3GPP TSG CN Plenary Meeting #12 **Tdoc NP-010310**
Stockholm, Sweden, 13th - 15th June 2001

Source: TSG CN WG2

Title: CRs on R99 and Rel-4 Work Item “CAMEL3”

Agenda item: 7.2

Document for: APPROVAL

Introduction:

This document contains 12 CRs on R99 and Rel-4 Work Item ”CAMEL3”, that have been agreed by TSG CN WG2, and are forwarded to TSG CN Plenary meeting #12 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.078	286		N2-010282	R99	GGSN address in SGSN to SCP interface	F	3.8.0
23.078	287		N2-010283	Rel-4	GGSN address in SGSN to SCP interface	A	4.0.0
23.078	290		N2-010290	R99	Correction of error implementing CR 23.078-181r2	F	3.8.0
23.078	291		N2-010291	Rel-4	Correction of error implementing CR 23.078-181r2	A	4.0.0
23.078	292	1	N2-010404	R99	Handling of second SIFOC	F	3.8.0
23.078	293	1	N2-010406	Rel-4	Handling of second SIFOC	A	4.0.0
23.078	294	1	N2-010389	R99	Correction to GPRS SDL: no state transition for QoS-induced ACR-GPRS	F	3.8.0
23.078	297		N2-010390	Rel-4	Correction to GPRS SDL: no state transition for QoS-induced ACR-GPRS	A	4.0.0
23.078	295	1	N2-010412	R99	Correction on the call-Diversion-Treatment-Indicator at the GMSC	F	3.8.0
23.078	299		N2-010413	Rel-4	Correction on the call-Diversion-Treatment-Indicator at the GMSC	A	4.0.0
23.078	301		N2-010449	R99	CAMEL Capability Handling in GPRS-CSI	F	3.8.0
23.078	302		N2-010450	Rel-4	CAMEL Capability Handling in GPRS-CSI	A	4.0.0

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010282

CR-Form-v3

CHANGE REQUEST

⌘ **23.078** **CR** **286** ⌘ rev **-** ⌘ Current version: **3.8.0** ⌘

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

Title:	⌘	GGSN address in SGSN to SCP interface
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	2nd of May 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)*

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:	⌘	It is unclear whether SGSN should report the GGSN signalling address or GGSN user plane address to the SCP. Since the signalling address relates to GGSN allocated Charging ID the *signalling address* shall be reported to the SCP. The Charging ID is unique only with the GGSN address.
Summary of change:	⌘	
Consequences if not approved:	⌘	Possible problems with CAMEL3 GPRS prepay service

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

****** FIRST MODIFIED SECTION ******

6.6 Description of information flows

…

6.6.1 gprsSSF to gsmSCF Information Flows

…

6.6.1.4 Event Report GPRS

6.6.1.4.1 Description

This IF is used to notify the gsmSCF of a GPRS event previously requested by the gsmSCF in a Request Report GPRS Event IF.

6.6.1.4.2 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. Refer to 3GPP TS 29.078 [5] for the usage of this element.
GPRS Event type	M	This IE specifies the type of event that is reported.
Misc GPRS Info	M	This IE indicates the DP type (EDP-N or EDP-R).
GPRS Event Specific Information	M	This IE contains information specific to the reported event.
PDP ID	C	This IE identifies the PDP context, which the Report GPRS Event is applicable for. If not present the dialogue corresponds to the Attach/Detach State Model or to one single PDP context.

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

If the *GPRS Event type* contains DP Change of Position GPRS Session, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Location Information in SGSN	M	See subclause 7.6.1.2.2.

M Mandatory (The IE shall always be sent).

If the *GPRS Event type* contains DP Change of Position Context, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	C1	This IE identifies the Access Point Name to which the MS is connected.
Charging ID	C1	This IE contains the Charging ID received from the GGSN for the PDP context.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
End User Address	C1	See subclause 6.6.1.5.2.
Quality Of Service	C1	This IE is described in the table below.
Time and Time Zone	C1	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
GGSN Address	C1	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].

M Mandatory (The IE shall always be sent).

C1 Conditional (The IE shall be sent, if available at inter-SGSN routing area update. Shall not be sent at intra-SGSN routing area update).

If the *GPRS Event type* contains DP Detach or DP PDP context disconnection, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Initiating Entity	M	This IE identifies the entity that has initiated the disconnection or detachment.
Routeing Area Update	C	This IE indicates that the Detach or Disconnection is due to inter-SGSN routeing area update.

M Mandatory (The IE shall always be sent).

C Optional (The IE shall be sent, if applicable)

If the *GPRS Event type* contains DP PDP context establishment, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	C	This IE identifies the Access Point Name the MS has requested to connect to.
End User Address	C	See subclause 6.6.1.5.2.
Quality Of Service	M	This IE is described in the table below.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
Time and Time Zone	M	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
PDP Initiation Type	M	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

If the *GPRS Event type* contains DP PDP context establishment acknowledgement, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	M	This IE identifies the Access Point Name to which the MS is connected.
Charging ID	M	This IE contains the Charging ID received from the GGSN for the PDP context.
End User Address	M	See subclause 6.6.1.5.2.
Quality Of Service	M	This IE is described in the table below.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
Time and Time Zone	M	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
GGSN Address	M	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].

M Mandatory (The IE shall always be sent).

****** NEXT MODIFIED SECTION ******

6.6.1.5 Initial DP GPRS

6.6.1.5.1 Description

This IF is generated by the gprsSSF when a trigger is detected at a DP in the GPRS state models, to request instructions from the gsmSCF.

6.6.1.5.2 Information Elements

The following information elements are required:

Information element name	Required	Description
Gprs Reference Number	M	This IE consists of a number assigned by the gprsSSF. It is used for TCAP dialogue segmentation. Refer to 3GPP TS 29.078 [5] for the usage of this element.
ServiceKey	M	This IE indicates to the gsmSCF the requested CAMEL Service. It is used to address the required application/SLP within the gsmSCF.
GPRS Event Type	M	This IE indicates the armed GPRS DP event resulting in the Initial Data Event IF.
MSISDN	M	This IE contains the basic MSISDN of the MS.
IMSI	M	This IE identifies the mobile subscriber.
Time and Time zone	M	This IE contains the time that the gprsSSF was triggered, and the time zone the gprsSSF resides in.
GPRS MS Class	C	This IE contains the MS network and radio access capabilities.
End User Address	C	Described in a table below.
Quality of Service	C	This IE is described in the table below.
Access Point Name	C	This IE identifies the Access Point Name: - At DP Change Of Position Context contains the selected APN. - AT DP PDP Context Establishment contains the APN which the MS has requested. - AT DP PDP Context Establishment Acknowledgement contains the selected APN.
Charging ID	C	This IE contains the Charging ID received from the GGSN for the PDP context.
SGSN Capabilities	C	This IE specifies the capabilities of the SGSN node to support the CAMEL interwork, e.g. support of Advice of Charge.
Location Information in SGSN	M	This IE is described in the subclause 7.6.1.2.2.
PDP Initiation Type	M	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
GGSN Address	C	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

Quality of Service contains the following information elements:

Information element name	Required	Description
Requested QoS	C	This IE identifies the QoS requested by the subscriber for a new PDP Context. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment, at PDP Context Establishment Acknowledgement and at Change of Position Context.
Subscribed QoS	C	This IE identifies the subscribed QoS. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment, at PDP Context Establishment Acknowledgement and at Change of Position Context.
Negotiated QoS	C	This IE identifies the QoS which was negotiated between the user, the SGSN and the GGSN. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment Acknowledgement and at Change of Position Context.

C Conditional (The IE shall be sent, if available)

End User Address shall be populated as follows:

- At DP Change Of Position Context in an Inter-SGSN Routeing Area Update: InitialDPGPRS and EventReportGPRS contain the selected value;
- At DP PDP Context Establishment: InitialDPGPRS and EventReportGPRS contain the value which the MS has requested;
- At DP PDP Context Establishment Acknowledgement: InitialDPGPRS and EventReportGPRS contain the selected value. Note that the PDP Address is not always available at this DP.

For details see 3GPP TS 23.060 [11].

End User Address contains the following information elements:

Information element name	Required	Description
PDP Type Organization	C	This IE identifies the PDP Type Organisation (e.g. IETF).
PDP Type Number	C	This IE identifies the PDP type, e.g. IPv4 or IPv6.
PDP Address	C	This IE identifies the address of the subscriber for a new PDP Context.

C Conditional (The IE shall be sent, if available)

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010283

CR-Form-v3

CHANGE REQUEST

⌘ **23.078** **CR** **287** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

Title:	⌘	GGSN address in SGSN to SCP interface
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	2nd of May 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:	⌘	It is unclear whether SGSN should report the GGSN signalling address or GGSN user plane address to the SCP. Since the signalling address relates to GGSN allocated Charging ID the *signalling address* shall be reported to the SCP. The Charging ID is unique only with the GGSN address.
Summary of change:	⌘	
Consequences if not approved:	⌘	Possible problems with CAMEL3 GPRS prepay service

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

****** FIRST MODIFIED SECTION ******

6.6 Description of information flows

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6.6.1 gprsSSF to gsmSCF Information Flows

…

6.6.1.4 Event Report GPRS

6.6.1.4.1 Description

This IF is used to notify the gsmSCF of a GPRS event previously requested by the gsmSCF in a Request Report GPRS Event IF.

6.6.1.4.2 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. Refer to 3GPP TS 29.078 [5] for the usage of this element.
GPRS Event type	M	This IE specifies the type of event that is reported.
Misc GPRS Info	M	This IE indicates the DP type (EDP-N or EDP-R).
GPRS Event Specific Information	M	This IE contains information specific to the reported event.
PDP ID	C	This IE identifies the PDP context, which the Report GPRS Event is applicable for. If not present the dialogue corresponds to the Attach/Detach State Model or to one single PDP context.

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

If the *GPRS Event type* contains DP Change of Position GPRS Session, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Location Information in SGSN	M	See subclause 7.6.1.2.2.

M Mandatory (The IE shall always be sent).

If the *GPRS Event type* contains DP Change of Position Context, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	C1	This IE identifies the Access Point Name to which the MS is connected.
Charging ID	C1	This IE contains the Charging ID received from the GGSN for the PDP context.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
End User Address	C1	See subclause 6.6.1.5.2.
Quality Of Service	C1	This IE is described in the table below.
Time and Time Zone	C1	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
GGSN Address	C1	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].

M Mandatory (The IE shall always be sent).

C1 Conditional (The IE shall be sent, if available at inter-SGSN routing area update. Shall not be sent at intra-SGSN routing area update).

If the *GPRS Event type* contains DP Detach or DP PDP context disconnection, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Initiating Entity	M	This IE identifies the entity that has initiated the disconnection or detachment.
Routeing Area Update	C	This IE indicates that the Detach or Disconnection is due to inter-SGSN routeing area update.

M Mandatory (The IE shall always be sent).

C Optional (The IE shall be sent, if applicable)

If the *GPRS Event type* contains DP PDP context establishment, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	C	This IE identifies the Access Point Name the MS has requested to connect to.
End User Address	C	See subclause 6.6.1.5.2.
Quality Of Service	M	This IE is described in the table below.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
Time and Time Zone	M	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
PDP Initiation Type	M	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

If the *GPRS Event type* contains DP PDP context establishment acknowledgement, then the GPRS Event Specific Information IE contains the following information elements:

Information element name	Required	Description
Access Point Name	M	This IE identifies the Access Point Name to which the MS is connected.
Charging ID	M	This IE contains the Charging ID received from the GGSN for the PDP context.
End User Address	M	See subclause 6.6.1.5.2.
Quality Of Service	M	This IE is described in the table below.
Location Information in SGSN	M	See subclause 7.6.1.2.2.
Time and Time Zone	M	This IE contains the time that the gprsSSF met the detection point, and the time zone the gprsSSF resides in.
GGSN Address	M	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].

M Mandatory (The IE shall always be sent).

****** NEXT MODIFIED SECTION ******

6.6.1.5 Initial DP GPRS

6.6.1.5.1 Description

This IF is generated by the gprsSSF when a trigger is detected at a DP in the GPRS state models, to request instructions from the gsmSCF.

6.6.1.5.2 Information Elements

The following information elements are required:

Information element name	Required	Description
Gprs Reference Number	M	This IE consists of a number assigned by the gprsSSF. It is used for TCAP dialogue segmentation. Refer to 3GPP TS 29.078 [5] for the usage of this element.
ServiceKey	M	This IE indicates to the gsmSCF the requested CAMEL Service. It is used to address the required application/SLP within the gsmSCF.
GPRS Event Type	M	This IE indicates the armed GPRS DP event resulting in the Initial Data Event IF.
MSISDN	M	This IE contains the basic MSISDN of the MS.
IMSI	M	This IE identifies the mobile subscriber.
Time and Time zone	M	This IE contains the time that the gprsSSF was triggered, and the time zone the gprsSSF resides in.
GPRS MS Class	C	This IE contains the MS network and radio access capabilities.
End User Address	C	Described in a table below.
Quality of Service	C	This IE is described in the table below.
Access Point Name	C	This IE identifies the Access Point Name: - At DP Change Of Position Context contains the selected APN. - AT DP PDP Context Establishment contains the APN which the MS has requested. - AT DP PDP Context Establishment Acknowledgement contains the selected APN.
Charging ID	C	This IE contains the Charging ID received from the GGSN for the PDP context.
SGSN Capabilities	C	This IE specifies the capabilities of the SGSN node to support the CAMEL interwork, e.g. support of Advice of Charge.
Location Information in SGSN	M	This IE is described in the subclause 7.6.1.2.2.
PDP Initiation Type	M	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
GGSN Address	C	This IE contains the *GGSN address for control plane* to which the MS is connected, see 3GPP TS 23.003 [37].
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

Quality of Service contains the following information elements:

Information element name	Required	Description
Requested QoS	C	This IE identifies the QoS requested by the subscriber for a new PDP Context. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment, at PDP Context Establishment Acknowledgement and at Change of Position Context.
Subscribed QoS	C	This IE identifies the subscribed QoS. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment, at PDP Context Establishment Acknowledgement and at Change of Position Context.
Negotiated QoS	C	This IE identifies the QoS which was negotiated between the user, the SGSN and the GGSN. It shall be included if the InitialDPGPRS is sent at PDP Context Establishment Acknowledgement and at Change of Position Context.

C Conditional (The IE shall be sent, if available)

End User Address shall be populated as follows:

- At DP Change Of Position Context in an Inter-SGSN Routeing Area Update: InitialDPGPRS and EventReportGPRS contain the selected value;
- At DP PDP Context Establishment: InitialDPGPRS and EventReportGPRS contain the value which the MS has requested;
- At DP PDP Context Establishment Acknowledgement: InitialDPGPRS and EventReportGPRS contain the selected value. Note that the PDP Address is not always available at this DP.

For details see 3GPP TS 23.060 [11].

End User Address contains the following information elements:

Information element name	Required	Description
PDP Type Organization	C	This IE identifies the PDP Type Organisation (e.g. IETF).
PDP Type Number	C	This IE identifies the PDP type, e.g. IPv4 or IPv6.
PDP Address	C	This IE identifies the address of the subscriber for a new PDP Context.

C Conditional (The IE shall be sent, if available)

3GPP TSG-CN2 Meeting #18
PuertoRico, USA, 14-18 May 2001

Tdoc N2-010290

CR-Form-v3

CHANGE REQUEST

⌘ **23.078 CR 290** ⌘ rev **-** ⌘ Current version: **3.8.0** ⌘

*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:	⌘	Correction of error implementing CR 23.078-181r2
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	9 May 2001
Category:	⌘	**F** Correction of error implementing an approved CR
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:	⌘	Error implementation of CR 23.078-181r2
Summary of change:	⌘	PDP Initiation Type set to “C” in Initial DP GPRS
Consequences if not approved:	⌘	Initial DP GPRS includes this IE at the initial contact with the gsmSCF for the GPRS session. This IE is only valid for PDP context.

Clauses affected:	⌘	4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

6.6.1.5 Initial DP GPRS

6.6.1.5.1 Description

This IF is generated by the gprsSSF when a trigger is detected at a DP in the GPRS state models, to request instructions from the gsmSCF.

6.6.1.5.2 Information Elements

The following information elements are required:

Information element name	Required	Description
Gprs Reference Number	M	This IE consists of a number assigned by the gprsSSF. It is used for TCAP dialogue segmentation. Refer to 3GPP TS 29.078 [5] for the usage of this element.
ServiceKey	M	This IE indicates to the gsmSCF the requested CAMEL Service. It is used to address the required application/SLP within the gsmSCF.
GPRS Event Type	M	This IE indicates the armed GPRS DP event resulting in the Initial Data Event IF.
MSISDN	M	This IE contains the basic MSISDN of the MS.
IMSI	M	This IE identifies the mobile subscriber.
Time and Time zone	M	This IE contains the time that the gprsSSF was triggered, and the time zone the gprsSSF resides in.
GPRS MS Class	C	This IE contains the MS network and radio access capabilities.
End User Address	C	Described in a table below.
Quality of Service	C	This IE is described in the table below.
Access Point Name	C	This IE identifies the Access Point Name: - At DP Change Of Position Context contains the selected APN. - AT DP PDP Context Establishment contains the APN which the MS has requested. - AT DP PDP Context Establishment Acknowledgement contains the selected APN.
Charging ID	C	This IE contains the Charging ID received from the GGSN for the PDP context.
SGSN Capabilities	C	This IE specifies the capabilities of the SGSN node to support the CAMEL interwork, e.g. support of Advice of Charge.
Location Information in SGSN	M	This IE is described in the subclause 7.6.1.2.2.
PDP Initiation Type	C	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
GGSN Address	C	This IE contains the Address of the GGSN to which the MS is connected, see 3GPP TS 23.003 [37].
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

3GPP TSG-CN2 Meeting #18
PuertoRico, USA, 14-18 May 2001

Tdoc N2-010291

CR-Form-v3

CHANGE REQUEST

⌘ **23.078 CR 291** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

*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: ⌘	Correction of error implementing CR 23.078-181r2	
Source: ⌘	CN2	
Work item code: ⌘	CAMEL3	***Date:*** ⌘ 9 May 2001
Category: ⌘	**A** Correction of error implementing an approved CR	***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: ⌘	Error implementation of CR 23.078-181r2
Summary of change: ⌘	PDP Initiation Type set to “C” in Initial DP GPRS
Consequences if not approved: ⌘	Initial DP GPRS includes this IE at the initial contact with the gsmSCF for the GPRS session. This IE is only valid for PDP context.

Clauses affected: ⌘	4		
Other specs affected: ⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments: ⌘			

6.6.1.5 Initial DP GPRS

6.6.1.5.1 Description

This IF is generated by the gprsSSF when a trigger is detected at a DP in the GPRS state models, to request instructions from the gsmSCF.

6.6.1.5.2 Information Elements

The following information elements are required:

Information element name	Required	Description
Gprs Reference Number	M	This IE consists of a number assigned by the gprsSSF. It is used for TCAP dialogue segmentation. Refer to 3GPP TS 29.078 [5] for the usage of this element.
ServiceKey	M	This IE indicates to the gsmSCF the requested CAMEL Service. It is used to address the required application/SLP within the gsmSCF.
GPRS Event Type	M	This IE indicates the armed GPRS DP event resulting in the Initial Data Event IF.
MSISDN	M	This IE contains the basic MSISDN of the MS.
IMSI	M	This IE identifies the mobile subscriber.
Time and Time zone	M	This IE contains the time that the gprsSSF was triggered, and the time zone the gprsSSF resides in.
GPRS MS Class	C	This IE contains the MS network and radio access capabilities.
End User Address	C	Described in a table below.
Quality of Service	C	This IE is described in the table below.
Access Point Name	C	This IE identifies the Access Point Name: - At DP Change Of Position Context contains the selected APN. - AT DP PDP Context Establishment contains the APN which the MS has requested. - AT DP PDP Context Establishment Acknowledgement contains the selected APN.
Charging ID	C	This IE contains the Charging ID received from the GGSN for the PDP context.
SGSN Capabilities	C	This IE specifies the capabilities of the SGSN node to support the CAMEL interwork, e.g. support of Advice of Charge.
Location Information in SGSN	M	This IE is described in the subclause 7.6.1.2.2.
PDP Initiation Type	C	This IE indicates whether a PDP context was established as a result of a network-initiated request or as a result of a subscriber request.
GGSN Address	C	This IE contains the Address of the GGSN to which the MS is connected, see 3GPP TS 23.003 [37].
Secondary PDP context	C	This IE indicates that the PDP context activation was requested for a secondary PDP context. See 3GPP TS 23.060 [11].

M Mandatory (The IE shall always be sent).

C Conditional (The IE shall be sent, if available).

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010389
(revision of N2-010318)

CHANGE REQUEST

⌘ **23.078 CR** **294** ⌘ rev **1** ⌘ Current version: **3.8.0** ⌘

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

Title:	⌘	Correction to GPRS SDL: no state transition for QoS-induced ACR-GPRS
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	14 May 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: ⌘

In Figure 6.17q: Process GPRS_SSF (sheet 17), when the gprsSSF is in state monitoring and it reports a Quality of Service change to the gsmSCF, by sending one or two ACR-GPRS operations, then the gprsSSF transits to state “Waiting for Instructions”.

This is incorrect. The gprsSSF shall remain in state “monitoring”.

Reasons for remaining in state “monitoring are” listed below.

(1) The state transition, from “Monitoring” to “Waiting for Instructions” was never introduced by means of a CR. It is probably a document editing error.

(2) Why would the SCP need to send ContinueGPRS after ACR-GPRS? We have the TC guard timer already. That is, even though the gprsSSF may remain in state Monitoring, the TC Dialogue is kept open for a pre-defined time, giving the SCP the chance to respond with ACH-GPRS without having to re-open the TC dialogue.

(3) When there is a change in QoS for a PDPc, then the procedure in the SGSN simply continues. It does not wait for an internal Continue signal. It is therefore not correct for the gprsSSF to go to state “WFI”. The SCP would then send CAP Continue and the gprsSSF would then forward this Continue to the SGSN. But the SGSN does not expect a Continue.

(4) When the gprsSSF sends an ACR-GPRS as a result of timer or counter expiry, then the gprsSSF does not change to state “WFI”. That looks inconsistent. Also, this may be rather confusing for the gprsSSF and the SCP alike. In the case of QoS-induced ACR-GPRS, they shall transit to WFI. In the case of timer/counter expiry-induced ACR-GPRS, they shall remain in state monitoring.

(5) The necessity for the SCP to send ContinueGPRS after receiving ACR-GPRS would now depend on the event that triggered the ACR-GPRS.

(6) If the gprsSSF would transit to state WFI in the case of sending ACR-GPRS

		as a result of QoS change, then the instruction counter would need to incremented before transiting to WFI. This is currently not done. (7) In general, when the gprsSSF is in state WFI, the Tssf timer needs to be running. At present, Tssf is not started when the gprsSSF transits to WFI in the case of ACR-GPRS due to PDPc QoS change. (8) When the gprsSSF gets the internal signal that the QoS has changed, it calls procedure Handle_ACR. However, calling Handle_ACR is not yet a guarantee that an ACR-GPRS will actually be sent. That still depends on whether or not any charging reports were actually outstanding at that moment. Hence, the transition to state WFI would have to be made conditional. Conclusion, the erroneous change in the spec, from “Monitoring” to “WFI”, shall be undone.
Summary of change:	⌘	In figure 6.17q, the gprsSSF shall remain in state “Monitoring”.
Consequences if not approved:	⌘	Incorrect specification, misalignment between SGSN and gprsSSF, inconsistent Service Logic implementation.

Clauses affected:	⌘	6.5.3.9			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘		
Other comments:	⌘				

****** First Change ******

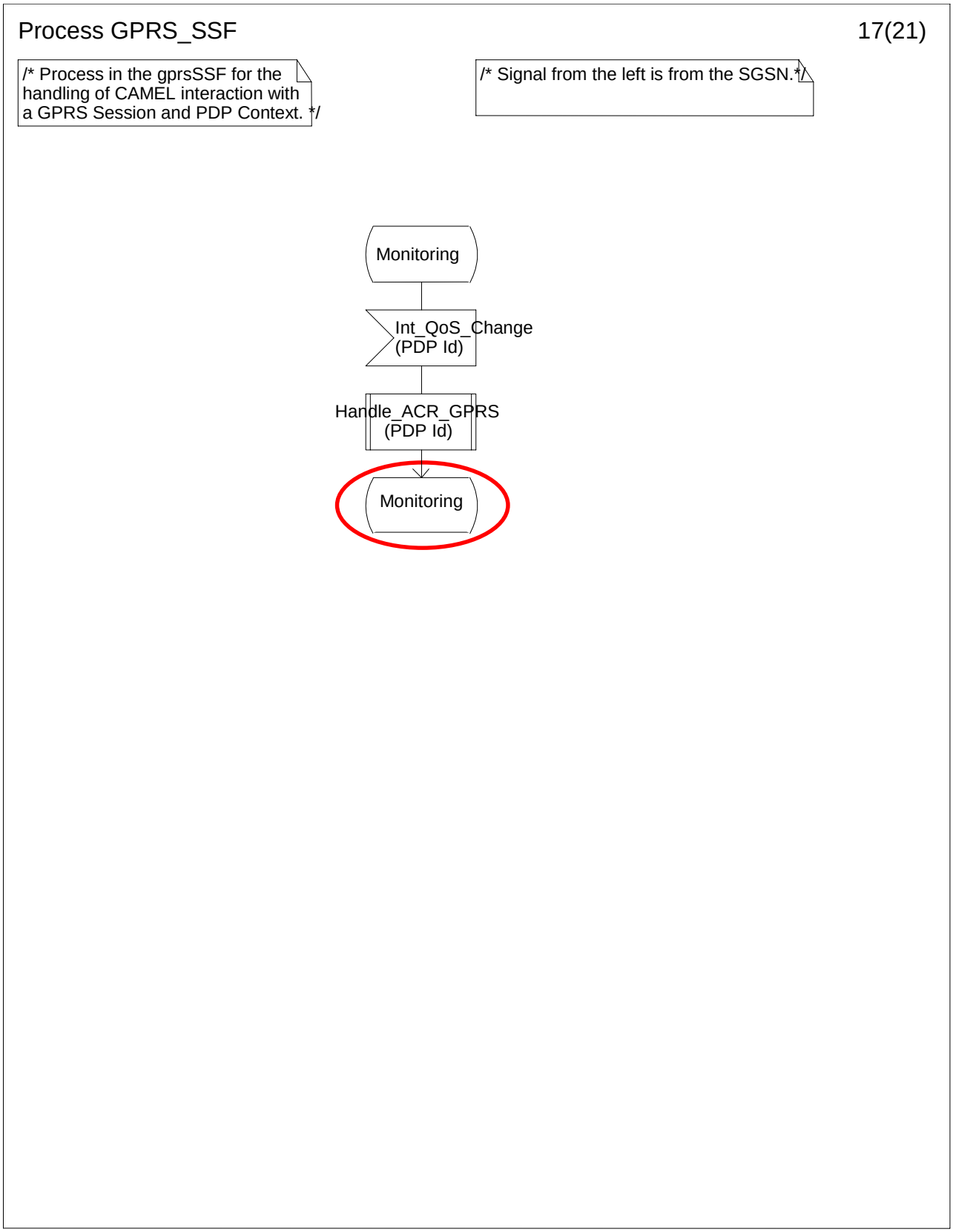

Figure 6.17q: Process GPRS_SSF (sheet 17)

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

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010390

CHANGE REQUEST

⌘ **23.078** **CR** **297** ⌘ rev ⌘ Current version: **4.0.0** ⌘

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

Title:	⌘	Correction to GPRS SDL: no state transition for QoS-induced ACR-GPRS
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	14 May 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: ⌘

In Figure 6.17q: Process GPRS_SSF (sheet 17), when the gprsSSF is in state monitoring and it reports a Quality of Service change to the gsmSCF, by sending one or two ACR-GPRS operations, then the gprsSSF transits to state “Waiting for Instructions”.

This is incorrect. The gprsSSF shall remain in state “monitoring”.

Reasons for remaining in state “monitoring are” listed below.

(1) The state transition, from “Monitoring” to “Waiting for Instructions” was never introduced by means of a CR. It is probably a document editing error.

(2) Why would the SCP need to send ContinueGPRS after ACR-GPRS? We have the TC guard timer already. That is, even though the gprsSSF may remain in state Monitoring, the TC Dialogue is kept open for a pre-defined time, giving the SCP the chance to respond with ACH-GPRS without having to re-open the TC dialogue.

(3) When there is a change in QoS for a PDPc, then the procedure in the SGSN simply continues. It does not wait for an internal Continue signal. It is therefore not correct for the gprsSSF to go to state “WFI”. The SCP would then send CAP Continue and the gprsSSF would then forward this Continue to the SGSN. But the SGSN does not expect a Continue.

(4) When the gprsSSF sends an ACR-GPRS as a result of timer or counter expiry, then the gprsSSF does not change to state “WFI”. That looks inconsistent. Also, this may be rather confusing for the gprsSSF and the SCP alike. In the case of QoS-induced ACR-GPRS, they shall transit to WFI. In the case of timer/counter expiry-induced ACR-GPRS, they shall remain in state monitoring.

(5) The necessity for the SCP to send ContinueGPRS after receiving ACR-GPRS would now depend on the event that triggered the ACR-GPRS.

(6) If the gprsSSF would transit to state WFI in the case of sending ACR-GPRS

		as a result of QoS change, then the instruction counter would need to incremented before transiting to WFI. This is currently not done. (7) In general, when the gprsSSF is in state WFI, the Tssf timer needs to be running. At present, Tssf is not started when the gprsSSF transits to WFI in the case of ACR-GPRS due to PDPc QoS change. (8) When the gprsSSF gets the internal signal that the QoS has changed, it calls procedure Handle_ACR. However, calling Handle_ACR is not yet a guarantee that an ACR-GPRS will actually be sent. That still depends on whether or not any charging reports were actually outstanding at that moment. Hence, the transition to state WFI would have to be made conditional. Conclusion, the erroneous change in the spec, from “Monitoring” to “WFI”, shall be undone.
Summary of change:	⌘	In figure 6.17q, the gprsSSF shall remain in state “Monitoring”.
Consequences if not approved:	⌘	Incorrect specification, misalignment between SGSN and gprsSSF, inconsistent Service Logic implementation.

Clauses affected:	⌘	6.5.3.9			
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘		
Other comments:	⌘				

****** First Change ******

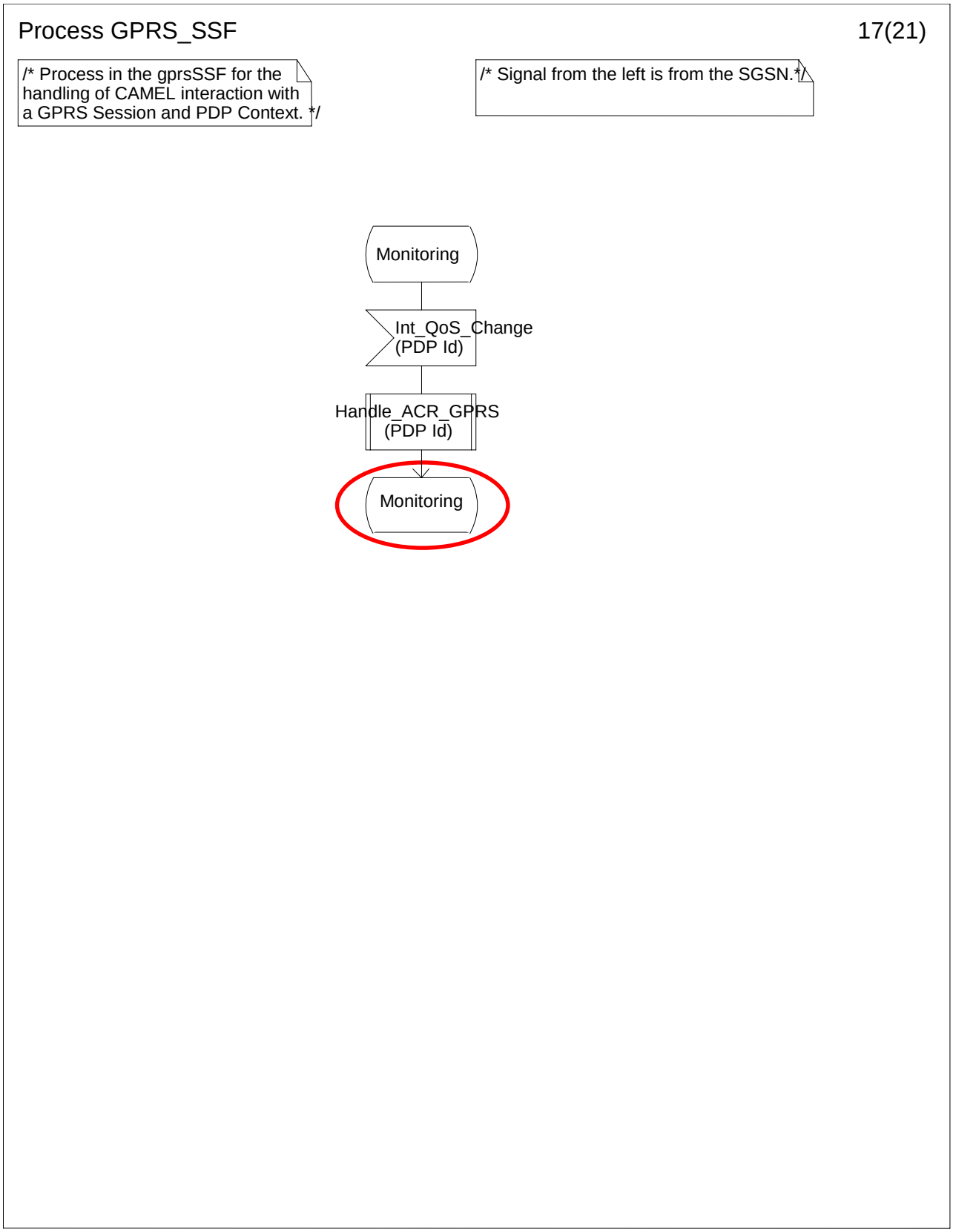

Figure 6.17q: Process GPRS_SSF (sheet 17)

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

3GPP TSG-CN2 Meeting #18
Puerto Rico, 14th – 18th May 2001

Tdoc N2-010404

CR-Form-v3

CHANGE REQUEST

23.078	**CR**	**292**	rev	**1**	Current version:	3.8.0

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

Title:	Handling of second SIFOC
Source:	CN2
Work item code:	CAMEL3 — ***Date:*** 15th May 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)*
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 CAMEL Phase 2, the MSC sends the VLR a second SIFOC if the call was subject to CAMEL invocation based on O-CSI. This allows the VLR to check the conditional outgoing call barrings against the destination routeing address provided by the gsmSCF. In CAMEL Phase 3, the handling was enhanced to deal with D-CSI and N-CSI as well. The MSC should send the VLR a second SIFOC if the call was subject to **at least one** of O-CSI, D-CSI and N-CSI. However, following through the SDLs (Procedure CAMEL_MO_Dialled_Services), the MSC will send the second SIFOC regardless of whether there was any CAMEL invocation for the call.
Summary of change:	Introduction of a new boolean variable CAMEL_Invocation. The variable is checked to determine whether the second SIFOC is sent.
Consequences if not approved:	In a CAMEL 3 VPLMN, any MO call that is not subject to a CAMEL invocation will fail.

Clauses affected:	4.5.2.1		
Other specs affected:	☒	Other core specifications	23.078-293 (REL-4) – N2-010309 23.018-??? (R99) – N4-01???? 23.018-??? (REL-4) – N4-01????
	☐	Test specifications	
	☐	O&M Specifications	
Other comments:	In this revision, the variable CAMEL_Invocation is initialised to False in Procedure OG_Call_Setup which is defined in 3GPP TS 23.018 (see CRs mentioned above).		

****** Modified Section ******

4.5.2.1 Handling of mobile originated calls in the originating MSC

…

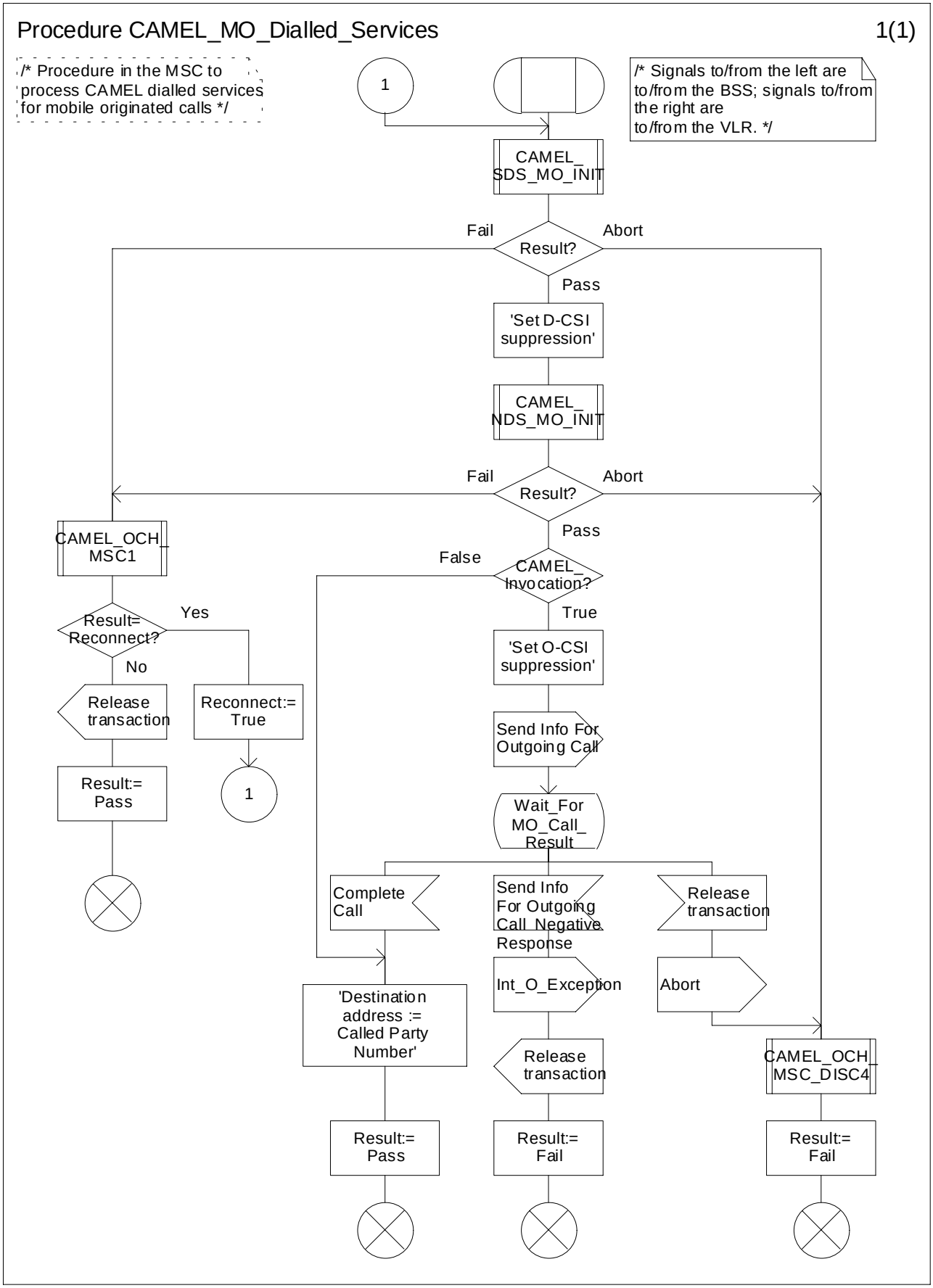

Figure 4.9a: Procedure CAMEL_MO_Dialled_Services (sheet 1)

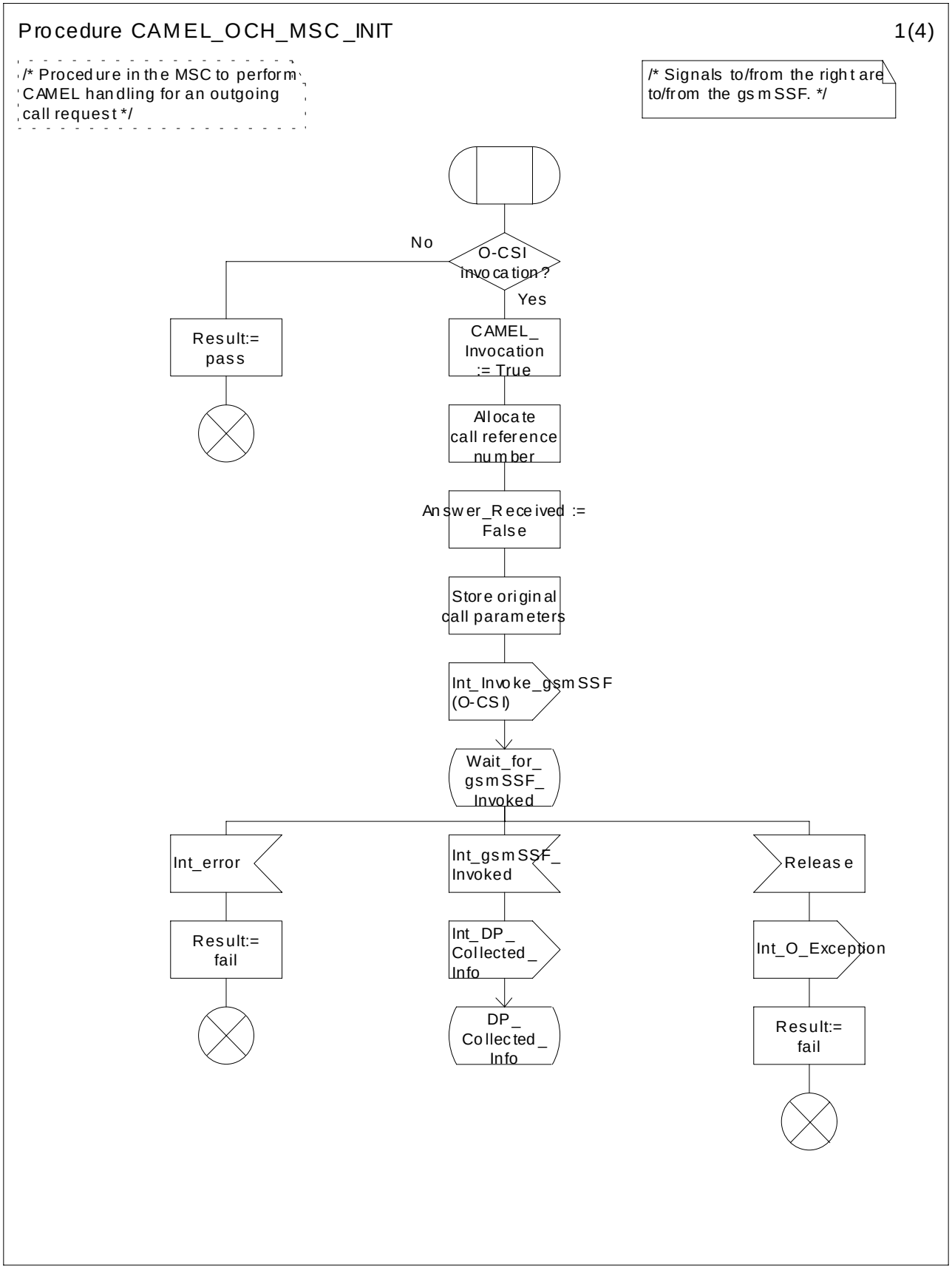

Figure 4.10a: Procedure CAMEL_OCH_MSC_INIT (sheet 1)

…

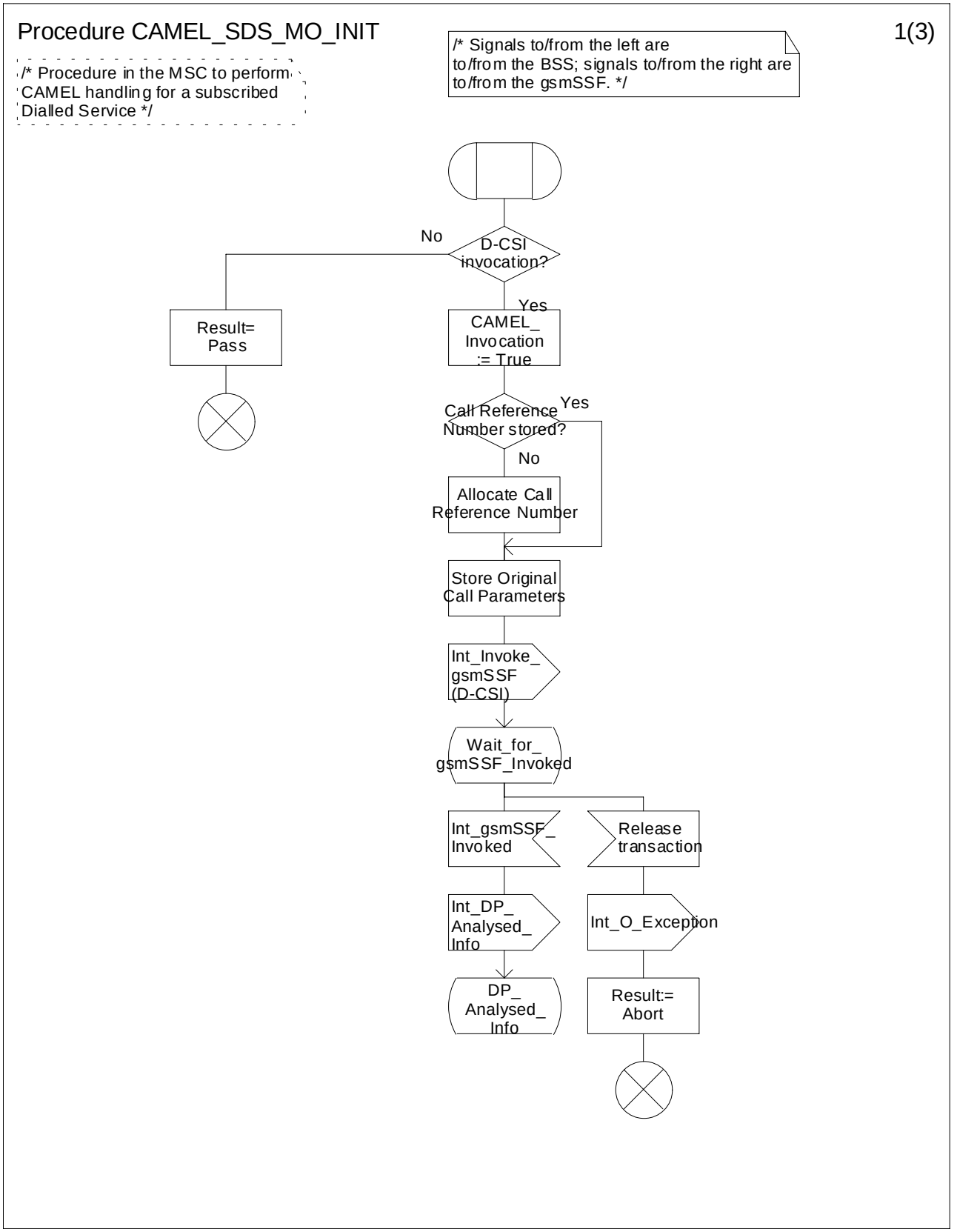

Figure 4.11a: Procedure CAMEL_SDS_MO_Init (sheet 1)

…

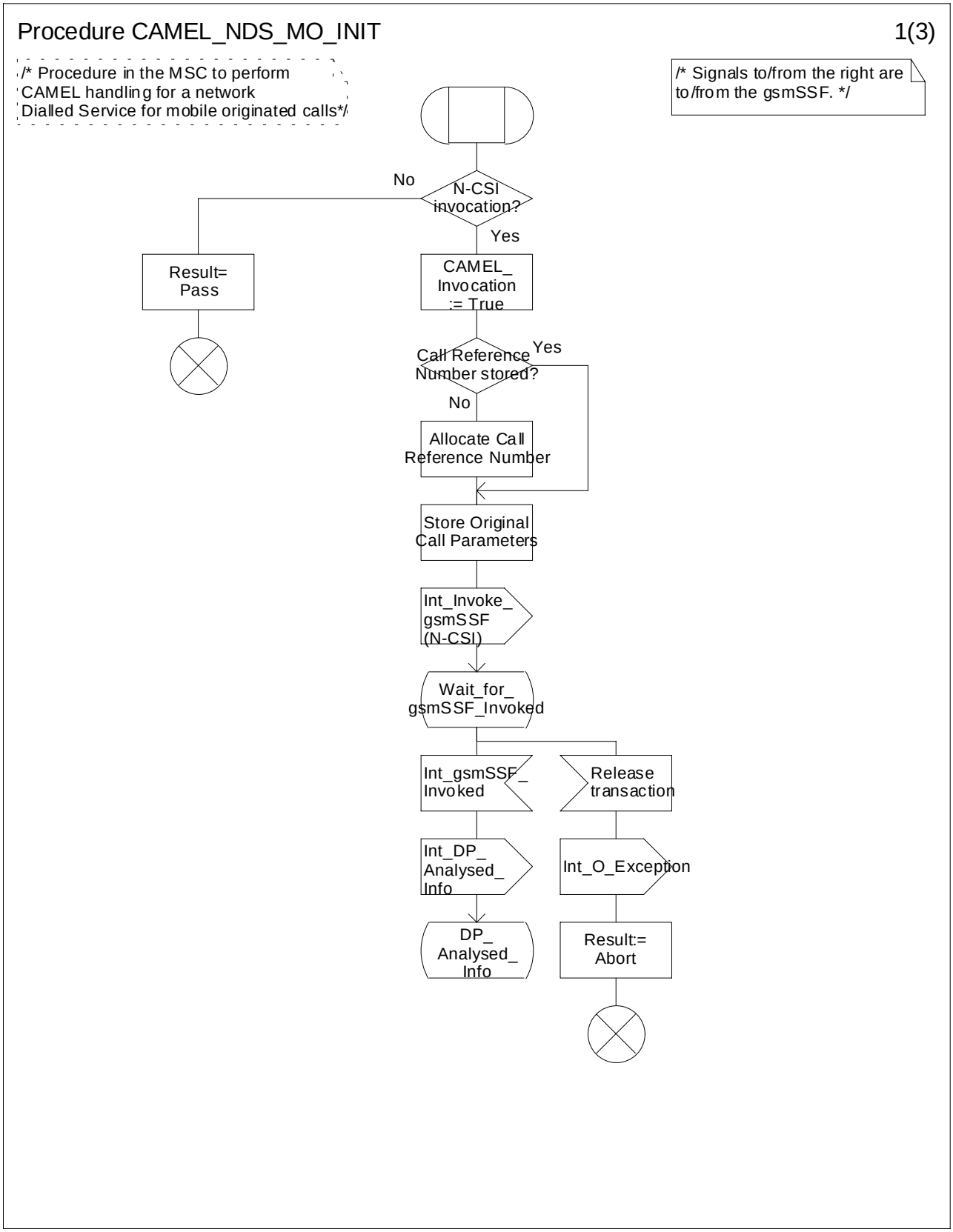

Figure 4.12a: Procedure CAMEL_NDS_MO_INIT (sheet 1)

…

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

3GPP TSG-CN2 Meeting #18
Puerto Rico, 14th – 18th May 2001

Tdoc N2-010406

CR-Form-v3

CHANGE REQUEST

23.078	**CR**	**293**	rev	**1**	Current version:	4.0.0

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

Title:	Handling of second SIFOC		
Source:	CN2		
Work item code:	CAMEL3	***Date:***	15th May 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 CAMEL Phase 2, the MSC sends the VLR a second SIFOC if the call was subject to CAMEL invocation based on O-CSI. This allows the VLR to check the conditional outgoing call barrings against the destination routeing address provided by the gsmSCF. In CAMEL Phase 3, the handling was enhanced to deal with D-CSI and N-CSI as well. The MSC should send the VLR a second SIFOC if the call was subject to **at least one** of O-CSI, D-CSI and N-CSI. However, following through the SDLs (Procedure CAMEL_MO_Dialled_Services), the MSC will send the second SIFOC regardless of whether there was any CAMEL invocation for the call.
Summary of change:	Introduction of a new boolean variable CAMEL_Invocation. The variable is checked to determine whether the second SIFOC is sent.
Consequences if not approved:	In a CAMEL 3 VPLMN, any MO call that is not subject to a CAMEL invocation will fail.

Clauses affected:	4.5.2.1		
Other specs affected:	☒ Other core specifications	23.078-292 (R99) – N2-010308 23.018-??? (R99) – N4-01???? 23.018-??? (REL-4) – N4-01????	
	☐ Test specifications		
	☐ O&M Specifications		
Other comments:	In this revision, the variable CAMEL_Invocation is initialised to False in Procedure OG_Call_Setup which is defined in 3GPP TS 23.018 (see CRs mentioned above).		

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

4.5.2.1 Handling of mobile originated calls in the originating MSC

…

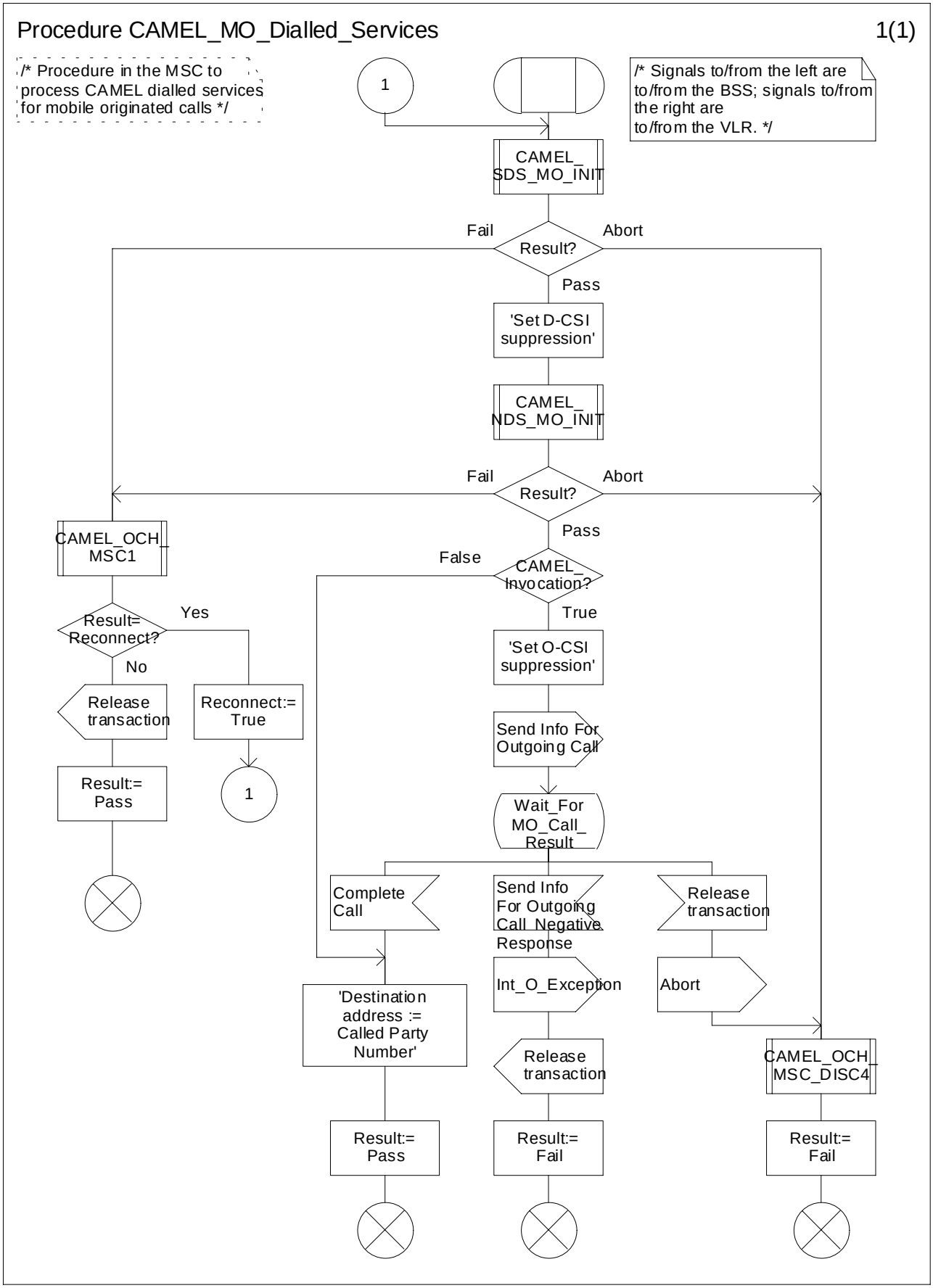

Figure 4.9a: Procedure CAMEL_MO_Dialled_Services (sheet 1)

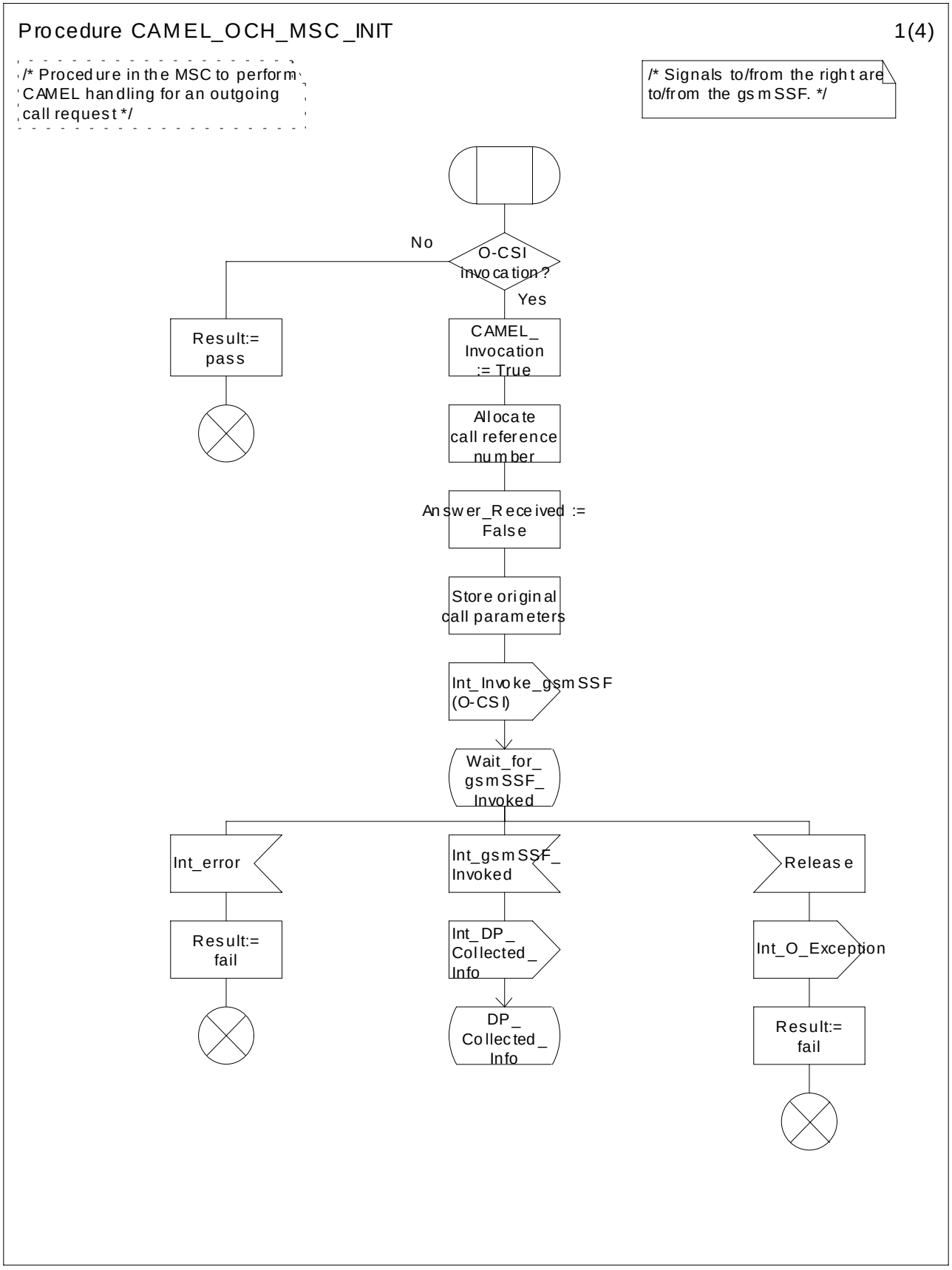

Figure 4.10a: Procedure CAMEL_OCH_MSC_INIT (sheet 1)

…

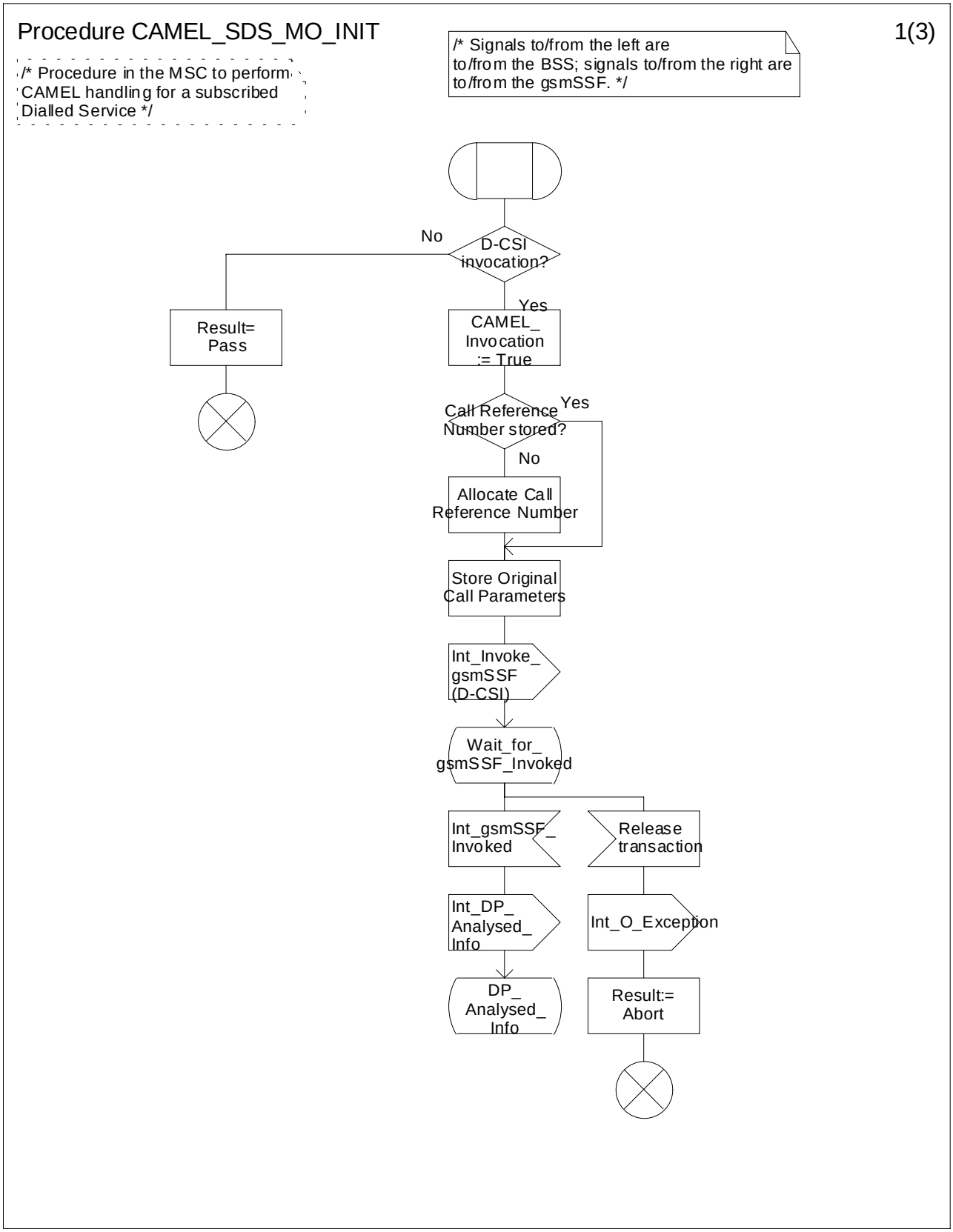

Figure 4.11a: Procedure CAMEL_SDS_MO_Init (sheet 1)

…

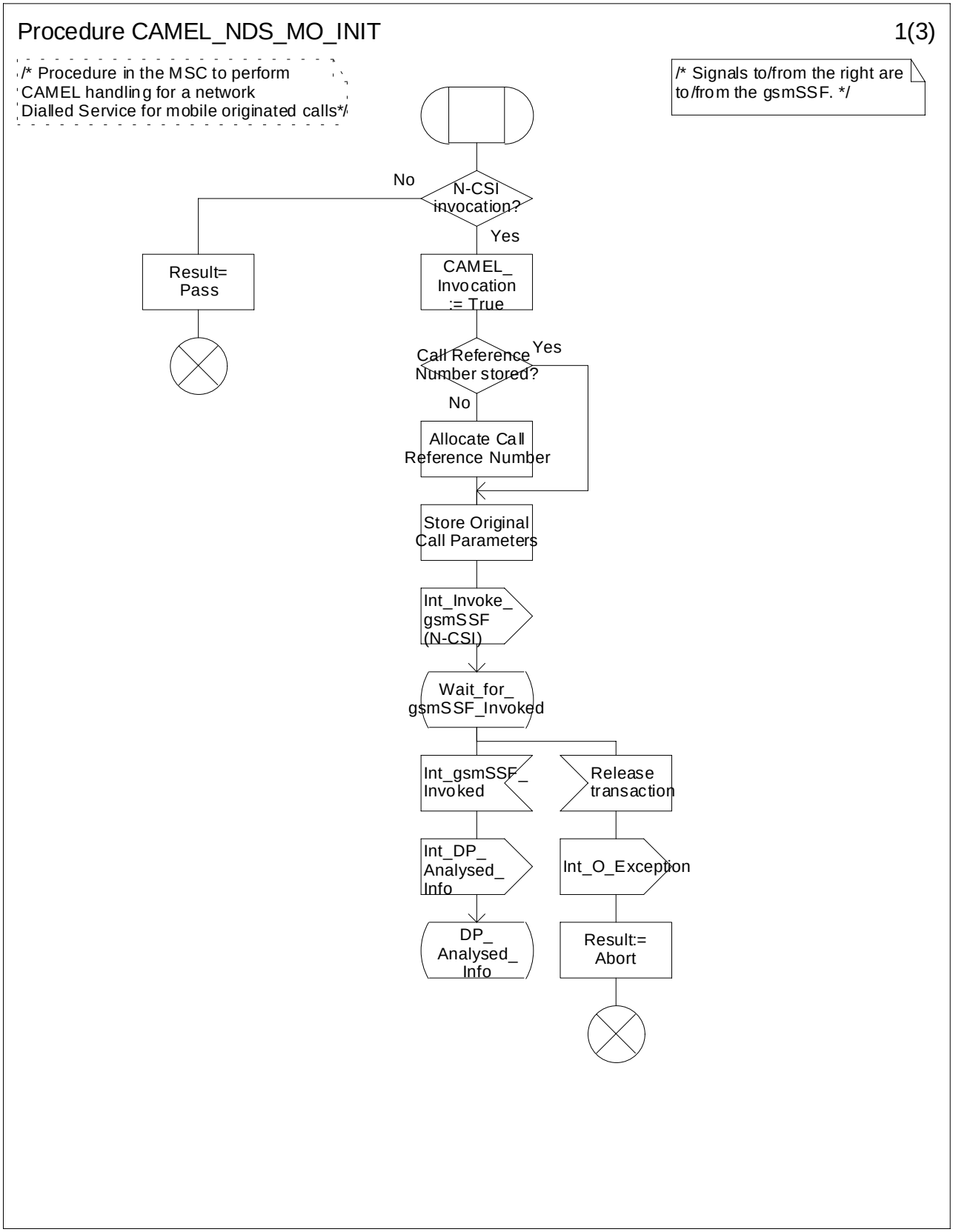

Figure 4.12a: Procedure CAMEL_NDS_MO_INIT (sheet 1)

…

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

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010412

CR-Form-v3

CHANGE REQUEST

⌘ **23.078** **CR** **295** ⌘ rev **1** ⌘ Current version: **3.8.0** ⌘

*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:	⌘	Correction on the call-Diversion-Treatment-Indicator at the GMSC
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	01/04/27
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:	⌘	The call-Diversion-Treatment-Indicator parameter sent by the gsmSCF via Connect or CWA operations is not taken into account in all cases at the GMSC. When a FTN is received in the first SRI ack, call forwarding is invoked independently of the value of call-Diversion-Treatment-Indicator received from the gsmSCF.
Summary of change:	⌘	Change of SDL diagrams
Consequences if not approved:	⌘	The call-Diversion-Treatment-Indicator parameter sent by the gsmSCF is not taken into account at the GMSC.

Clauses affected:	⌘	§ 4.5.3
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

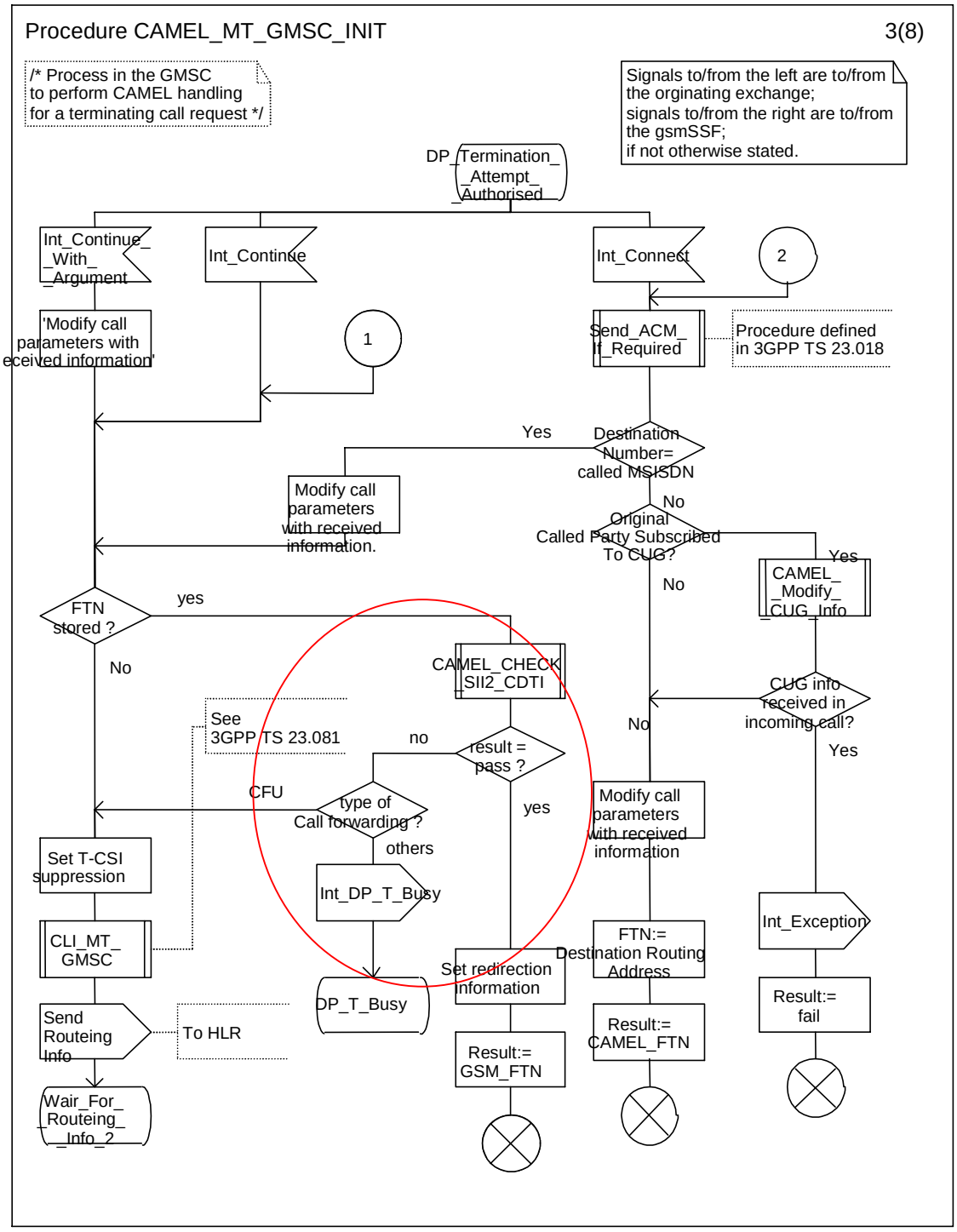

Figure 4.30c: Procedure CAMEL_MT_GMSC_INIT (sheet 3)

3GPP TSG-CN WG2 Meeting #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010413

CR-Form-v3

CHANGE REQUEST

⌘ **23.078** **CR** **299** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

*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:	⌘	Correction on the call-Diversion-Treatment-Indicator at the GMSC
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	01/04/27
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:	⌘	The call-Diversion-Treatment-Indicator parameter sent by the gsmSCF via Connect or CWA operations is not taken into account in all cases at the GMSC. When a FTN is received in the first SRI ack, call forwarding is invoked independently of the value of call-Diversion-Treatment-Indicator received from the gsmSCF.
Summary of change:	⌘	Change of SDL diagrams
Consequences if not approved:	⌘	The call-Diversion-Treatment-Indicator parameter sent by the gsmSCF is not taken into account at the GMSC.

Clauses affected:	⌘	§ 4.5.3
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

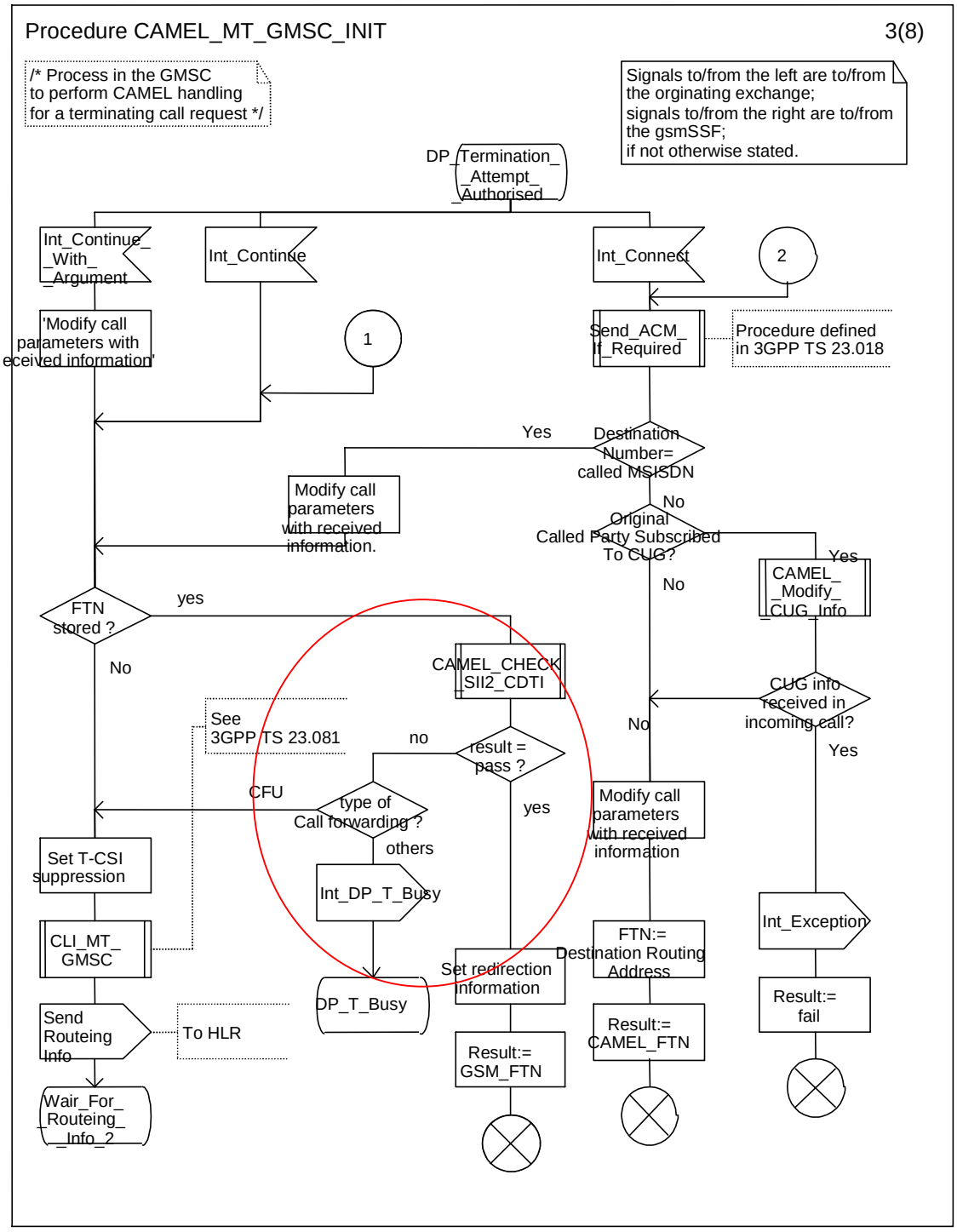

Figure 4.30c: Procedure CAMEL_MT_GMSC_INIT (sheet 3)

3GPP TSG-CN2 #18
Puerto Rico, 14th - 18th May 2001

Tdoc N2-010449

CR-Form-v3

CHANGE REQUEST

23.078	**CR**	301	rev	**0**	Current version:	3.8.0

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

Title:	CAMEL Capability Handling in GPRS-CSI
Source:	CN2
Work item code:	CAMEL3 — ***Date:*** 17th May 2001
Category:	**F (Approved 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:	CAMEL Capability Handling should be included in the GPRS-CSI downloaded to the SGSN. It is already specified in MAP.
Summary of change:	Inclusion of CAMEL Capability Handling in Insert Subscriber Data
Consequences if not approved:	Confusion on whether or not the CAMEL Capability Handling should be sent in Insert Subscriber Data or not, and how to handle the GPRS-CSI if CAMEL Capability Handling is not included

Clauses affected:	6.6.3.2		
Other specs affected:	☒ Other core specifications ☐ Test specifications ☐ O&M Specifications	23.078 (Rel-4)	
Other comments:			

****** Extract from 3GPP TS 29.002 v3.8.0 – for information ******

17.7.1 Mobile Service data types

…

```
GPRS-CSI ::= SEQUENCE {
     gprs-CamelTDPDataList               [0] GPRS-CamelTDPDataList         OPTIONAL,
     camelCapabilityHandling             [1] CamelCapabilityHandling       OPTIONAL,
     extensionContainer                  [2] ExtensionContainer            OPTIONAL,
     notificationToCSE                   [3]  NULL                         OPTIONAL,
     csi-Active                          [4]  NULL                         OPTIONAL,
     ...}
--   notificationToCSE and csi-Active shall not be present when GPRS-CSI is sent to SGSN.
--   They may only be included in ATSI/ATM ack/NSDC message.
--   GPRS-CamelTDPData and  camelCapabilityHandling shall be present in
--   the GPRS-CSI sequence.
--   If GPRS-CSI is segmented, gprs-CamelTDPDataList and camelCapabilityHandling shall be
--   present in the first segment
```

…

****** Section for Information ******

6.3.1 GPRS CAMEL Subscription Information (GPRS-CSI)

This subclause defines the contents of the GPRS CAMEL Subscription Information.

6.3.1.1 gsmSCF Address

Address to be used to access the gsmSCF for a particular subscriber. The address shall be an E.164 number to be used for routeing.

6.3.1.2 Service Key

The Service Key identifies to the gsmSCF the service logic that shall apply.

6.3.1.3 Default GPRS Handling

The Default GPRS Handling indicates whether the GPRS session or PDP context shall be released or continued as requested in case of error in the gprsSSF to gsmSCF dialogue.

6.3.1.4 TDP List

The TDP List indicates on which detection point triggering shall take place.

6.3.1.5 CAMEL Capability Handling

CAMEL Capability Handling indicates the phase of CAMEL which is asked by the gsmSCF for the service.

6.3.1.6 CSI state

The CSI state indicates whether the GPRS-CSI is active or not.

6.3.1.7 Notification flag

The notification flag indicates whether the change of the GPRS-CSI shall trigger Notification on Change of Subscriber Data or not.

6.3.1.8 gsmSCF address list for CSI

The gsmSCF address list contains a list of gsmSCF addresses to which Notification on Change of Subscriber Data is to be sent. This list is common to all CSI.

****** Modified Section ******

6.6.3.2 Insert Subscriber Data

6.6.3.2.1 Description

This IF is specified in 3GPP TS 29.002 [4] and used by the HLR to insert subscriber data in the SGSN.

6.6.3.2.2 Information Elements

Insert Subscriber Data contains the following CAMEL specific IE:

Information element name	Required	Description
GPRS-CSI	C	This IE identifies the subscriber as having CAMEL GPRS services.

C Conditional (The IE shall be sent, if required).

GPRS-CSI contains the following information:

Information element name	Required	Description
GsmSCF Address	M	See subclause 6.3.1.1.
Service Key	M	See subclause 6.3.1.2.
Default Session Handling	M	See subclause 6.3.1.3.
TDP List	M	See subclause 6.3.1.4.
CAMEL Capability Handling	M	See subclause 6.3.1.5

M Mandatory (The IE shall always be sent).

****** End of document ******

3GPP TSG-CN2 #18
Puerto Rico, 14th - 18th May 2001

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CR-Form-v3

CHANGE REQUEST

23.078	**CR**	302	rev	**0**	Current version:	4.0.0

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

Title:	CAMEL Capability Handling in GPRS-CSI
Source:	CN2
Work item code:	CAMEL3 — ***Date:*** 17th May 2001
Category:	**A** — ***Release:*** REL-4

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Clauses affected:	6.6.3.2		
Other specs affected:	☒ Other core specifications ☐ Test specifications ☐ O&M Specifications	23.078 (R99)	
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Service Key	M	See subclause 6.3.1.2.
Default Session Handling	M	See subclause 6.3.1.3.
TDP List	M	See subclause 6.3.1.4.
CAMEL Capability Handling	M	See subclause 6.3.1.5

M Mandatory (The IE shall always be sent).

****** End of document ******