3GPP TSG CN Plenary Meeting #12 **Tdoc NP-010313**
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 8 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-	Phase	Subject	Cat	Ver_C
29.078	168	1	N2-010394	R99	Clarification of the TC dialogue termination	F	3.7.0
29.078	169	1	N2-010395	Rel-4	Clarification of the TC dialogue termination	A	4.0.0
29.078	170	1	N2-010396	R99	The termination of the dialogue is not clear after ActivityTestGPRS Return Result	F	3.7.0
29.078	171	1	N2-010397	Rel-4	The termination of the dialogue is not clear after ActivityTestGPRS Return Result	A	4.0.0
29.078	172	1	N2-010410	R99	Alignement the 29.078 on the 23.078	F	3.7.0
29.078	179		N2-010411	Rel-4	Alignement the 29.078 on the 23.078	A	4.0.0
29.078	174	1	N2-010442	R99	Setting of End User Address Spare Bits	F	3.7.0
29.078	181		N2-010443	Rel-4	Setting of End User Address Spare Bits	A	4.0.0

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

Tdoc N2-010394

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **168** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

*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 the TC dialogue termination
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	4.5.2001
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 not suitable to send the class 1 operations in TC-END.
Summary of change:	⌘	The termination of the TC dialogue is clarified so that after class 1 operation, the related result/error have to be received before the termination of the TC dialogue.
Consequences if not approved:	⌘	May affect incorrect implementation.

Clauses affected:	⌘	12.1.7.1.3
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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

12.1.7.1.3 gprsSSF-to-gsmSCF messages

This subclause defines the normal procedures for TC messages from the gprsSSF to the gsmSCF.

gprsSSF-FSM related messages

A GPRS dialogue and a TC dialogue shall be established when the gprsSSF moves from the state Idle to the state Waiting for Instructions. The InitialDPGPRS operation shall be transmitted in the same TC message, i.e. TC-BEGIN. It shall contain the GPRS-Reference as assigned by the SGSN in the originationReference. The gprsSSF may intiate the subsequent TC dialogues for this GPRS dialogue with the following operations:

- ApplyChargingReportGPRS
- EntityReleasedGPRS
- EventReportGPRS

The gprsSSF shall memorise the gsmSCF address used in the first response message to the InitialDPGPRS, and use it in the further TC dialogues. The gsmSCF shall memorise the gprsSSF address received along with the InitialDPGPRS, and use it in the further TC dialogues for the relationship between these processes.

The gsmSCF may open subsequent TC dialogues with the following CAP operations:

- ActivityTestGPRS;
- ApplyChargingGPRS;
- CancelGPRS;
- FurnishChargingInformationGPRS;
- ReleaseGPRS;
- RequestReportGPRSEvent;
- SendChargingInformationGPRS.

The CAP operation that opens a TC dialogue shall be sent with a TC-BEGIN request primitive. This message shall contain the GPRS-ReferenceNumber assigned by the sender of this message in the originationReference. If the operation opens a subsequent TC dialogue this message shall contain also the previously received destinationReference. If an operation opens a GPRS dialogue then the TC message reply shall contain the originationReference as assigned by the sender, i.e. the gsmSCF.

The TC dialogue shall be closed for the idle periods, i.e. when the gprsSSF moves from the Waiting for Instructions state to the Idle state, if the gprsSSF is in the Monitoring state and has received all replies or time-outs for the operations sent, after standalone operations of the SCF in Monitoring state if gprsSSF is not going to the Idle state (ActivityTestGPRS, ApplyChargingGPRS, CancelGPRS, FurnishChargingInformationGPRS, RequestReportGPRSEvent, SendChargingInformationGPRS), or at the end of a GPRS dialogue.
Each TC dialogue shall be terminated by the gprsSSF using TC-END (basic end). The following operations can cause the end of the GPRS dialogue:

- ContinueGPRS;
- ConnectGPRS;
- ApplyChargingReportGPRS result;
- EntityReleasedGPRS rersult;
- EventReportGPRS (EDP-N) result;
- CancelGPRS;
- ReleaseGPRS;

- RequestReportGPRSEvent (disarming of DPs).

When the gprsSSF makes a non-error case state transition to the state Idle and there is one or more pending operation and TC dialogue is established, TC dialogue may be terminated by TC-END primitive with zero component(s) after all pending operations have been sent. When the gprsSSF sends the last EventReportGPRS, EntityReleasedGPRS or ApplyChargingReportGPRS, then after reception of the result or error, the GPRS dialogue may be ended from the gprsSSF by a TC-END request primitive with basic end.

In the case that there is no pending operation, result nor error, and TC dialogue is established, TC dialogue shall be terminated by TC-END primitive with zero component.

In the case where a PDP context release or detach is initiated by any other entity than an gsmSCF, the gprsSSF shall end a GPRS dialogue with the EntityReleasedGPRS operation if the gprsSSF has no armed DP to report nor pending ApplyChargingReportGPRS which should reported.

In the case of overlapping dialogues for the same GPRS dialogue the gsmSCF opened TC dialogue is aborted by the gprsSSF with the abort reason overlapping-dialogue as specified in clause 5.7. This abort reason is used to indicate to the gsmSCF that a specific instance already has a TC dialogue open. It is typically obtained when both the gsmSCF and gprsSSF open a new dialogue at the same time. While the gprsSSF waits for a response to an operation sent in TC-BEGIN it may receive an operation from the gsmSCF in TC-BEGIN. In such cases the dialogue opened by the gprsSSF is maintained and the dialogue opened by the gsmSCF is aborted with this abort reason.

SSME-FSM related messages

The following procedures shall be followed:

- The dialogue shall be ended with basic end when the ActivityTestGPRS Return Result is sent.

****** END OF DOCUMENT ******

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

Tdoc N2-010395

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **169** ⌘ rev **1** ⌘ 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 the TC dialogue termination
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	4.5.2001
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 not suitable to send the class 1 operations in TC-END.
Summary of change:	⌘	The termination of the TC dialogue is clarified so that after class 1 operation, the related result/error have to be received before the termination of the TC dialogue.
Consequences if not approved:	⌘	May affect incorrect implementation.

Clauses affected:	⌘	12.1.7.1.3		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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

12.1.7.1.3 gprsSSF-to-gsmSCF messages

This subclause defines the normal procedures for TC messages from the gprsSSF to the gsmSCF.

gprsSSF-FSM related messages

A GPRS dialogue and a TC dialogue shall be established when the gprsSSF moves from the state Idle to the state Waiting for Instructions. The InitialDPGPRS operation shall be transmitted in the same TC message, i.e. TC-BEGIN. It shall contain the GPRS-Reference as assigned by the SGSN in the originationReference. The gprsSSF may intiate the subsequent TC dialogues for this GPRS dialogue with the following operations:

- ApplyChargingReportGPRS
- EntityReleasedGPRS
- EventReportGPRS

The gprsSSF shall memorise the gsmSCF address used in the first response message to the InitialDPGPRS, and use it in the further TC dialogues. The gsmSCF shall memorise the gprsSSF address received along with the InitialDPGPRS, and use it in the further TC dialogues for the relationship between these processes.

The gsmSCF may open subsequent TC dialogues with the following CAP operations:

- ActivityTestGPRS;
- ApplyChargingGPRS;
- CancelGPRS;
- FurnishChargingInformationGPRS;
- ReleaseGPRS;
- RequestReportGPRSEvent;
- SendChargingInformationGPRS.

The CAP operation that opens a TC dialogue shall be sent with a TC-BEGIN request primitive. This message shall contain the GPRS-ReferenceNumber assigned by the sender of this message in the originationReference. If the operation opens a subsequent TC dialogue this message shall contain also the previously received destinationReference. If an operation opens a GPRS dialogue then the TC message reply shall contain the originationReference as assigned by the sender, i.e. the gsmSCF.

The TC dialogue shall be closed for the idle periods, i.e. when the gprsSSF moves from the Waiting for Instructions state to the Idle state, if the gprsSSF is in the Monitoring state and has received all replies or time-outs for the operations sent, after standalone operations of the SCF in Monitoring state if gprsSSF is not going to the Idle state (ActivityTestGPRS, ApplyChargingGPRS, CancelGPRS, FurnishChargingInformationGPRS, RequestReportGPRSEvent, SendChargingInformationGPRS), or at the end of a GPRS dialogue.
Each TC dialogue shall be terminated by the gprsSSF using TC-END (basic end). The following operations can cause the end of the GPRS dialogue:

- ContinueGPRS;
- ConnectGPRS;
- ApplyChargingReportGPRS result;
- EntityReleasedGPRS rersult;
- EventReportGPRS (EDP-N) result;
- CancelGPRS;
- ReleaseGPRS;

- RequestReportGPRSEvent (disarming of DPs).

When the gprsSSF makes a non-error case state transition to the state Idle and there is one or more pending operation and TC dialogue is established, TC dialogue may be terminated by TC-END primitive with zero component(s) after all pending operations have been sent. When the gprsSSF sends the last EventReportGPRS, EntityReleasedGPRS or ApplyChargingReportGPRS, then after reception of the result or error, the GPRS dialogue may be ended from the gprsSSF by a TC-END request primitive with basic end.

In the case that there is no pending operation, result nor error, and TC dialogue is established, TC dialogue shall be terminated by TC-END primitive with zero component.

In the case where a PDP context release or detach is initiated by any other entity than an gsmSCF, the gprsSSF shall end a GPRS dialogue with the EntityReleasedGPRS operation if the gprsSSF has no armed DP to report nor pending ApplyChargingReportGPRS which should reported.

In the case of overlapping dialogues for the same GPRS dialogue the gsmSCF opened TC dialogue is aborted by the gprsSSF with the abort reason overlapping-dialogue as specified in clause 5.7. This abort reason is used to indicate to the gsmSCF that a specific instance already has a TC dialogue open. It is typically obtained when both the gsmSCF and gprsSSF open a new dialogue at the same time. While the gprsSSF waits for a response to an operation sent in TC-BEGIN it may receive an operation from the gsmSCF in TC-BEGIN. In such cases the dialogue opened by the gprsSSF is maintained and the dialogue opened by the gsmSCF is aborted with this abort reason.

SSME-FSM related messages

The following procedures shall be followed:

- The dialogue shall be ended with basic end when the ActivityTestGPRS Return Result is sent.

****** END OF DOCUMENT ******

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

Tdoc N2-010396

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **170** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

*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 the TC dialogue termination after ActivityTestGPRS result
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	4.5.2001
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)*
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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 termination of the TC-dialogue after ActivityTestGPRS Return Result is not clear specified.
Summary of change:	⌘	The termination of the TC-dialogue is clarified so that after ActivityTestGPRS Return Result, the TC-dialogue shall be terminated with empty TC-END.
Consequences if not approved:	⌘	May result to the different implementations.

Clauses affected:	⌘	12.1.7.1.3		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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

12.1.7.1.3 gprsSSF-to-gsmSCF messages

This subclause defines the normal procedures for TC messages from the gprsSSF to the gsmSCF.

gprsSSF-FSM related messages

A GPRS dialogue and a TC dialogue shall be established when the gprsSSF moves from the state Idle to the state Waiting for Instructions. The InitialDPGPRS operation shall be transmitted in the same TC message, i.e. TC-BEGIN. It shall contain the GPRS-Reference as assigned by the SGSN in the originationReference. The gprsSSF may intiate the subsequent TC dialogues for this GPRS dialogue with the following operations:

- ApplyChargingReportGPRS
- EntityReleasedGPRS
- EventReportGPRS

The gprsSSF shall memorise the gsmSCF address used in the first response message to the InitialDPGPRS, and use it in the further TC dialogues. The gsmSCF shall memorise the gprsSSF address received along with the InitialDPGPRS, and use it in the further TC dialogues for the relationship between these processes.

The gsmSCF may open subsequent TC dialogues with the following CAP operations:

- ActivityTestGPRS;
- ApplyChargingGPRS;
- CancelGPRS;
- FurnishChargingInformationGPRS;
- ReleaseGPRS;
- RequestReportGPRSEvent;
- SendChargingInformationGPRS.

The CAP operation that opens a TC dialogue shall be sent with a TC-BEGIN request primitive. This message shall contain the GPRS-ReferenceNumber assigned by the sender of this message in the originationReference. If the operation opens a subsequent TC dialogue this message shall contain also the previously received destinationReference. If an operation opens a GPRS dialogue then the TC message reply shall contain the originationReference as assigned by the sender, i.e. the gsmSCF.

The TC dialogue shall be closed for the idle periods, i.e. when the gprsSSF moves from the Waiting for Instructions state to the Idle state, if the gprsSSF is in the Monitoring state and has received all replies or time-outs for the operations sent, after standalone operations of the SCF in Monitoring state if gprsSSF is not going to the Idle state (ActivityTestGPRS, ApplyChargingGPRS, CancelGPRS, FurnishChargingInformationGPRS, RequestReportGPRSEvent, SendChargingInformationGPRS), or at the end of a GPRS dialogue.
Each TC dialogue shall be terminated by the gprsSSF using TC-END (basic end). The following operations can cause the end of the GPRS dialogue:

- ContinueGPRS;
- ConnectGPRS;
- ApplyChargingReportGPRS result;
- EntityReleasedGPRS rersult;
- EventReportGPRS (EDP-N) result;
- CancelGPRS;
- ReleaseGPRS;

- RequestReportGPRSEvent (disarming of DPs).

When the gprsSSF makes a non-error case state transition to the state Idle and there is one or more pending operation and TC dialogue is established, TC dialogue may be terminated by TC-END primitive with zero component(s) after all pending operations have been sent. When the gsmSSF sends the last EventReportGPRS or ApplyChargingReportGPRS the GPRS dialogue may be ended from the gprsSSF by a TC-END request primitive with basic end.

In the case that there is no pending operation, result nor error, and TC dialogue is established, TC dialogue shall be terminated by a TC-END primitive with zero components.

In the case where a PDP context release or detach is initiated by any other entity than an gsmSCF, the gprsSSF shall end a GPRS dialogue with the EntityReleasedGPRS operation if the gprsSSF has no armed DP to report nor pending ApplyChargingReportGPRS which should reported.

In the case of overlapping dialogues for the same GPRS dialogue the gsmSCF opened TC dialogue is aborted by the gprsSSF with the abort reason overlapping-dialogue as specified in clause 5.7. This abort reason is used to indicate to the gsmSCF that a specific instance already has a TC dialogue open. It is typically obtained when both the gsmSCF and gprsSSF open a new dialogue at the same time. While the gprsSSF waits for a response to an operation sent in TC-BEGIN it may receive an operation from the gsmSCF in TC-BEGIN. In such cases the dialogue opened by the gprsSSF is maintained and the dialogue opened by the gsmSCF is aborted with this abort reason.

SSME-FSM related messages

The following procedures shall be followed:

- The TC-dialogue shall be terminated by a TC-END primitive with zero components afterthe ActivityTestGPRS Return Result is sent.

****** END OF DOCUMENT ******

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

Tdoc N2-010397

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **171** ⌘ rev **1** ⌘ 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:	⌘	Clarification of the TC dialogue termination after AT result
Source:	⌘	CN2
Work item code:	⌘	CAMEL phase 3
Date:	⌘	4.5.2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
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Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
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R99 *(Release 1999)*
REL-4 *(Release 4)*
REL-5 *(Release 5)*

Reason for change:	⌘	The termination of the TC-dialogue after ActivityTestGPRS Return Result is not clear specified.
Summary of change:	⌘	The termination of the TC-dialogue is clarified so that after ActivityTestGPRS Return Result, the TC-dialogue shall be terminated with empt TC-END.
Consequences if not approved:	⌘	May affect different implementations.

Clauses affected:	⌘	12.1.7.1.3		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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

12.1.7.1.3 gprsSSF-to-gsmSCF messages

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- CancelGPRS;
- FurnishChargingInformationGPRS;
- ReleaseGPRS;
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- SendChargingInformationGPRS.

The CAP operation that opens a TC dialogue shall be sent with a TC-BEGIN request primitive. This message shall contain the GPRS-ReferenceNumber assigned by the sender of this message in the originationReference. If the operation opens a subsequent TC dialogue this message shall contain also the previously received destinationReference. If an operation opens a GPRS dialogue then the TC message reply shall contain the originationReference as assigned by the sender, i.e. the gsmSCF.

The TC dialogue shall be closed for the idle periods, i.e. when the gprsSSF moves from the Waiting for Instructions state to the Idle state, if the gprsSSF is in the Monitoring state and has received all replies or time-outs for the operations sent, after standalone operations of the SCF in Monitoring state if gprsSSF is not going to the Idle state (ActivityTestGPRS, ApplyChargingGPRS, CancelGPRS, FurnishChargingInformationGPRS, RequestReportGPRSEvent, SendChargingInformationGPRS), or at the end of a GPRS dialogue.
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- EntityReleasedGPRS rersult;
- EventReportGPRS (EDP-N) result;
- CancelGPRS;
- ReleaseGPRS;

- RequestReportGPRSEvent (disarming of DPs).

When the gprsSSF makes a non-error case state transition to the state Idle and there is one or more pending operation and TC dialogue is established, TC dialogue may be terminated by TC-END primitive with zero component(s) after all pending operations have been sent. When the gsmSSF sends the last EventReportGPRS or ApplyChargingReportGPRS the GPRS dialogue may be ended from the gprsSSF by a TC-END request primitive with basic end.

In the case that there is no pending operation, result nor error, and TC dialogue is established, TC dialogue shall be terminated by a TC-END primitive with zero components.

In the case where a PDP context release or detach is initiated by any other entity than an gsmSCF, the gprsSSF shall end a GPRS dialogue with the EntityReleasedGPRS operation if the gprsSSF has no armed DP to report nor pending ApplyChargingReportGPRS which should reported.

In the case of overlapping dialogues for the same GPRS dialogue the gsmSCF opened TC dialogue is aborted by the gprsSSF with the abort reason overlapping-dialogue as specified in clause 5.7. This abort reason is used to indicate to the gsmSCF that a specific instance already has a TC dialogue open. It is typically obtained when both the gsmSCF and gprsSSF open a new dialogue at the same time. While the gprsSSF waits for a response to an operation sent in TC-BEGIN it may receive an operation from the gsmSCF in TC-BEGIN. In such cases the dialogue opened by the gprsSSF is maintained and the dialogue opened by the gsmSCF is aborted with this abort reason.

SSME-FSM related messages

The following procedures shall be followed:

- The dialogue shall be terminated by a TC-END primitive with zero components afterthe ActivityTestGPRS Return Result is sent.

****** END OF DOCUMENT ******

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

Tdoc N2-010410

CR-Form-v3

CHANGE REQUEST

29.078	**CR**	**172**	rev	**1**	Current version:	3.7.0

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

Title:	Alignement the 29.078 on the 23.078
Source:	CN2
Work item code:	CAMEL3
Date:	19th April 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:	The 2 specifications 3GPP TS 23.078 and 3GPP TS 29.078 are in line on certain points and that may induce some misunderstandings.
Summary of change:	The changes are the following : Sub-clause 11 : description of the CallInformation request procedure description of the Connect procedure description of the Initial-DP procedure description of the RequestReportBSCMEvent procedure
Consequences if not approved:	The not alignement between the 2 spefications may induce wrong implementations

Clauses affected:	§ 11
Other specs affected:	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications
Other comments:	

3GPP TS 29.078 V3.7.0 (2001-03)

11.10 CallInformationRequest procedure

11.10.1 General description

This operation is used to request the gsmSSF to record specific information about a single call party and report it to the gsmSCF using the "CallInformationReport" operation.

11.10.1.1 Parameters

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

  - callAttemptElapsedTime:
    This parameter indicates the duration between the end of CAP processing of operations initiating call setup ("Connect","Continue" or "ContinueWithArgument") and the received answer indication from called party side. For a calling party leg this parameter has to be set to 0.

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

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

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

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

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

11.10.2 Responding entity (gsmSSF)

11.10.2.1 Normal procedure

gsmSSF precondition:

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

gsmSSF postcondition:

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

(2) The gsmSSF is waiting for further instructions.

The gsmSSF may receive the "CallInformationRequest" operation within an existing call associated (CA) dialogue only.

The "CallInformationRequest" operation is accepted by the gsmSSF Finite State Machine (gsmSSF-FSM) only in the state "Waiting for Instructions". The operation does not lead to any transition to another state.

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

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

11.10.2.2 Error handling

In any other than the "Waiting for Instruction" state the "CallInformationRequest" operation will be handled as an error with the error code "UnexpectedComponentSequence".

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.13 Connect procedure

11.13.1 General description

This operation is used to request the gsmSSF to perform the call processing actions to route a call to a specific destination.

In general all parameters which are provided in a Connect operation to the gsmSSF shall replace the corresponding signalling parameter in the CCF in O-BCSM, in accordance with ES 201 296 [38] and shall be used for subsequent call processing. The CCF of the T-BCSM shall send corresponding signalling parameters to new call leg without using them in subsequent call processing. Parameters which are not provided by the Connect operation shall retain their value (if already assigned) in the CCF for subsequent call processing.

11.13.1.1 Parameters

- destinationRoutingAddress:
  This parameter contains the called party numbers towards which the call is to be routed.

- alertingPattern:
  This parameter indicates the type of alerting to be applied. It is defined in 3GPP TS 29.002 [13].

- serviceInteractionIndicatorsTwo:
  This parameter contains indicators which are exchanged between the gsmSSF and the gsmSCF to resolve interactions between IN based services and network based services.

- callingPartysCategory:
  This parameter indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).

- originalCalledPartyID:
  This parameter carries the dialled digits if the call is forwarded by the gsmSCF.

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

- redirectionInformation:
  This parameter contains forwarding related information, such as redirecting counter.

- genericNumbers:
  This parameter allows the gsmSCF to set the Generic Number parameter used in the network. It is used for transfer of Additional Calling Party Number.

- suppressionOfAnnouncement:
  This parameter indicates that announcements and tones which are played in the exchange at non-successful call set-up attempts shall be suppressed.

- oCSIApplicable:
  This parameter indicates to the GMSC/gsmSSF or VMSC/gsmSSF that the Originating CAMEL Subscription Information, if present, shall be applied on the outgoing call leg created with the Connect operation. For the use of this parameter see 3GPP TS 23.078 [42].

- Carrier:
  This parameter indicates carrier information. It consists of the carrier selection field followed by the Carrier ID information to be used by gsmSSF for routing a call to a carrier.

  It comprises the following embedded sub-parameter:

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

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

- naOliInfo:
  This parameter contains originating line information which identifies the charged party number type to the carrier.

- ChargeNumber:
  This parameter contains the number that identifies the entity to be charged for the call. It identifies the chargeable number for the usage of a carrier (applicable on a call sent into a North American long distance carrier). For a definition of this parameter refer to ANSI ISUP T1.113 [53].

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

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

11.13.2 Responding entity (gsmSSF)

11.13.2.1 Normal procedure

gsmSSF precondition:

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

(2) BCSM: Basic call processing has been suspended at a DP.

(3) The gsmSSF is in state "Waiting for Instructions".

gsmSSF postcondition:

(1) The gsmSSF performs the call processing actions to route the call to the specified destination.

(2) In the O-BCSM, call processing resumes at PIC Analyze_Information.

On receipt of this operation in the gsmSSF state "Waiting for Instructions", the gsmSSF performs the following actions:

- The gsmSSF cancels T_{SSF}.

- If no EDPs have been armed and neither a CallInformationReport nor an ApplyChargingReport has been requested, the gsmSSF goes to state "Idle". Otherwise, the gsmSSF goes to state "Monitoring".

No implicit activation or deactivation of DPs occurs.

Statistic counter(s) are not affected.

11.13.2.2 Error handling

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.30 InitialDP procedure

11.30.1 General description

This operation is sent by the gsmSSF after detection of a TDP-R in the BCSM, to request the gsmSCF for instructions to complete the call.

11.30.1.1 Parameters

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

- calledPartyNumber:
  This parameter contains the number used to identify the called party in the forward direction, i.e. see EN 300 356-1 [8]. This parameter shall be sent only in the Mobile Terminating ,Mobile Forwarding and Mobile Originating on unsuccessful TDP cases.

- callingPartyNumber:
  This parameter carries the calling party number to identify the calling party or the origin of the call. See EN 300 356-1 [8] Calling Party Number signalling information.

- callingPartysCategory:
  Indicates the type of calling party (e.g. operator, pay phone, ordinary subscriber). See EN 300 356-1 [8] Calling Party Category signalling information.

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

- originalCalledPartyID:
  This parameter carries the dialled digits if the call has met call forwarding on the route to the gsmSSF. See EN 300 356-1[8] Original Called Number signalling information.

- highlayerCompatibility:
  This parameter indicates the type of the high layer compatibility, which will be used to determine the ISDN - teleservice of a connected ISDN terminal. For encoding DSS1 (EN 300 403-1 [10]) is used. The highlayerCompatibility can also be transported by ISUP (e.g. within the ATP (see ITU-T Recommendation Q.763 [20]) parameter).

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

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

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

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

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

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

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

- redirectionInformation:
  It contains forwarding related information, such as redirecting counter.
  See ITU-T Recommendation Q.763 [20] Redirection Information signalling information.

- iPSSPCapabilities:
  Indicates which gsmSRF resources supported within the VMSC/GMSC the gsmSSF resides in are attached and available.

- serviceInteractionIndicatorsTwo:
  This parameter contains indicators which are exchanged between the gsmSSF and the gsmSCF to resolve interactions between IN based services and network based services.

- iMSI:
  IMSI of the mobile subscriber for which the service is invoked. For encoding see 3GPP TS 29.002 [13].

- subscriberState:
  The state of the mobile subscriber for which the service is invoked. The possible states are busy, idle and not reachable. For encoding see 3GPP TS 29.002 [13].

- locationInformation:
  This parameter indicates the whereabouts of the MS, and the age of the information defining the whereabouts. For encoding see 3GPP TS 29.002 [13].

- ext-BasicServiceCode:
  Indicates the Basic Service Code. For encoding see 3GPP TS 29.002 [13].

- callReferenceNumber:
  This parameter gives the call reference number assigned to the call by the CCF. For encoding see 3GPP TS 29.002 [13].

- mscAddress:
  This parameter gives the mscId assigned to the MSC. For encoding see 3GPP TS 29.002 [13].

- gmscAddress:
  This parameter gives the gmscId assigned to the GMSC. For encoding see 3GPP TS 29.002 [13].

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

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

- gsm-ForwardingPending:
  This parameter indicates that a forwarded-to-number was received and the call will be forwarded due to GSM supplementary service call forwarding in the GMSC or in the VMSC.

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

  It comprises the following embedded sub-parameter:

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

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

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

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

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

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

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

  For "RouteSelectFailure" it will contain the "FailureCause", if available.

  For “O-Busy” it will contain the "BusyCause", if available.

  If the busy event is triggered by an ISUP release message, the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.
  If the Busy event is trigerred by a MAP error, for example: Absent subscriber, received from the HLR, the MAP cause is mapped to the corresponding ISUP release cause.

  For “T-Busy” it may contain the following parameters, if available.

  If the T-busy event is triggered by an ISUP release message, the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.
  If the T-busy event is triggered by a MAP error, for example: Absent subscriber, received from the HLR, the MAP cause is mapped to the corresponding ISUP release cause.
  If the T-busy event is triggered by call forwarding invocation in the GMSC/VMSC the BusyCause will refer to the type of the call forwarding service according to the mapping table in 3GPP TS 23.078.

11.30.2 Invoking entity (gsmSSF)

11.30.2.1 Normal procedure

gsmSSF precondition:

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

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

gsmSSF postcondition:

(1) A control relationship has been established if the DP was armed as a TDP-R. The gsmSSF moves to the State "Waiting for Instructions".

The address of the gsmSCF is fetched from the valid CSI. The gsmSSF provides all available parameters. Otherwise the gsmSSF proceeds with call handling without CAMEL Service.

The gsmSSF application timer T_{SSF} is set when the gsmSSF sends "InitialDP" for requesting instructions from the gsmSCF. It is used to prevent excessive call suspension time.

11.30.2.2 Error handling

If the destination gsmSCF is not accessible then the call proceeds according to the 'default call handling' parameter in the CSI.

On expiration of T_{SSF} before receiving any operation, the gsmSSF aborts the interaction with the gsmSCF and the call continues according to the 'default call handling' parameter in the CSI.

If the calling party abandons after the sending of "InitialDP", then the gsmSSF aborts the control relationship by means of an abort to TC. Note that TC will wait until the first response message from the gsmSCF has been received before it sends an abort to the gsmSCF (see also clause 12).

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.38 RequestReportBCSMEvent procedure

11.38.1 General description

This operation is used to request the gsmSSF to monitor for a call-related event (e.g., BCSM events such as busy or no answer), then send a notification back to the gsmSCF when the event is detected.

NOTE: If the RequestReportBCSMEvent requests arming of the current DP from which the call processing was suspended, the next occurrence of the DP encountered during BCSM processing will be detected (i.e. not the current one from which the call was suspended).

The DP arming principle is as follows:

- The DPs O_Disconnect and T_Disconnect can be armed as well as for leg1 as leg2 depending on what direction (either from the A-party which is connected to leg1 or from the B-party connected to the leg2) events have to be captured. As an example the Disconnect DP can be armed as well as for leg1 and leg2, in that case if a release request is received from the A-party it will be detected by the Disconnect DP armed for leg1, while a release request from the B-party shall be detected by arming the leg2 Disconnect DP.

- The O_Abandon DP can only be armed for leg1 in the O_BCSM and the T_Abandon can only be armed for leg1 in the T_BCSM.

Table 11-1: DP Arming Table for O-BCSM:

O_BCSM	leg1	leg2	Default_leg_ID
Route_Select_Failure DP	-	X	2
O_Called_Party_Busy DP	-	X	2
O_No_Answer DP	-	X	2
O_Answer DP	-	X	2
O_Disconnect DP	X	X	- o1
O_Abandon DP	X	-	1
o1) The "legID" parameter shall be included Nomenclature: X = Arming Applicable - = Not Applicable			

Table 11-2: DP Arming Table for T-BCSM:

T_BCSM	leg2	leg1	Default Leg ID
T_Busy DP	X	-	2
T_No_Answer DP	X	-	2
T_Answer DP	X	-	2
T_Disconnect DP	X	X	- t1
T_Abandon DP	-	X t2	1
t1) The "legID" parameter shall be included t2) T_Abandon can only be armed for the leg1. Nomenclature: X = Arming Applicable - = Not Applicable			

11.38.1.1 Parameters

- bcsmEvents:
  This parameter specifies the event or events of which a report is requested.

  - eventTypeBCSM:
    This parameter specifies the type of event of which a report is requested.

- monitorMode:
  This parameter indicates how the event shall be reported. When the "monitorMode" is "interrupted", the event shall be reported as a request, if the "monitorMode" is "notifyAndContinue", the event shall be reported as a notification, if the "monitorMode" is "transparent", the event shall not be reported.

- legID:
  This parameter indicates the party in the call for which the event shall be reported. gsmSCF will use the option "sendingSideID" only.

  - sendingSideID:

    If not included, the following defaults are assumed for LegID:

    "legID" = 1 for the events O-Abandon and T-Abandon,

    "legID" = 2 for the events RouteSelectFailure, O-Busy, O-NoAnswer, O-Answer, T-Busy, T-NoAnswer, and T-Answer.

  The "legID" parameter shall always be included for the events O-Disconnect and T-Disconnect.

- dPSpecificCriteria:
  This parameter indicates information specific to the EDP to be armed.

  - applicationTimer:
    This parameter indicates the NoAnswer timer value for the NoAnswer event. If the user does not answer the call within the allotted time, the gsmSSF reports the event to the gsmSCF. This timer shall be shorter than the network no-answer timer.

11.38.2 Responding entity (gsmSSF)

11.38.2.1 Normal procedure

gsmSSF precondition:

(1) A control relationship exists between the gsmSSF and the gsmSRF.

(2) The gsmSSF is in either the state "Waiting for Instructions" or the state "Monitoring".

NOTE: In state "monitoring" only requests to disarm detection points (with MonitorMode set to "Transparent") or send notifications of events (with MonitorMode set to "NotifyAndContinue") shall be accepted.

gsmSSF postcondition:

(1) The requested EDPs have been armed or disarmed as indicated.

(2) Previously requested events are monitored until ended by a transparent monitor mode, until the end of the call, until the EDPs are detected or until the corresponding leg is released.

(3) The gsmSSF remains in the same state, unless all EDPs have been disarmed and no CallInformationReport or ApplyChargingReport has been requested; in the latter case the gsmSSF moves to the state "Idle".

11.38.2.2 Error handling

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

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

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CHANGE REQUEST

29.078	**CR**	**179**	rev	**-**	Current version:	4.0.0

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

Title:	Alignement the 29.078 on the 23.078		
Source:	CN2		
Work item code:	CAMEL3	***Date:***	19th April 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:	The 2 specifications 3GPP TS 23.078 and 3GPP TS 29.078 are in line on certain points and that may induce some misunderstandings.
Summary of change:	The changes are the following : Sub-clause 11 : description of the CallInformation request procedure description of the Connect procedure description of the Initial-DP procedure description of the RequestReportBSCMEvent procedure
Consequences if not approved:	The not alignement between the 2 spefications may induce wrong implementations

Clauses affected:	§ 11	
Other specs affected:	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	
Other comments:		

11.10 CallInformationRequest procedure

11.10.1 General description

This operation is used to request the gsmSSF to record specific information about a single call party and report it to the gsmSCF using the "CallInformationReport" operation.

11.10.1.1 Parameters

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

  - callAttemptElapsedTime:
    This parameter indicates the duration between the end of CAP processing of operations initiating call setup ("Connect","Continue" or "ContinueWithArgument") and the received answer indication from called party side. For a calling party leg this parameter has to be set to 0.

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

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

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

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

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

11.10.2 Responding entity (gsmSSF)

11.10.2.1 Normal procedure

gsmSSF precondition:

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

gsmSSF postcondition:

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

(2) The gsmSSF is waiting for further instructions.

The gsmSSF may receive the "CallInformationRequest" operation within an existing call associated (CA) dialogue only.

The "CallInformationRequest" operation is accepted by the gsmSSF Finite State Machine (gsmSSF-FSM) only in the state "Waiting for Instructions". The operation does not lead to any transition to another state.

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

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

11.10.2.2 Error handling

In any other than the "Waiting for Instruction" state the "CallInformationRequest" operation will be handled as an error with the error code "UnexpectedComponentSequence".

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.13 Connect procedure

11.13.1 General description

This operation is used to request the gsmSSF to perform the call processing actions to route a call to a specific destination.

In general all parameters which are provided in a Connect operation to the gsmSSF shall replace the corresponding signalling parameter in the CCF in O-BCSM, in accordance with ES 201 296 [38] and shall be used for subsequent call processing. The CCF of the T-BCSM shall send corresponding signalling parameters to new call leg without using them in subsequent call processing. Parameters which are not provided by the Connect operation shall retain their value (if already assigned) in the CCF for subsequent call processing.

11.13.1.1 Parameters

- destinationRoutingAddress:
  This parameter contains the called party numbers towards which the call is to be routed.

- alertingPattern:
  This parameter indicates the type of alerting to be applied. It is defined in 3GPP TS 29.002 [13].

- serviceInteractionIndicatorsTwo:
  This parameter contains indicators which are exchanged between the gsmSSF and the gsmSCF to resolve interactions between IN based services and network based services.

- callingPartysCategory:
  This parameter indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).

- originalCalledPartyID:
  This parameter carries the dialled digits if the call is forwarded by the gsmSCF.

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

- redirectionInformation:
  This parameter contains forwarding related information, such as redirecting counter.

- genericNumbers:
  This parameter allows the gsmSCF to set the Generic Number parameter used in the network. It is used for transfer of Additional Calling Party Number.

- suppressionOfAnnouncement:
  This parameter indicates that announcements and tones which are played in the exchange at non-successful call set-up attempts shall be suppressed.

- oCSIApplicable:
  This parameter indicates to the GMSC/gsmSSF or VMSC/gsmSSF that the Originating CAMEL Subscription Information, if present, shall be applied on the outgoing call leg created with the Connect operation. For the use of this parameter see 3GPP TS 23.078 [42].

- Carrier:
  This parameter indicates carrier information. It consists of the carrier selection field followed by the Carrier ID information to be used by gsmSSF for routing a call to a carrier.

  It comprises the following embedded sub-parameter:

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

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

- naOliInfo:
  This parameter contains originating line information which identifies the charged party number type to the carrier.

- ChargeNumber:
  This parameter contains the number that identifies the entity to be charged for the call. It identifies the chargeable number for the usage of a carrier (applicable on a call sent into a North American long distance carrier). For a definition of this parameter refer to ANSI ISUP T1.113 [53].

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

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

11.13.2 Responding entity (gsmSSF)

11.13.2.1 Normal procedure

gsmSSF precondition:

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

(2) BCSM: Basic call processing has been suspended at a DP.

(3) The gsmSSF is in state "Waiting for Instructions".

gsmSSF postcondition:

(1) The gsmSSF performs the call processing actions to route the call to the specified destination.

(2) In the O-BCSM, call processing resumes at PIC Analyze_Information.

On receipt of this operation in the gsmSSF state "Waiting for Instructions", the gsmSSF performs the following actions:

- The gsmSSF cancels T_{SSF}.

- If no EDPs have been armed and neither a CallInformationReport nor an ApplyChargingReport has been requested, the gsmSSF goes to state "Idle". Otherwise, the gsmSSF goes to state "Monitoring".

No implicit activation or deactivation of DPs occurs.

Statistic counter(s) are not affected.

11.13.2.2 Error handling

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.30 InitialDP procedure

11.30.1 General description

This operation is sent by the gsmSSF after detection of a TDP-R in the BCSM, to request the gsmSCF for instructions to complete the call.

11.30.1.1 Parameters

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

- calledPartyNumber:
  This parameter contains the number used to identify the called party in the forward direction, i.e. see EN 300 356-1 [8]. This parameter shall be sent only in the Mobile Terminating, Mobile Forwarding and Mobile Originating on unsuccessful TDP cases.

- callingPartyNumber:
  This parameter carries the calling party number to identify the calling party or the origin of the call. See EN 300 356-1 [8] Calling Party Number signalling information.

- callingPartysCategory:
  Indicates the type of calling party (e.g. operator, pay phone, ordinary subscriber). See EN 300 356-1 [8] Calling Party Category signalling information.

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

- originalCalledPartyID:
  This parameter carries the dialled digits if the call has met call forwarding on the route to the gsmSSF. See EN 300 356-1[8] Original Called Number signalling information.

- highlayerCompatibility:
  This parameter indicates the type of the high layer compatibility, which will be used to determine the ISDN - teleservice of a connected ISDN terminal. For encoding DSS1 (EN 300 403-1 [10]) is used. The highlayerCompatibility can also be transported by ISUP (e.g. within the ATP (see ITU-T Recommendation Q.763 [20]) parameter).

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

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

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

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

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

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

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

- redirectionInformation:
  It contains forwarding related information, such as redirecting counter.
  See ITU-T Recommendation Q.763 [20] Redirection Information signalling information.

- iPSSPCapabilities:
  Indicates which gsmSRF resources supported within the VMSC/GMSC the gsmSSF resides in are attached and available.

- serviceInteractionIndicatorsTwo:
  This parameter contains indicators which are exchanged between the gsmSSF and the gsmSCF to resolve interactions between IN based services and network based services.

- iMSI:
  IMSI of the mobile subscriber for which the service is invoked. For encoding see 3GPP TS 29.002 [13].

- subscriberState:
  The state of the mobile subscriber for which the service is invoked. The possible states are busy, idle and not reachable. For encoding see 3GPP TS 29.002 [13].

- locationInformation:
  This parameter indicates the whereabouts of the MS, and the age of the information defining the whereabouts. For encoding see 3GPP TS 29.002 [13].

- ext-BasicServiceCode:
  Indicates the Basic Service Code. For encoding see 3GPP TS 29.002 [13].

- callReferenceNumber:
  This parameter gives the call reference number assigned to the call by the CCF. For encoding see 3GPP TS 29.002 [13].

- mscAddress:
  This parameter gives the mscId assigned to the MSC. For encoding see 3GPP TS 29.002 [13].

- gmscAddress:
  This parameter gives the gmscId assigned to the GMSC. For encoding see 3GPP TS 29.002 [13].

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

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

- gsm-ForwardingPending:
  This parameter indicates that a forwarded-to-number was received and the call will be forwarded due to GSM supplementary service call forwarding in the GMSC or in the VMSC.

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

  It comprises the following embedded sub-parameter:

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

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

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

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

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

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

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

  For "RouteSelectFailure" it will contain the "FailureCause", if available.

  For “O-Busy” it will contain the "BusyCause", if available.

  If the busy event is triggered by an ISUP release message, the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.
  If the Busy event is trigerred by a MAP error, for example: Absent subscriber, received from the HLR, the MAP cause is mapped to the corresponding ISUP release cause.

  For “T-Busy” it may contain the following parameters, if available.

  If the T-busy event is triggered by an ISUP release message, the BusyCause is a copy of the ISUP release cause, for example: Subscriber absent, 20 or User busy, 17.
  If the T-busy event is triggered by a MAP error, for example: Absent subscriber, received from the HLR, the MAP cause is mapped to the corresponding ISUP release cause.
  If the T-busy event is triggered by call forwarding invocation in the GMSC/VMSC the BusyCause will refer to the type of the call forwarding service according to the mapping table in 3GPP TS 23.078.

11.30.2 Invoking entity (gsmSSF)

11.30.2.1 Normal procedure

gsmSSF precondition:

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

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

gsmSSF postcondition:

(1) A control relationship has been established if the DP was armed as a TDP-R. The gsmSSF moves to the State "Waiting for Instructions".

The address of the gsmSCF is fetched from the valid CSI. The gsmSSF provides all available parameters. Otherwise the gsmSSF proceeds with call handling without CAMEL Service.

The gsmSSF application timer T_{SSF} is set when the gsmSSF sends "InitialDP" for requesting instructions from the gsmSCF. It is used to prevent excessive call suspension time.

11.30.2.2 Error handling

If the destination gsmSCF is not accessible then the call proceeds according to the 'default call handling' parameter in the CSI.

On expiration of T_{SSF} before receiving any operation, the gsmSSF aborts the interaction with the gsmSCF and the call continues according to the 'default call handling' parameter in the CSI.

If the calling party abandons after the sending of "InitialDP", then the gsmSSF aborts the control relationship by means of an abort to TC. Note that TC will wait until the first response message from the gsmSCF has been received before it sends an abort to the gsmSCF (see also clause 12).

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

11.38 RequestReportBCSMEvent procedure

11.38.1 General description

This operation is used to request the gsmSSF to monitor for a call-related event (e.g., BCSM events such as busy or no answer), then send a notification back to the gsmSCF when the event is detected.

NOTE: If the RequestReportBCSMEvent requests arming of the current DP from which the call processing was suspended, the next occurrence of the DP encountered during BCSM processing will be detected (i.e. not the current one from which the call was suspended).

The DP arming principle is as follows:

- The DPs O_Disconnect and T_Disconnect can be armed as well as for leg1 as leg2 depending on what direction (either from the A-party which is connected to leg1 or from the B-party connected to the leg2) events have to be captured. As an example the Disconnect DP can be armed as well as for leg1 and leg2, in that case if a release request is received from the A-party it will be detected by the Disconnect DP armed for leg1, while a release request from the B-party shall be detected by arming the leg2 Disconnect DP.

- The O_Abandon DP can only be armed for leg1 in the O_BCSM and the T_Abandon can only be armed for leg1 in the T_BCSM.

Table 11-1: DP Arming Table for O-BCSM:

O_BCSM	leg1	leg2	Default_leg_ID
Route_Select_Failure DP	-	X	2
O_Called_Party_Busy DP	-	X	2
O_No_Answer DP	-	X	2
O_Answer DP	-	X	2
O_Disconnect DP	X	X	- o1
O_Abandon DP	X	-	1
o1) The "legID" parameter shall be included Nomenclature: X = Arming Applicable - = Not Applicable			

Table 11-2: DP Arming Table for T-BCSM:

T_BCSM	leg2	leg1	Default Leg ID
T_Busy DP	X	-	2
T_No_Answer DP	X	-	2
T_Answer DP	X	-	2
T_Disconnect DP	X	X	- t1
T_Abandon DP	-	X t2	1
t1) The "legID" parameter shall be included t2) T_Abandon can only be armed for the leg1. Nomenclature: X = Arming Applicable - = Not Applicable			

11.38.1.1 Parameters

- bcsmEvents:
  This parameter specifies the event or events of which a report is requested.

  - eventTypeBCSM:
    This parameter specifies the type of event of which a report is requested.

- monitorMode:
  This parameter indicates how the event shall be reported. When the "monitorMode" is "interrupted", the event shall be reported as a request, if the "monitorMode" is "notifyAndContinue", the event shall be reported as a notification, if the "monitorMode" is "transparent", the event shall not be reported.

- legID:
  This parameter indicates the party in the call for which the event shall be reported. gsmSCF will use the option "sendingSideID" only.

  - sendingSideID:

    If not included, the following defaults are assumed for LegID:

    "legID" = 1 for the events O-Abandon and T-Abandon,

    "legID" = 2 for the events RouteSelectFailure, O-Busy, O-NoAnswer, O-Answer, T-Busy, T-NoAnswer, and T-Answer.

  The "legID" parameter shall always be included for the events O-Disconnect and T-Disconnect.

- dPSpecificCriteria:
  This parameter indicates information specific to the EDP to be armed.

  - applicationTimer:
    This parameter indicates the NoAnswer timer value for the NoAnswer event. If the user does not answer the call within the allotted time, the gsmSSF reports the event to the gsmSCF. This timer shall be shorter than the network no-answer timer.

11.38.2 Responding entity (gsmSSF)

11.38.2.1 Normal procedure

gsmSSF precondition:

(1) A control relationship exists between the gsmSSF and the gsmSRF.

(2) The gsmSSF is in either the state "Waiting for Instructions" or the state "Monitoring".

NOTE: In state "monitoring" only requests to disarm detection points (with MonitorMode set to "Transparent") or send notifications of events (with MonitorMode set to "NotifyAndContinue") shall be accepted.

gsmSSF postcondition:

(1) The requested EDPs have been armed or disarmed as indicated.

(2) Previously requested events are monitored until ended by a transparent monitor mode, until the end of the call, until the EDPs are detected or until the corresponding leg is released.

(3) The gsmSSF remains in the same state, unless all EDPs have been disarmed and no CallInformationReport or ApplyChargingReport has been requested; in the latter case the gsmSSF moves to the state "Idle".

11.38.2.2 Error handling

Generic error handling for the operation related errors are described in clause 10 and the TC services which are used for reporting operation errors are described in clause 12.

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

Tdoc N2-010442
N2-010361 rev

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **174** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

*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:	⌘	Setting of End User Address Spare Bits
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	17.05.2001
Category:	⌘	**F** (supported 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:	⌘	3G TS 29.060 defines the information element End User Address, which is the reference for 3G TS 29.078. According to 3G TS 29.060 the four spare bits in the octet holding the PDP Type Organization bits are set to 1.
Summary of change:	⌘	The sender of parameter End User Address shall set the four most significant bits (spare bits) of PDP Type Organization octet to 1.
Consequences if not approved:	⌘	Given reference and related statements are not in line.

Clauses affected:	⌘	5.1
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

…

5 Common CAP Types

5.1 Data types

```
-- The Definition of Common Data Types follows


…



EndUserAddress  {PARAMETERS-BOUND: bound}           ::= SEQUENCE {
    pDPTypeOrganization                     [0] OCTET STRING (SIZE(1)),
    pDPTypeNumber                           [1] OCTET STRING (SIZE(1)),
    PDPAddress                              [2] OCTET STRING (SIZE(
        bound.&minPDPAddressLength .. bound.&maxPDPAddressLength))  OPTIONAL
    }
-- Indicates the EndUserAddress, refer to 3GPP TS 29.060 for the encoding.
-- The pDPTypeOrganization shall use the least significant 4 bits of the octet encoded.
-- The sender of this parameter shall set the most significant 4 bits of the octet to 1.
-- The receiver of this parameter shall ignore the most significant 4 bits of this octet.


…
```

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

Tdoc N2-010443

CR-Form-v3

CHANGE REQUEST

⌘ **29.078** **CR** **181** ⌘ 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:	⌘	Setting of End User Address Spare Bits
Source:	⌘	CN2
Work item code:	⌘	CAMEL3
Date:	⌘	17.05.2001
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.

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Clauses affected:	⌘	5.1
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications
	⌘	
Other comments:	⌘	

…

5 Common CAP Types

5.1 Data types

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-- The Definition of Common Data Types follows


…



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    pDPTypeOrganization                     [0] OCTET STRING (SIZE(1)),
    pDPTypeNumber                           [1] OCTET STRING (SIZE(1)),
    PDPAddress                              [2] OCTET STRING (SIZE(
        bound.&minPDPAddressLength .. bound.&maxPDPAddressLength))  OPTIONAL
    }
-- Indicates the EndUserAddress, refer to 3GPP TS 29.060 for the encoding.
-- The pDPTypeOrganization shall use the least significant 4 bits of the octet encoded.
-- The sender of this parameter shall set the most significant 4 bit of the octet to 1.
-- The receiver of this parameter shall ignore the most significant 4 bits of this octet.



…
```