3GPP TSG CN Plenary Meeting #15 **Tdoc NP-020055**
Korea, Jeju Island, 6th – 8th March 2002

Source: TSG CN WG2

Title: CR on R99 Work Item CAMEL3, Pack 2

Agenda item: 7.2

Document for: APPROVAL

Introduction:

This document contains 8 CRs on R99 WI CAMEL3 (4 CRs for R99 and the 4 mirror CRs for Rel-4). These CRs have been agreed by TSG CN WG2 and are forwarded to TSG CN Plenary meeting #15 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.078	384	1	N2-020192	R99	Handling Disconnect From IP Forbidden IE in Play Announcement and Prompt And Collect User Information IFs	F	3.11.0
23.078	385	1	N2-020193	Rel-4	Handling Disconnect From IP Forbidden IE in Play Announcement and Prompt And Collect User Information IFs	A	4.3.0
23.078	382	1	N2-020194	R99	The waiting for new AC timers	F	3.11.0
23.078	383	1	N2-020195	Rel-4	The waiting for new AC timers	A	4.3.0
23.078	390	1	N2-020206	R99	MSISDN to be made available to MSC	F	3.11.0
23.078	391	1	N2-020207	Rel-4	MSISDN to be made available to MSC	A	4.3.0
23.078	372	1	N2-020178	R99	Clarification on NP check at DP2	F	3.11.0
23.078	392		N2-020213	Rel-4	Clarification on NP check at DP2	A	4.3.0

3GPP TSG CN WG2 Meeting #22 ***N2-020178***
Sophia Antipolis, France, 28th January – 2nd February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **23.078** **CR** **372** ⌘ **rev** **1** ⌘ Current version: **3.11.0** ⌘

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

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

Title:	⌘	Clarification on NP check at DP2
Source:	⌘	Nokia
Work item code:	⌘	CAMEL3
Date:	⌘	2nd of Jan 2002
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 10 destination numbers in the *Destination number* criterion is not adequate if the HLR must contain all numbers with *unknown* and *E.164* NPI values.
Summary of change:	⌘	The proposal is to clarify that MSC shall ignore NPI at DP2. This is the current default behaviour but it was not explicitly documented.
Consequences if not approved:	⌘	The HPLMN operator is not sure what to put into O-CSI destination number criterion, i.e. confusion. Some pre-paid calls may not trigger at all -> fraud.

Clauses affected:	⌘	
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	CAMEL2 is expected to have similar behaviour. It's too late to change CAMEL2.

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

4.2.1.2 Criteria

Criteria are the conditions that must be met in order for the gsmSSF to request instructions from the gsmSCF.

4.2.1.2.1 Criteria at DP Collected_Info

The criteria for an mobile originating call are checked in the originating MSC.

The criteria for an mobile forwarded call are checked in the forwarding MSC.

For early forwarded calls in the GMSC, the HLR may decide not to include the DP Collected_Info trigger criteria in the subscriber data sent to the GMSC if the trigger criteria for the call are not met.

For optimally routed late forwarded calls, the MSC may decide not to include the DP Collected Info trigger criteria in the RCH message sent to the GMSC, if the trigger criteria for the call are not met.

The following criteria are applicable for DP Collected_Info:

- Destination number triggering criterion: The HLR may store a list of up to 10 destination numbers and/or up to 3 number lengths. There is no restriction on the nature of address. There is no restriction on the numbering plan indicator. This criterion may be defined to be either "enabling" or "inhibiting".

- Basic service triggering criterion: The HLR may store a list of up to 5 basic service codes, each of which may represent an individual basic service or a basic service group. Compound basic service group codes, as defined in 3GPP TS 29.002 [4], are not allowed for conditional triggering. This list is a triggering list.

- Forwarding triggering criterion: The HLR may store an indicator that triggering shall occur only for a call which has been subject to GSM or CAMEL call forwarding. This criterion may be defined to be either "enabling" or "inhibiting".

For MO calls, triggering at DP Collected_Info shall be strictly based on the number received over the access network. No service selection information, such as ∗ and # digits, or carrier selection information, dialled by the subscriber, shall be removed from the number before conditional triggering check takes place.

For MF calls at the VMSC, triggering at DP Collected_Info shall be strictly based on the number received over the access network (the Deflected-to-Number in case of Call Deflection), the Forwarded-to-Number retained in the VLR or the Destination Routing Address received in the Connect operation from SCF during a Terminating CAMEL Service at the VMSC.
No service selection information or carrier selection information shall be removed from the number before conditional triggering check takes place.

For MF calls at the GMSC, triggering at DP Collected_Info shall be strictly based on the Forwarded-to-Number received from HLR, on the Destination Routing Address received in the Connect operation from SCF during a Terminating CAMEL Service or on the Forwarded-to-Number received in the RCH message.
No service selection information or carrier selection information shall be removed from the number before conditional triggering check takes place.

One or more DP criteria may be applicable. All applicable triggering criteria must be satisfied before the dialogue is established with the gsmSCF.

If the destination number triggering criterion is enabling, then the gsmSSF may establish a dialogue with the gsmSCF if:

- the destination number matches one of the destination number strings defined in the list; or

- the length of the destination number matches one of the destination number lengths defined in the list.

In this test the destination number matches one of the destination number strings in the list if:

- the nature of address of destination number is the same as the nature of address of the destination number string (The numbering plan indicator is not compared);
- the destination number is at least as long as the destination number string in the list; and
- all the digits in the destination number string in the list match the leading digits of the destination number.

If the destination number triggering criterion is inhibiting, then the gsmSSF may establish a dialogue with the gsmSCF if:

- the destination number does not match any of the destination number strings defined in the list; and
- the length of the destination number does not match any of the destination number lengths defined in the list.

In this test the destination number matches one of the destination number strings in the list if:

- the nature of address of destination number is the same as the nature of address of the destination number string (The numbering plan indicator is not compared);
- the destination number is at least as long as the destination number string in the list; and
- all the digits in the destination number string in the list match the leading digits of the destination number.

The basic service triggering criterion is met if the basic service for the call matches a stored individual basic service code or is a member of the group defined by a stored basic service group code. For the purpose of this paragraph a general bearer service is a member of the corresponding bearer service group.

If the forwarding triggering criterion is enabling, then the gsmSSF may establish a dialogue with the gsmSCF only if the call has been subject to CAMEL or GSM call forwarding. If the forwarding triggering criterion is inhibiting, then the gsmSSF may establish a dialogue with the gsmSCF only if the call has not been subject to CAMEL or GSM call forwarding.

****** NON MODIFIED SECTION ******

4.2.1.2.2 Criteria at DP Analysed_Information

4.2.1.2.2.1 General

The criteria for a mobile originating call are checked in the originating MSC. The criteria for a mobile forwarded call are checked in the forwarding MSC.

For early forwarded calls in the GMSC, the HLR shall always include the trigger criteria in the subscriber data sent to the GMSC. Reason is that the HLR can not check the criteria applicable at DP Analysed Info, since the number that the criteria check shall be based on, may be modified by a Mobile Terminating or Mobile Forwarding Service Logic for this call.

For optimally routed late forwarded calls, the MSC shall always include the trigger criteria in the RCH message sent to the GMSC. Reason is that the MSC can not check the criteria applicable at DP Analysed Info, since the number that the criteria check shall be based on, may be modified by a Mobile Terminating or Mobile Forwarding Service Logic for this call.

The following criteria are applicable for DP Analysed_Information:

- Destination number triggering criterion: The HLR may store a list of up to 10 destination numbers. There is no restriction on the nature of address. There is no restriction on the numbering plan indicator.

For MO calls, triggering at DP Analysed_Info shall be based on the called party number received over the access network.

For MF calls at the VMSC, triggering at DP Analysed_Info shall be based on the number received over the access network (the Deflected-to-Number in case of Call Deflection), the Forwarded-to-Number retained in the VLR, or the Destination Routing Address in the Connect operation from the SCF during a Mobile Terminated or Mobile Forwarded CAMEL Service.

For MF calls at the GMSC, triggering at DP Analysed_Info shall be based on the Forwarded-to-Number received from HLR, on the Destination Routing Address received in the Connect operation from SCF during a Mobile Terminated or Mobile Forwarded CAMEL Service, or on the Forwarded-to-Number received in the RCH message.

4.2.1.2.2.2 Removal of information significant to the serving entity

In order to decide whether triggering shall take place, the trigger criteria need to be compared with the address information. Before the comparison takes place the following information shall be removed from the destination address information:

- Operator specific service selection information that is recognised and treated locally in the serving entity. This shall not lead to a change of the type of number indicator of the address information.

- Carrier selection information. If the removal of carrier selection information also removes international or national (trunk) prefixes (depending on regulatory requirements), then the type of number indicator of the address information shall be changed to "international number" or "national (significant) number" respectively. Otherwise the type of number indicator shall remain unchanged.

The address information in a subsequent Initial DP message at DP Analysed_Info shall not contain the removed information, however in the further call handling the serving entity shall invoke the requested services (e.g. carrier selection).

4.2.1.2.2.3 Number comparison

The following procedure shall be performed for the comparison of the destination number triggering criterion and the address information in the given order.

1. The numbering plan indicators of both numbers are ignored.

2. The type of number/nature of address indicators of both numbers are compared. If there is a match of the type of number indicator, then the check shall be performed by comparing the digits as defined in step 6. If there is no match of the type of number the comparison procedure shall continue as follows.

3. If there are other type of number/nature of address indicators present than "unknown", "national (significant) number" or "international number" then the destination number does not match the destination number triggering criterion. Otherwise the comparison procedure shall continue as follows.

4. If there is a number with type of number/nature of address "unknown" this number shall be translated based on the numbering plan of the serving entity in either of the following ways:

   - if the leading digits refer to an international prefix, those digits shall be removed and the type of number/nature of address shall be set to "international number".

   - if the leading digits refer to a national (trunk) prefix, those digits shall be removed and the type of number/nature of address shall be set to "national (significant) number".

   If the leading digits refer neither to an international prefix nor to a national (trunk) prefix, then the destination number does not match the destination number triggering criterion.

   If there is a match of the type of number/nature of address indicator after this number modification, then the check shall be performed by comparing the digits as defined in step 6, otherwise the comparison procedure shall continue as follows.

5. If there is a number with type of number/nature of address "national (significant) number" this number shall be translated based on the numbering plan of the serving entity to international format by adding the country code of the serving entity to the number string. After this modification both numbers shall be in international format and shall be checked by comparing the digits as defined in step 6.

6 If the number digits of the address information are compared with the number digits of the destination number triggering criterion, then there is a match if:

   - the destination number is at least as long as the destination number string of the destination number triggering criterion, and

   - all the digits in the destination number string of the destination number triggering criterion match the leading digits of the destination number.

The check described in this clause shall be repeated for every number contained in the destination number triggering criterion of the D-CSI until a match is recognised and DP Analysed_Info is triggered, or until all the destination numbers have been checked without a match being recognised. In the latter case DP Analysed_Info is not triggered.

The procedures for the destination number triggering criterion check for the N-CSI are network specific.

The modifications of the address information described in this clause shall be only be done for comparison purposes, i.e. they shall not affect the format of the destination address information sent in the Initial DP message.

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

3GPP TSG CN WG2 Meeting #22 ***N2-020213***
Sophia Antipolis, France, 28th January – 2nd February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **23.078** **CR** **392** ⌘ **rev** **-** ⌘ Current version: **4.3.0** ⌘

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

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

Title:	⌘	Clarification on NP check at DP2
Source:	⌘	Nokia
Work item code:	⌘	CAMEL3
Date:	⌘	2nd of Jan 2002
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
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B *(addition of feature),*
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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)
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R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The 10 destination numbers in the *Destination number* criterion is not adequate if the HLR must contain all numbers with *unknown* and *E.164* NPI values.
Summary of change:	⌘	The proposal is to clarify that MSC shall ignore NPI at DP2. This is the current default behaviour but it was not explicitly documented.
Consequences if not approved:	⌘	The HPLMN operator is not sure what to put into O-CSI destination number criterion, i.e. confusion. Some pre-paid calls may not trigger at all -> fraud.

Clauses affected:	⌘	
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	CAMEL2 is expected to have similar behaviour. It's too late to change CAMEL2.

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****** NON MODIFIED SECTION ******

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4.2.1.2.2.2 Removal of information significant to the serving entity

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- Operator specific service selection information that is recognised and treated locally in the serving entity. This shall not lead to a change of the type of number indicator of the address information.

- Carrier selection information. If the removal of carrier selection information also removes international or national (trunk) prefixes (depending on regulatory requirements), then the type of number indicator of the address information shall be changed to "international number" or "national (significant) number" respectively. Otherwise the type of number indicator shall remain unchanged.

The address information in a subsequent Initial DP message at DP Analysed_Info shall not contain the removed information, however in the further call handling the serving entity shall invoke the requested services (e.g. carrier selection).

4.2.1.2.2.3 Number comparison

The following procedure shall be performed for the comparison of the destination number triggering criterion and the address information in the given order.

1. The numbering plan indicators of both numbers are ignored.

2. The type of number/nature of address indicators of both numbers are compared. If there is a match of the type of number indicator, then the check shall be performed by comparing the digits as defined in step 6. If there is no match of the type of number the comparison procedure shall continue as follows.

3. If there are other type of number/nature of address indicators present than "unknown", "national (significant) number" or "international number" then the destination number does not match the destination number triggering criterion. Otherwise the comparison procedure shall continue as follows.

4. If there is a number with type of number/nature of address "unknown" this number shall be translated based on the numbering plan of the serving entity in either of the following ways:

   - if the leading digits refer to an international prefix, those digits shall be removed and the type of number/nature of address shall be set to "international number".

   - if the leading digits refer to a national (trunk) prefix, those digits shall be removed and the type of number/nature of address shall be set to "national (significant) number".

   If the leading digits refer neither to an international prefix nor to a national (trunk) prefix, then the destination number does not match the destination number triggering criterion.

   If there is a match of the type of number/nature of address indicator after this number modification, then the check shall be performed by comparing the digits as defined in step 6, otherwise the comparison procedure shall continue as follows.

5. If there is a number with type of number/nature of address "national (significant) number" this number shall be translated based on the numbering plan of the serving entity to international format by adding the country code of the serving entity to the number string. After this modification both numbers shall be in international format and shall be checked by comparing the digits as defined in step 6.

6 If the number digits of the address information are compared with the number digits of the destination number triggering criterion, then there is a match if:

   - the destination number is at least as long as the destination number string of the destination number triggering criterion, and

   - all the digits in the destination number string of the destination number triggering criterion match the leading digits of the destination number.

The check described in this clause shall be repeated for every number contained in the destination number triggering criterion of the D-CSI until a match is recognised and DP Analysed_Info is triggered, or until all the destination numbers have been checked without a match being recognised. In the latter case DP Analysed_Info is not triggered.

The procedures for the destination number triggering criterion check for the N-CSI are network specific.

The modifications of the address information described in this clause shall be only be done for comparison purposes, i.e. they shall not affect the format of the destination address information sent in the Initial DP message.

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

3GPP TSG CN WG2 Meeting #22 **N2-020207**
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

CHANGE REQUEST

⌘ **23.078** **CR** **391** ⌘ **rev** **1** ⌘ Current version: **4.3.0** ⌘

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

Title:	⌘	MSISDN to be made available to MSC
Source:	⌘	Ericsson
Work item code:	⌘	CAMEL3
Date:	⌘	28-01-2002
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)*
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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 supplementary service "Multiple Subscriber Profile Phase 2" (MSP2) relies on CAMEL Phase 3 support in the network. Refer to 3GPP TS 23.097. If an MSP2 subscriber receives a Mobile Terminated call in the VMSC ("VT call") and that subscriber has VT-CSI in the VLR, then the gsmSSF in that VMSC shall contact the SCP, provided that VT-CSI trigger conditions, if present, are satisfied. The CAP Initial DP operation sent to the SCP shall include the MSISDN of the served subscriber. This MSISDN may be the MSISDN as registered in the VLR or the MSISDN sent from the HLR to the VLR in the Provide Roaming Number (PRN) MAP Message. If the HLR has sent down an MSISDN in PRN, then the gsmSSF shall include that MSISDN in CAP Initial DP, and not the MSISDN that is stored in the VLR. This may e.g. be the case if the MSP2 subscriber was called with a different MSISDN than the basic MSISDN of that MSP2 subscriber. In that case, the SCP needs to receive the MSISDN that was used to call the MSP2 subscriber, not the basic MSISDN of that MSP2 subscriber. The above described behaviour of the MSC/gsmSSF is part of the MSP2 requirements on CAMEL Phase 3. However, this behaviour is currently not properly specified in TS 23.078. The present CR proposes corrective text to specify this behaviour.
Summary of change:	⌘	Correct the description of MSISDN in the "Continue CAMEL Handling" Information Flow (IF). This IF is used between the VLR and the MSC for the handling of a VT call.
Consequences if not approved:	⌘	The MSP Phase 2 supplementary service may not work properly for MT calls in the VMSC ("VT calls"). When contacted by the MSC/gsmSSF for a VT call, the gsmSCF will always

	return information for the registered profile for a subscriber having a MSP Phase 2 service. This makes the subscription to this service far less valuable for the user.

Clauses affected:	⌘	4.6.13.2.2			
Other specs affected:	⌘	X	Other core specifications	⌘	
			Test specifications		
			O&M Specifications		
Other comments:	⌘				

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

4.6.13 VLR to MSC information flows

…

…

4.6.13.2 Continue CAMEL Handling

4.6.13.2.1 Description

This IF is used to instruct the MSC to continue the CAMEL specific handling.

4.6.13.2.2 Information Elements

Continue CAMEL Handling contains the following IE:

Information element name	Required	Description
VT-CSI	M	This IE identifies the subscriber as having terminating CAMEL services in the VMSC.
IMSI	M	IMSI of the B subscriber.
MSISDN	C	E.164 number which identifies the B subscriber. It will be used to create the redirecting number presented to the C subscriber. Shall be present if the call is to be forwarded or if it has been provided by the HLR in the Provide Roaming Number IF, otherwise shall be absent.
CUG interlock	C	For the definition of this IE, see 3GPP TS 23.085 [9]. Shall be present if the VLR has determined that the forwarded call is to be treated as a CUG call in accordance with the rules in 3GPP TS 23.085 [9], otherwise shall be absent.
CUG outgoing access	C	For the definition of this IE, see 3GPP TS 23.085 [9]. Shall be present if the VLR has determined that the forwarded call is to be treated as a CUG call with outgoing access in accordance with the rules in 3GPP TS 23.085 [9], otherwise shall be absent.
Location information	C	Information to define the location of the MS: see definition in 3GPP TS 23.018 [3]. Shall be present if location information was requested and is available; otherwise shall be absent.
GMSC-Address	M	The E.164 address of the GMSC which was received in the Provide Roaming Number.
Call Reference Number	M	This IE carries the Call Reference Number provided by the HLR in the Provide Roaming Number IF.
ExtBasic Service Code	C	This IE indicates the type of basic service i.e. teleservice or bearer service.
M Mandatory (The IE shall always be sent). C Conditional (The IE shall be sent if applicable).		

****** END OF MODIFICATIONS ******

CHANGE REQUEST

⌘ 23.078 CR 390 ⌘rev 1 ⌘ Current version: 3.B.0 ⌘

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

Title:	⌘	MSISDN to be made available to MSC
Source:	⌘	Ericsson
Work item code:	⌘	CAMEL3
Date:	⌘	28-01-2002
Category:	⌘	F (Agreed by Consensus)
Release:	⌘	REL-99

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

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

Reason for change: ⌘

The supplementary service "Multiple Subscriber Profile Phase 2" (MSP2) relies on CAMEL Phase 3 support in the network. Refer to 3GPP TS 23.097.

If an MSP2 subscriber receives a Mobile Terminated call in the VMSC ("VT call") and that subscriber has VT-CSI in the VLR, then the gsmSSF in that VMSC shall contact the SCP, provided that VT-CSI trigger conditions, if present, are satisfied.

The CAP Initial DP operation sent to the SCP shall include the MSISDN of the served subscriber. This MSISDN may be the MSISDN as registered in the VLR or the MSISDN sent from the HLR to the VLR in the Provide Roaming Number (PRN) MAP Message.

If the HLR has sent down an MSISDN in PRN, then the gsmSSF shall include that MSISDN in CAP Initial DP, and not the MSISDN that is stored in the VLR. This may e.g. be the case if the MSP2 subscriber was called with a different MSISDN than the basic MSISDN of that MSP2 subscriber. In that case, the SCP needs to receive the MSISDN that was used to call the MSP2 subscriber, not the basic MSISDN of that MSP2 subscriber.

The above described behaviour of the MSC/gsmSSF is part of the MSP2 requirements on CAMEL Phase 3. However, this behaviour is currently not properly specified in TS 23.078.

The present CR proposes corrective text to specify this behaviour.

Summary of change: ⌘

Correct the description of MSISDN in the "Continue CAMEL Handling" Information Flow (IF). This IF is used between the VLR and the MSC for the handling of a VT call.

Consequences if not approved: ⌘

The MSP Phase 2 supplementary service may not work properly for MT calls in the VMSC ("VT calls").
When contacted by the MSC/gsmSSF for a VT call, the gsmSCF will always return information for the registered profile for a subscriber having a MSP Phase

	2 service. This makes the subscription to this service far less valuable for the user.

Clauses affected:	⌘	4.6.13.2.2			
Other specs affected:	⌘	X	Other core specifications	⌘	
			Test specifications		
			O&M Specifications		
Other comments:	⌘				

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

4.6.13 VLR to MSC information flows

…

…

4.6.13.2 Continue CAMEL Handling

4.6.13.2.1 Description

This IF is used to instruct the MSC to continue the CAMEL specific handling.

4.6.13.2.2 Information Elements

Continue CAMEL Handling contains the following IE:

Information element name	Required	Description
VT-CSI	M	This IE identifies the subscriber as having terminating CAMEL services in the VMSC.
IMSI	M	IMSI of the B subscriber.
MSISDN	C	E.164 number which identifies the B subscriber. It will be used to create the redirecting number presented to the C subscriber. Shall be present if the call is to be forwarded or if it has been provided by the HLR in the Provide Roaming Number IF, otherwise shall be absent.
CUG interlock	C	For the definition of this IE, see 3GPP TS 23.085 [9]. Shall be present if the VLR has determined that the forwarded call is to be treated as a CUG call in accordance with the rules in 3GPP TS 23.085 [9], otherwise shall be absent.
CUG outgoing access	C	For the definition of this IE, see 3GPP TS 23.085 [9]. Shall be present if the VLR has determined that the forwarded call is to be treated as a CUG call with outgoing access in accordance with the rules in 3GPP TS 23.085 [9], otherwise shall be absent.
Location information	C	Information to define the location of the MS: see definition in 3GPP TS 23.018 [3]. Shall be present if location information was requested and is available; otherwise shall be absent.
GMSC-Address	M	The E.164 address of the GMSC which was received in the Provide Roaming Number.
Call Reference Number	M	This IE carries the Call Reference Number provided by the HLR in the Provide Roaming Number IF.
ExtBasic Service Code	C	This IE indicates the type of basic service i.e. teleservice or bearer service.
M Mandatory (The IE shall always be sent). C Conditional (The IE shall be sent if applicable).		

****** END OF MODIFICATIONS ******

3GPP TSG CN WG2 Meeting #22 ***N2-020195***
Sophia Antipolis, France, 28th January – 2nd February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **23.078** **CR** **383** ⌘ **rev** **1** ⌘ Current version: **4.3.0** ⌘

*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:	⌘	The waiting for new AC timers
Source:	⌘	Nokia
Work item code:	⌘	CAMEL 3
Date:	⌘	30.01.2002
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:	⌘	After sending of ACR in gsmSSF Monitoring state, the waiting of the AC will be supervise by Tccd and Tssf even the expiring of the Tssf is not handled in Monitoring state.
Summary of change:	⌘	The setting of the Tssf in Monitoring state will be removed, so the supervision of a new AC will be based in Monitoring state only to the Tccd timer.
Consequences if not approved:	⌘	The usage of Tssf in Monitoring state will affect missunderstanding.

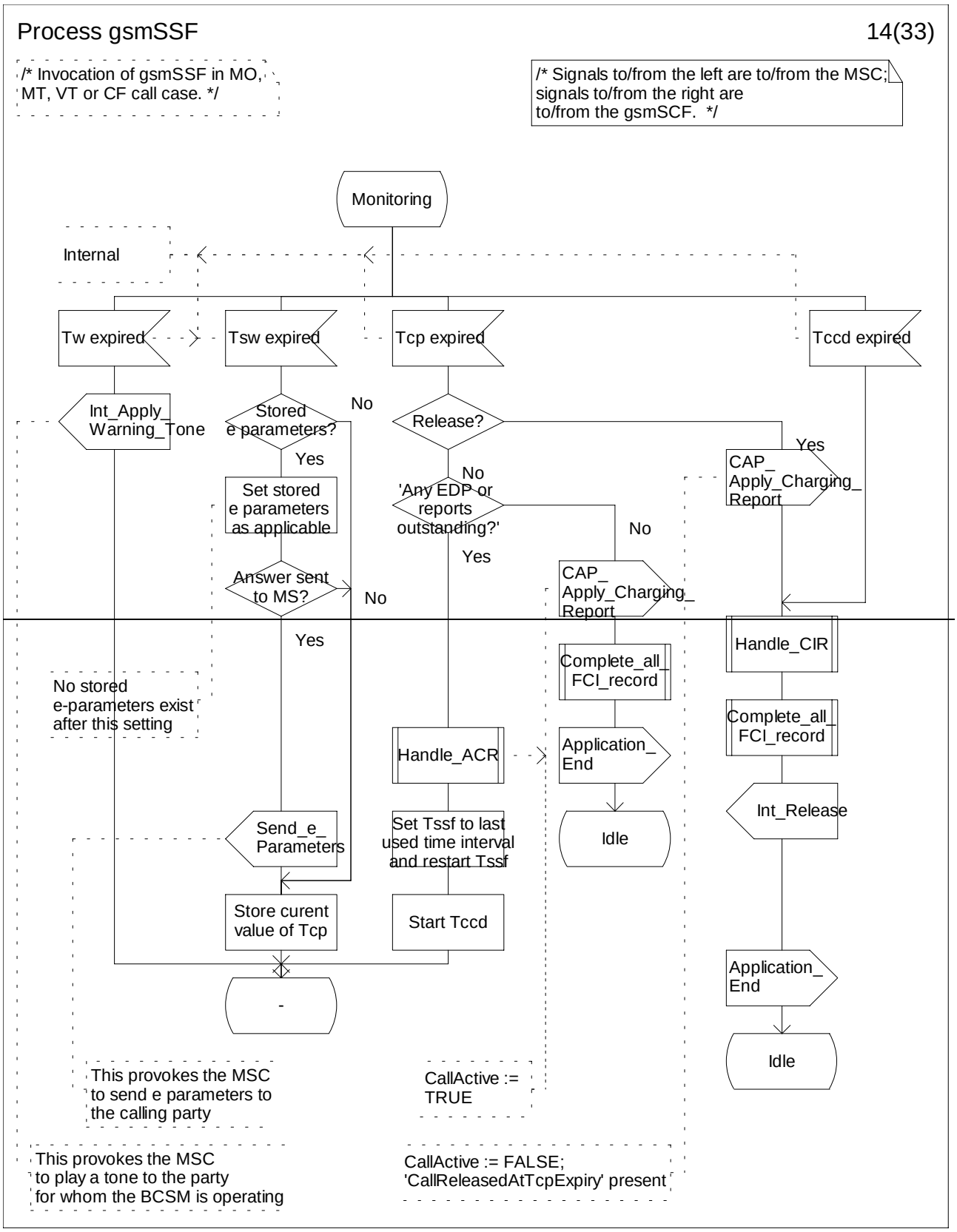
Clauses affected:	⌘	4.5.6.4
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5.6.4 Process gsmSSF and procedures

…



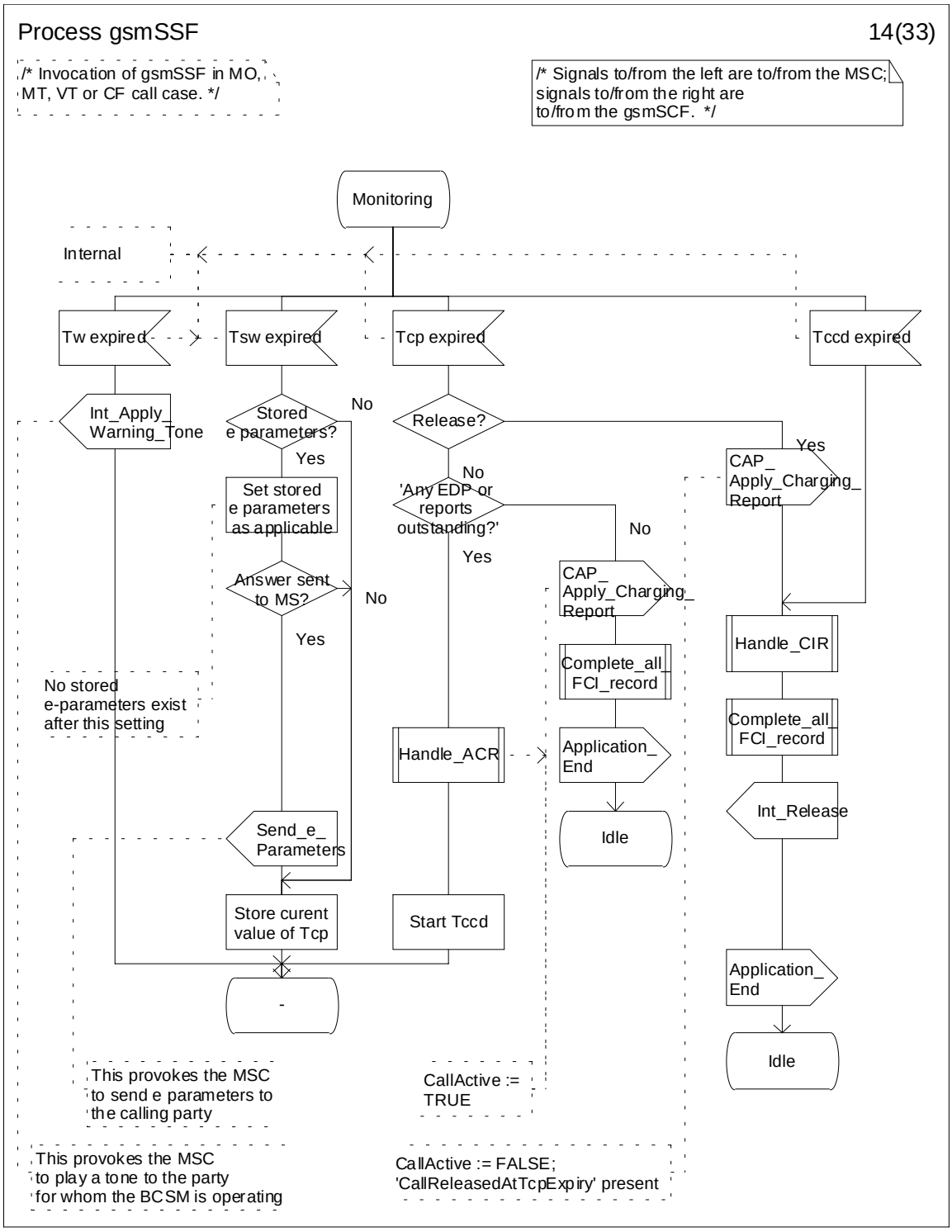


Figure 4.64n: Process gsmSSF (sheet 14)

3GPP TSG CN WG2 Meeting #22 ***N2-020194***
Sophia Antipolis, France, 28th January – 2nd February 2002

CR-Form-v5

CHANGE REQUEST

⌘ **23.078** **CR** **382** ⌘ **rev** **1** ⌘ Current version: **3.11.0** ⌘

*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:	⌘	The waiting for new AC timers
Source:	⌘	Nokia
Work item code:	⌘	CAMEL 3
Date:	⌘	30.01.2002
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:	⌘	After sending of ACR in gsmSSF Monitoring state, the waiting of the AC will be supervise by Tccd and Tssf even the expiring of the Tssf is not handled in Monitoring state.
Summary of change:	⌘	The setting of the Tssf in Monitoring state will be removed, so the supervision of a new AC will be based in Monitoring state only to the Tccd timer.
Consequences if not approved:	⌘	The usage of Tssf in Monitoring state will affect missunderstanding.

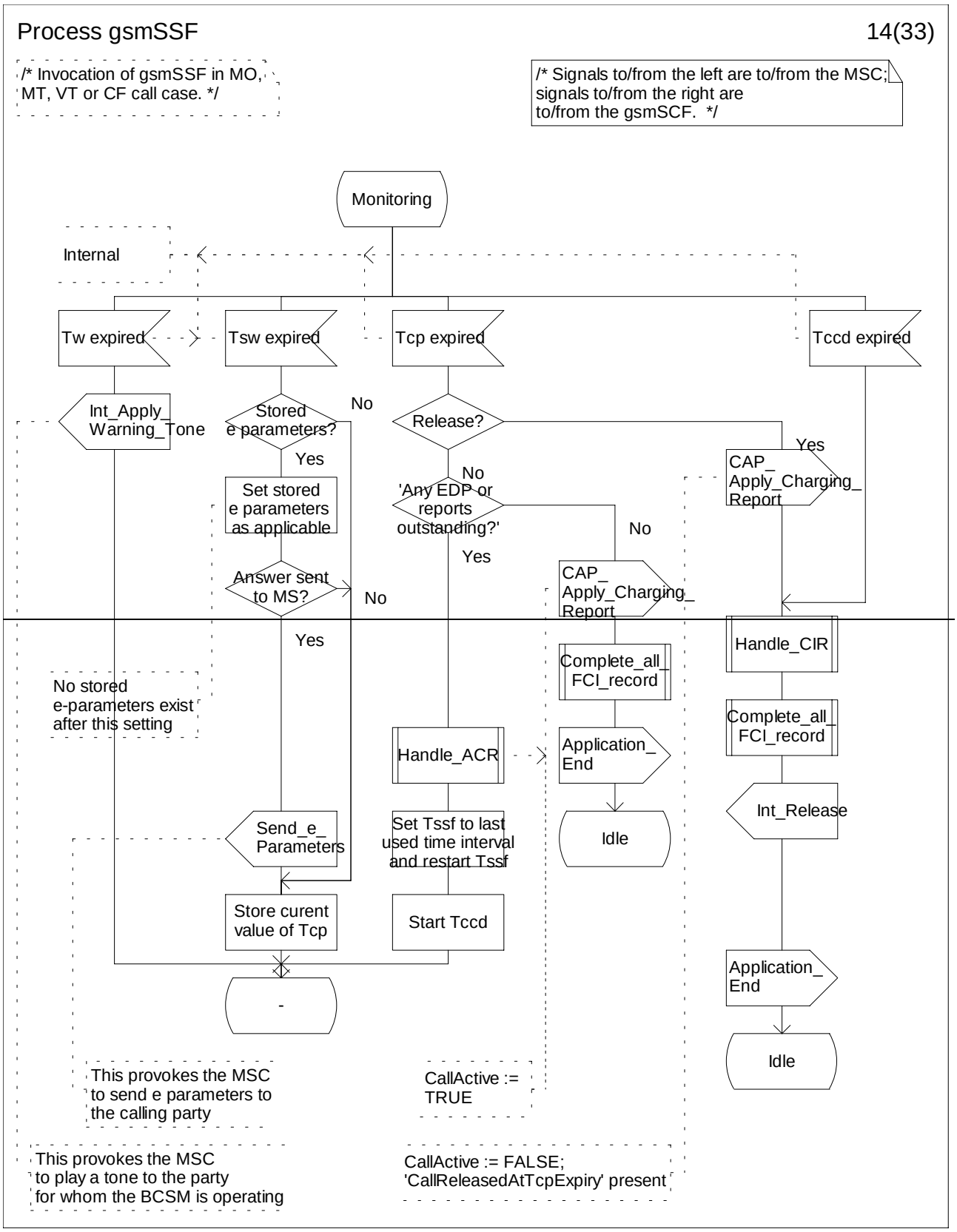
Clauses affected:	⌘	4.5.6.4
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5.6.4 Process gsmSSF and procedures

…



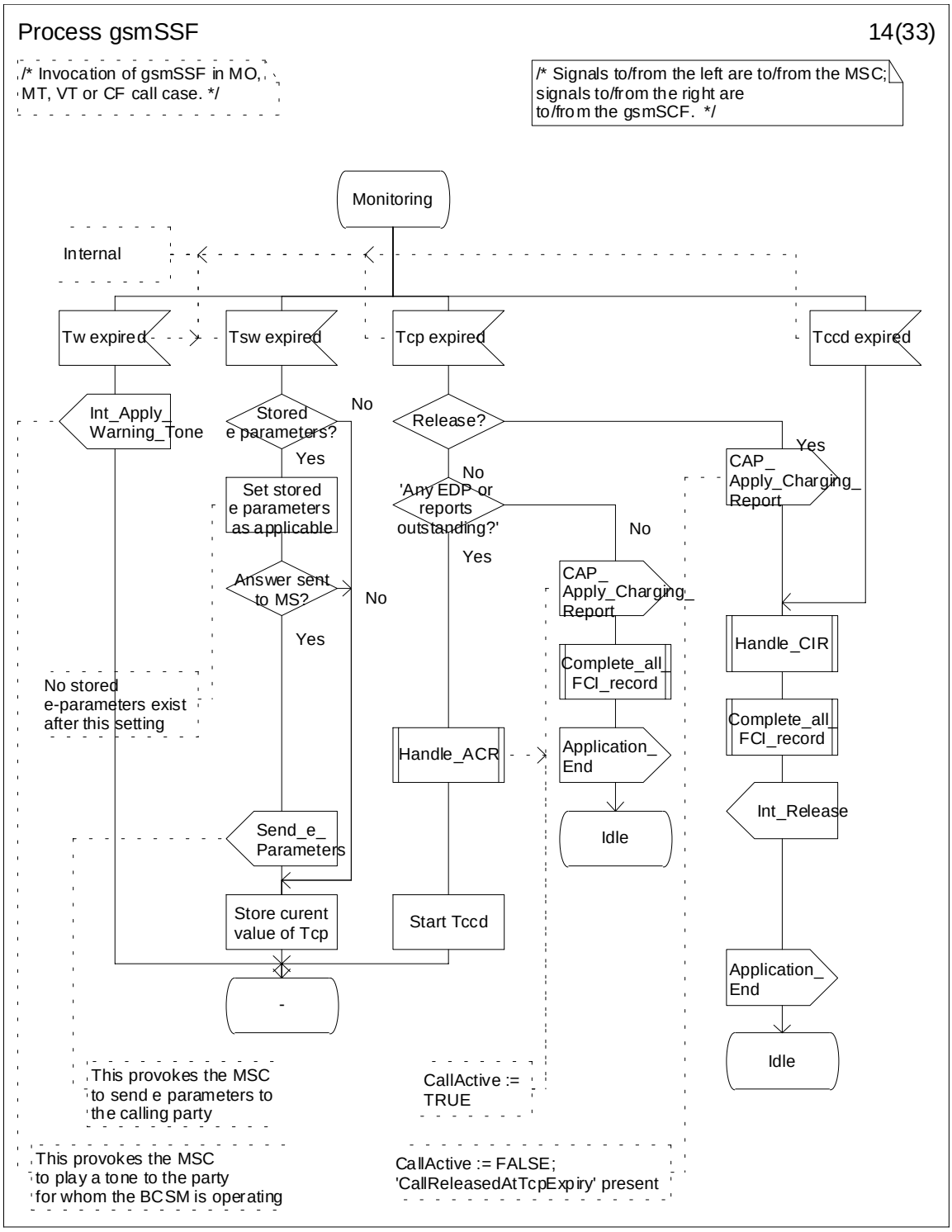


Figure 4.64n: Process gsmSSF (sheet 14)

CR-Form-v5

CHANGE REQUEST

⌘ 23.078 CR 385 ⌘rev 1 ⌘ Current version: 4.3.0 ⌘

*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:	⌘	Handling Disconnect From IP Forbidden IE in Prompt And Collect User Information IFs.
Source:	⌘	Siemens AG
Work item code:	⌘	CAMEL3
Date:	⌘	31 January 2002
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:	⌘	Current description of Disconnect From IP Forbidden IE (stage 2) or disconnectFromIPForbidden parameter (stage 3) in Prompt and Collect User Information is quite vague. Comparing the ASN.1 in the stage 3, the following questions occur; Since the parameter is BOOLEAN with the default value, this parameter exists anyway. This means the IE shall be set to "M". This CR proposes the consistent description to the use of the IE.
Summary of change:	⌘	IE is set to "M" (mandatory)
Consequences if not approved:	⌘	Inconsistent description.

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

***** For information, extracted from 29.078 *****

```
PromptAndCollectUserInformationArg {PARAMETERS-BOUND : bound}::= SEQUENCE {
    collectedInfo               [0] CollectedInfo,
    disconnectFromIPForbidden   [1] BOOLEAN DEFAULT TRUE,
    informationToSend           [2] InformationToSend {bound}       OPTIONAL,
    extensions                  [3] Extensions {bound}      OPTIONAL,
    ...
    }
```

11.34 PromptAndCollectUserInformation procedure

11.34.1.1 Parameters

- disconnectFromIPForbidden:
  This parameter indicates whether the gsmSRF should initiate disconnection to the gsmSSF after the interaction has been completed. If the parameter is not present or set to TRUE, the gsmSRF shall not initiate disconnection.

***** Correction *****

4.6.3.4 Prompt And Collect User Information (received information)

4.6.3.4.1 Description

This IF is used to interact with a call party in order to collect information.

4.6.3.4.2 Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Collected Info	M	M	M	M	This IE is described in the next table.
Information To Send	O	O	O	O	This IE indicates an announcement or a tone to be sent to the end user by the gsmSRF.
Disconnect From IP Forbidden	~~O~~M	~~O~~M	~~O~~M	~~O~~M	This IE indicates whether the gsmSRF ~~shall~~ may be disconnected from the user when all information has been sent.
O Optional (Service logic dependent).					

Collected Info contains the following information:

Information element name	MO	MF	MT	VT	Description
Collected Digits	M	M	M	M	This IE is described in the next table.
O Optional (Service logic dependent).					

Collected Digits contains the following information:

Information element name	MO	MF	MT	VT	Description
Minimum Number Of Digits	M	M	M	M	This IE indicates the minimum number of valid digits to be collected.
Maximum Number Of Digits	M	M	M	M	This IE specifies the maximum number of valid digits to be collected
End Of Reply Digit	O	O	O	O	This IE indicates the digit(s) used to signal the end of input.
Cancel Digit	O	O	O	O	If this IE is present, the cancel digit can be entered by the user to request a possible retry
Start Digit	O	O	O	O	If this IE is present, the start digit(s) indicates the start of the valid digits to be collected.
First Digit Time Out	O	O	O	O	If this IE is present, the first digit shall be received before the expiration of the first digit timer expiration
Inter Digit Time Out	O	O	O	O	If this IE is present, any subsequent valid or invalid digit shall be received by the gsmSRF before the inter digit timer expires.
Error Treatment	O	O	O	O	This IE indicates what specific action shall be taken by the gsmSRF in the event of error conditions occurring.
Interruptable Ann Ind	O	O	O	O	If this IE is set to TRUE (default value) the announcement is interrupted after the first valid or invalid digit received by the gsmSRF. If this IE is present and explicitly set to FALSE, the announcement will not be interrupted after the first digit is received by the gsmSRF
Voice Information	O	O	O	O	This IE is optional, where the default value is specified being FALSE. If the VoiceInformation IE is set to FALSE, all valid or invalid digits are entered by DTMF If this IE is present and explicitly set to TRUE, calling user is required to provide all valid or invalid information by speech
Voice Back	O	O	O	O	This IE is optional, where the default value is specified being FALSE. If the VoiceBack IE is set to FALSE, no voice back information is given by the gsmSRF If this IE is present and explicitly set to TRUE, the valid input digits received by the gsmSRF will be announced back to the calling user immediately after the end of input is received
O Optional (Service logic dependent).					

InformationToSend is defined in clause 4.6.3.3.

CR-Form-v5

CHANGE REQUEST

⌘ 23.078 CR 384 ⌘rev 1 ⌘ Current version: 3.B.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:	⌘	Handling Disconnect From IP Forbidden IE in Prompt And Collect User Information IFs.
Source:	⌘	Siemens AG
Work item code:	⌘	CAMEL3
Date:	⌘	31 January 2002
Category:	⌘	**F (agreed by consensus)**
Release:	⌘	R99

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

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

Reason for change:	⌘	Current description of Disconnect From IP Forbidden IE (stage 2) or disconnectFromIPForbidden parameter (stage 3) in Prompt and Collect User Information is quite vague. Comparing the ASN.1 in the stage 3, the following questions occur; Since the parameter is BOOLEAN with the default value, this parameter exists anyway. This means the IE shall be set to "M". This CR proposes the consistent description to the use of the IE.
Summary of change:	⌘	IE is set to "M" (mandatory)
Consequences if not approved:	⌘	Inconsistent description.

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

***** For information, extracted from 29.078 *****

```
PromptAndCollectUserInformationArg {PARAMETERS-BOUND : bound}::= SEQUENCE {
    collectedInfo               [0] CollectedInfo,
    disconnectFromIPForbidden   [1] BOOLEAN DEFAULT TRUE,
    informationToSend           [2] InformationToSend {bound}       OPTIONAL,
    extensions                  [3] Extensions {bound}      OPTIONAL,
    ...
    }
```

11.34 PromptAndCollectUserInformation procedure

11.34.1.1 Parameters

- disconnectFromIPForbidden:
  This parameter indicates whether the gsmSRF should initiate disconnection to the gsmSSF after the interaction has been completed. If the parameter is not present or set to TRUE, the gsmSRF shall not initiate disconnection.

***** Correction *****

4.6.3.4 Prompt And Collect User Information (received information)

4.6.3.4.1 Description

This IF is used to interact with a call party in order to collect information.

4.6.3.4.2 Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Collected Info	M	M	M	M	This IE is described in the next table.
Information To Send	O	O	O	O	This IE indicates an announcement or a tone to be sent to the end user by the gsmSRF.
Disconnect From IP Forbidden	~~O~~M	~~O~~M	~~O~~M	~~O~~M	This IE indicates whether the gsmSRF ~~shall~~ may be disconnected from the user when all information has been sent.
O Optional (Service logic dependent).					

Collected Info contains the following information:

Information element name	MO	MF	MT	VT	Description
Collected Digits	M	M	M	M	This IE is described in the next table.
O Optional (Service logic dependent).					

Collected Digits contains the following information:

Information element name	MO	MF	MT	VT	Description
Minimum Number Of Digits	M	M	M	M	This IE indicates the minimum number of valid digits to be collected.
Maximum Number Of Digits	M	M	M	M	This IE specifies the maximum number of valid digits to be collected
End Of Reply Digit	O	O	O	O	This IE indicates the digit(s) used to signal the end of input.
Cancel Digit	O	O	O	O	If this IE is present, the cancel digit can be entered by the user to request a possible retry
Start Digit	O	O	O	O	If this IE is present, the start digit(s) indicates the start of the valid digits to be collected.
First Digit Time Out	O	O	O	O	If this IE is present, the first digit shall be received before the expiration of the first digit timer expiration
Inter Digit Time Out	O	O	O	O	If this IE is present, any subsequent valid or invalid digit shall be received by the gsmSRF before the inter digit timer expires.
Error Treatment	O	O	O	O	This IE indicates what specific action shall be taken by the gsmSRF in the event of error conditions occurring.
Interruptable Ann Ind	O	O	O	O	If this IE is set to TRUE (default value) the announcement is interrupted after the first valid or invalid digit received by the gsmSRF. If this IE is present and explicitly set to FALSE, the announcement will not be interrupted after the first digit is received by the gsmSRF
Voice Information	O	O	O	O	This IE is optional, where the default value is specified being FALSE. If the VoiceInformation IE is set to FALSE, all valid or invalid digits are entered by DTMF If this IE is present and explicitly set to TRUE, calling user is required to provide all valid or invalid information by speech
Voice Back	O	O	O	O	This IE is optional, where the default value is specified being FALSE. If the VoiceBack IE is set to FALSE, no voice back information is given by the gsmSRF If this IE is present and explicitly set to TRUE, the valid input digits received by the gsmSRF will be announced back to the calling user immediately after the end of input is received
O Optional (Service logic dependent).					

InformationToSend is defined in clause 4.6.3.3.