

3GPP TSG_CN#7
ETSI SMG3 Plenary Meeting #7,
Madrid, Spain
13th – 15th March 2000

NP-000113

Agenda item: 5.2.3
Source: TSG_N WG 2
Title: CRs to 3G Work Item TEI

Introduction:

This document contains “2” CRs on **Work Item TEI**, that have been agreed by **TSG_N WG 2**, and are forwarded to **TSG_N Plenary** meeting #7 for approval.

Tdoc	Spec	CR	Rev	Cat	Rel	Old ver	New ver	Subject
N2A000200	23.078	100	1	R99	C	3.3.0	3.4.0	Introduction of 'Service Area Identity (SAI)'
N2A000280	29.078	059		R99	C	3.2.0	3.3.0	Introduction of 'Service Area Identity

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

23.078 CR 100r1

Current Version: **3.3.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#7**
 list expected approval meeting # here ↑

for approval
 for information

strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects:
 (at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source: CN WG2 **Date:** 18 Feb. 2000

Subject: CR 23.078-100r1 on introduction of 'Service Area Identification (SAI)'.
 Work item: TEI

Category:

- (only one category shall be marked with an X)
- F Correction
 - A Corresponds to a correction in an earlier release
 - B Addition of feature
 - C Functional modification of feature
 - D Editorial modification

- Release:**
- Phase 2
 - Release 96
 - Release 97
 - Release 98
 - Release 99
 - Release 00

Reason for change:

In 3G network, Service Area Identification consists of LAI and SAC. It is used by Core Network to identify Service Area. For example Service Area Identification is included in initial UE message instead of CGI in 3G network. So the Cell ID shall be replaced to the new one that shows the Cell in GSM case and the Service Area in UMTS case.

This CR is aligning with 23.003 CR (N2B000121).

Clauses affected: 4.6.1.5.2, 4.6.9.1.2, 7.6.1.3.2, 11.3.2.1.2, 11.3.4.1.2

Other specs affected:

- Other 3G core specifications → List of CRs: 23.003, 23.018, 29.002
- Other GSM core specifications → List of CRs:
- MS test specifications → List of CRs:
- BSS test specifications → List of CRs:
- O&M specifications → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

4.6.1.5 Initial DP

4.6.1.5.1 Description

This IF is generated by the gsmSSF when a trigger is detected at a DP in the BCSM, to request instructions from the gsmSCF.

4.6.1.5.2 Information Elements

The following information elements are required:

Information element name	MO	MF	MT	VT	Description
Additional Calling Party Number	-	C	C	C	The calling party number provided by the access signalling system of the calling user.
Bearer Capability	M	C	C	C	This IE indicates the type of the bearer capability connection to the user.
Called Party Number	-	M	M	M	This IE contains the number used to identify the called party in the forward direction. For the VT calls this is the MSISDN received in the Provide Roaming Number; if the MSISDN is not available, the basic MSISDN is used.
Called Party BCD Number	M	-	-	-	This IE contains the number used to identify the called party in the forward direction. The number contained in this IE shall be identical to the number received over the access network. It may e.g. include service selection information, such as * and # digits, or carrier selection information dialled by the subscriber.
Calling Party Number	M	C	C	C	This IE carries the calling party number to identify the calling party or the origin of the call.
Calling Partys Category	M	C	C	C	Indicates the type of calling party (e.g., operator, pay phone, ordinary subscriber).
Call Reference Number	M	M	M	M	This IE may be used by the gsmSCF for inclusion in a network optional gsmSCF call record. It has to be coupled with the identity of the MSC which allocated it in order to define unambiguously the identity of the call. For MO calls, the call reference number is set by the serving VMSC and included in the MO call record. For MT calls, the call reference number is set by the GMSC and included in the RCF call record in the GMSC and in the MT call record in the terminating MSC. For VT calls, the call reference number is set by the GMSC and included in the RCF call record in the GMSC and in the MT call record in the terminating MSC. For CF calls, the call reference number is set by the GMSC and included in the CF record in the forwarding MSC.
Cause	C	C	C	C	This IE indicates the cause specific to the armed BCSM DP event. This IE is applicable to DP Route_Select_Failure and DP T_Busy. The cause may be used by the SCF to decide about the further handling of the call.
Event Type BCSM	M	M	M	M	This IE indicates the armed BCSM DP event, resulting in the Initial DP IF.
Ext-Basic Service Code	C	C	C	C	This IE indicates the type of basic service i.e., teleservice or bearer service.

<u>Information element name</u>	<u>MO</u>	<u>MF</u>	<u>MT</u>	<u>VT</u>	<u>Description</u>
High Layer Compatibility	C	C	C	C	This IE indicates the type of the high layer compatibility, which will be used to determine the ISDN-teleservice of a connected ISDN terminal.
IMSI	M	M	M	M	This IE identifies the mobile subscriber.
IP SSP Capabilities	C	C	C	C	This IE indicates which SRF resources are supported within the gsmSSF and are available. If this IE is absent, this indicates that no gsmSRF is attached and available.
Location Information	M	-	C	M	This IE is described in the next table.
Location Number	M	C	C	C	For mobile originated calls this IE represents the location of the calling party. For all other call scenarios this IE contains the location number received in incoming ISUP signalling.
MSC Address	M	M	M	M	For MO calls, the MSC Address carries the international E.164 address of the serving VMSC. For MT calls, the MSC Address carries the international E.164 address of the GMSC. For VT calls, the MSC Address carries the international E.164 address of the serving VMSC. For CF calls, the MSC Address carries the international E.164 address of the forwarding MSC.
GMSC Address	-	M	-	M	For CF calls, the GMSC Address carries the international E.164 address of the GMSC. For VT calls, the GMSC Address carries the international E.164 address of the GMSC.
NA Carrier Information	C	C	C	C	The content of this IE is described in the next table. The IE may be sent when the VPLMN and the HPLMN of the subscriber are both North American. For MO calls, this IE shall contain any carrier that was dialed by the calling subscriber. If no carrier was dialed, the IE shall contain the calling subscriber's subscribed carrier. For MT and VT calls, the IE shall contain the carrier subscribed to by the called subscriber. For CF calls, the IE shall contain the carrier subscribed to by the forwarding subscriber.
Original Called Party ID	-	C	C	C	This IE carries the dialed digits if the call has met call forwarding on the route to the gsmSSF.
Redirecting Party ID	-	M	C	C	This IE indicates the directory number the call was redirected from.
Redirection Information	-	M	C	C	This IE contains forwarding related information, such as redirection counter.
Service Key	M	M	M	M	This IE identifies for the gsmSCF the requested set of one or more CAMEL services. It is used to address the correct application/SLP within the gsmSCF.

<u>Information element name</u>	<u>MO</u>	<u>MF</u>	<u>MT</u>	<u>VT</u>	<u>Description</u>
Subscriber State	-	-	C	C	This IE indicates the status of the MS. The states are: - CAMELBusy: The MS is engaged on a transaction for a mobile originating or terminated circuit-switched call. - NetworkDeterminedNotReachable: The network can determine from its internal data that the MS is not reachable. - AssumedIdle: The state of the MS is neither "CAMELBusy" nor "NetworkDeterminedNotReachable". - Not provided from VLR.
Time And Timezone	M	M	M	M	This IE contains the time that the gsmSSF was triggered, and the time zone the gsmSSF resides in.
GSM Forwarding Pending	-	-	C	C	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/VMSC.
Service Interaction Indicators Two	C	C	C	C	This IE is sent if it is received in the ISUP message or due to previous CAMEL processing. The IE is described in a table below.
CUG Information	-	C	C	C	See 3G TS 23.085 [9] for details of this IE.
CUG Index	C	-	-	-	See 3G TS 23.085 [9] for details of this IE.

M Mandatory (The IE shall always be sent)

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

- Not applicable

Location Information contains the following information:

<u>Information element name</u>	<u>MO</u>	<u>MF</u>	<u>MT</u>	<u>VT</u>	<u>Description</u>
Location Number	-	-	C	C	See 3G TS 23.018 [3].
CellGlobalIdOrServiceAreaId OrLAI	M	-	C	C	See 3G TS 23.018 [3].
Geographical Information	C	-	C	C	See 3G TS 23.018 [3].
Geodetic Information	C	-	C	C	See 3G TS 23.018 [3].
Age Of Location Information	M	-	C	C	See 3G TS 23.018 [3].
VLR number	M	-	C	M	See 3G TS 23.018 [3].
Selected LSA Identity	C	-	C	C	This IE indicates the LSA identity associated with the current position of the MS. Send if the LSA ID of subscription and LSA ID of the used cell matches. In the case of multiple matches the one with the highest priority is sent. See 3G TS 23.073 [23]. The IE shall only be sent, if SoLSA is supported.

M Mandatory (The IE shall always be sent)

C Conditional (The IE shall be sent, if available. Further conditions are in the description column.)

- Not applicable

****** Next Modified Section ******

4.6.9.1 Send Routeing Info ack

4.6.9.1.1 Description

This IF is specified in 3G TS 23.018 [3] and is used by the HLR to transfer the requested routeing information to the GMSC.

4.6.9.1.2 Information Elements

Send Routeing Info ack contains the following CAMEL specific IE:

<u>Information element name</u>	<u>Required</u>	<u>Description</u>
Location Information	C	This IE indicates the location of the served subscriber.
O-CSI	C	This IE identifies the subscriber as having originating CAMEL services. Shall be sent if O-CSI is active, and CFU or CFNRc has been invoked, or if both O-CSI and T-CSI are active.
Subscriber State	C	This IE indicates the status of the MS. The possible values of the IE are: <ul style="list-style-type: none"> - CAMELBusy: The VLR has indicated that the MS is engaged on a transaction for a mobile originating or terminated circuit-switched call. - NetworkDeterminedNotReachable: The VLR has indicated that the network can determine from its internal data that the MS is not reachable. - AssumedIdle: The VLR has indicated that the state of the MS is neither "CAMELBusy" nor "NetworkDeterminedNotReachable". - NotProvidedFromVLR: The VLR did not provide any information on subscriber state even though it was requested.
T-CSI	C	This IE identifies the subscriber as having terminating CAMEL services. Shall be sent if T-CSI is active and no Suppress T-CSI indicator is present in the SRI.
Basic Service Code	C	This IE indicates the type of basic service i.e., teleservice or bearer service.
CUG Subscription Flag	C	This IE indicates if the called party has a CUG subscription. It shall only be sent if the T-CSI is active and included in the Send Routing Information ack.

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

Location Information contains the following information:

<u>Information element name</u>	<u>Required</u>	<u>Description</u>
Location Number	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.
CellGlobalIdOrServiceAreaIdOrLAI	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.
Geographical Information	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.
Geodetic Information	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.
Age Of Location Information	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.
VLR number	C	See 3G TS 23.018 [3].
Selected LSA Identity	C	See 3G TS 23.018 [3]. The IE shall be sent, if available and indicated by Subscriber Information in Send Routing Information ack indicator.

C Conditional (The IE shall be sent, if available. Further conditions are in the description column.)

***** Next Modified Section *****

7.6.1.3 Initial DP SMS

7.6.1.3.1 Description

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

7.6.1.3.2 Information Elements

Information element name	MO SMS	Description
Destination Subscriber Number	M	This IE contains a number to identify the Destination short message entity. The Destination Subscriber Number shall be retrieved from the SMS-SUBMIT TPDU which is specified in 3G TS 23.040 [21].
Calling Party Number	M	This IE carries the MSISDN of the subscriber who sent the short message.
Event Type	M	This IE indicates the armed event (i.e., <i>SMS_Collected_Info</i>) resulting in the Initial DP SMS IF.
IMSI	M	This IE identifies the mobile subscriber.
Location Information in MSC	C	This IE is described in the next table.
Location Information in SGSN	C	This IE is described in the table below.
Service Key	M	The Service Key identifies to the gsmSCF the service logic.
Time And Timezone	M	This IE contains the time that the gsmSSF/gprsSSF was triggered, and the time zone the gsmSSF/gprsSSF resides in.
TP Short Message Submission Specific Information	M	This IE contains the 1 st octet of the SMS-SUBMIT TPDU which is specified in 3G TS 23.040 [21]. The 1 st octet includes the following information: <ul style="list-style-type: none"> – Message Type Indicator – Reject Duplicates – Validity Period Format – Status Report Request – User Data Header Indicator – Reply Path
TP Protocol Identifier	M	This IE indicates the protocol used above SM-Transfer Layer. The TP Protocol Identifier shall be retrieved from the SMS-SUBMIT TPDU which is specified in 3G TS 23.040 [21].
TP Data Coding Scheme	M	This IE indicates the data coding scheme of the TP-User Data field, and may indicate a message class. The message class may indicate e.g. the originator of Short Message. The TP Data Coding Scheme shall be retrieved from the SMS-SUBMIT TPDU which is specified in 3G TS 23.040 [21].
TP Validity Period	C	This IE indicates the length of the validity period or the absolute time of the validity period termination. The TP Validity Period shall be retrieved from the SMS-SUBMIT TPDU which is specified in 3G TS 23.040 [21].
SMSC Address	M	This I.E defines the address of the SMSC to which the MO short message is intended to be submitted.

M Mandatory (The IE shall always be sent)

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

Location Information in MSC contains the following information:

Information element name	MO SMS	Description
CellGlobalIdOrServiceAreaIdOrLAI	M	See 3G TS 23.018 [3].
Geographical Information	C	See 3G TS 23.018 [3].
Geodetic Information	C	See 3G TS 23.018 [3].
VLR number	M	See 3G TS 23.018 [3].
Selected LSA Identity	C1	This IE indicates the LSA identity associated with the current position of the MS. Send if the LSA ID of subscription and LSA ID of the used cell matches. In the case of multiple matches the one with the highest priority is sent. See 3GPP TS 23.073[23]

M Mandatory (The IE shall always be sent)

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

C1 Conditional (The IE shall be sent, if available and SoLSA is supported)

Location Information in the GPRS case contains the following information:

Information element name	MO SMS	Description
CellGlobalIdOrServiceAreaIdOrRAI	M	See 3G TS 23.018 [3] and 3G TS 23.060 [11].
Geographical Information	C	See 3G TS 23.018 [3].
SGSN number	M	Global Title of the Serving GPRS Service Node. See 3G TS 23.060 [11].

M Mandatory (The IE shall always be sent)

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

***** Next Modified Section *****

11.3.2.1 Any Time Interrogation ack

11.3.2.1.1 Description

This IF is used by the GMLC to provide the requested information to the gsmSCF. The gsmSCF requested the information previously with the Any Time Interrogation IF.

11.3.2.1.2 Information Elements

The following information elements are required:

Information element name	Required	Description
Location Information	C	This IE indicates the location of the Mobile Station.

C Conditional (The IE shall be sent if requested and available)

Location Information contains the following information:

Information element name	Required	Description
Location Number	-	See 3G TS 23.018 [3].
CellGlobalIdOrServiceAreaIdOrL	-	See 3G TS 23.018 [3].

AI		
Geographical Information	C	See 3G TS 23.032 [x]. The GMLC receives Extended Geographical Information from the MSC. The Extended Geographical Information shall be converted to the Geographical Information by the GMLC.
Geodetic Information	C	See 3G TS 23.018 [3].
Age Of Location Information	C	See 3G TS 23.018 [3].
VLR number	-	See 3G TS 23.018 [3].
Selected LSA Identity	-	See 3G TS 23.018 [3].
MSC number	C	See 3G TS 23.032. [x] The GMLC receives the MSC number from the HLR in the SendRoutingInfoForLCS MAP operation.

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

***** Next Modified Section *****

11.3.4.1 Any Time Interrogation ack

11.3.4.1.1 Description

This IF is used by the HLR to provide the requested subscriber location and/or subscriber state information to the gsmSCF.

11.3.4.1.2 Information Elements

The following information elements are required:

<u>Information element name</u>	<u>Required</u>	<u>Description</u>
Location Information	C	This IE indicates the location of the served subscriber.
Subscriber State	C	This IE indicates the status of the MS. The possible values of the IE are: <ul style="list-style-type: none"> - CAMELBusy: The VLR has indicated that the MS is engaged on a transaction for a mobile originating or terminated circuit-switched call. - NetworkDeterminedNotReachable: The VLR has indicated that the network can determine from its internal data that the MS is not reachable. - AssumedIdle: The VLR has indicated that the state of the MS is neither "CAMELBusy" nor "NetworkDeterminedNotReachable". - NotProvidedFromVLR: The VLR did not provide any information on subscriber state even though it was requested.

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

Location Information contains the following information:

<u>Information element name</u>	<u>Required</u>	<u>Description</u>
Location Number	C	See 3G TS 23.018 [3].
CellGlobalIdOrServiceAreaIdOrLAI	C	See 3G TS 23.018 [3].
Geographical Information	C	See 3G TS 23.018 [3].
Geodetic Information	C	See 3G TS 23.018 [3].
Age Of Location Information	C	See 3G TS 23.018 [3].

VLR number	C	See 3G TS 23.018 [3].
Selected LSA Identity	C	See 3G TS 23.018[3]

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

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

29.078 CR 059

Current Version: **3.2.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#7**
 list expected approval meeting # here ↑

for approval
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strategic
 non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects:
 (at least one should be marked with an X)

(U)SIM ME UTRAN / Radio Core Network

Source: CN WG2 **Date:** 25 Feb. 2000

Subject: CR 29.078-059 on introduction of 'Service Area Identification (SAI)'

Work item: TEI

Category:
 (only one category shall be marked with an X)

F Correction
 A Corresponds to a correction in an earlier release
 B Addition of feature
 C Functional modification of feature
 D Editorial modification

Release: Phase 2
 Release 96
 Release 97
 Release 98
 Release 99
 Release 00

Reason for change:

In 3G network, Service Area Identification consists of LAI and SAC. It is used by Core Network to identify Service Area. For example Service Area Identification is included in initial UE message instead of CGI in 3G network. So the Cell ID shall be replaced to the new one that shows the Cell in GSM case and the Service Area in UMTS case.

This CR is aligning with 23.003 CR (N2B000121).

Clauses affected: 4.6.1.5.2, 4.6.9.1.2, 7.6.1.3.2, 11.3.2.1.2, 11.3.4.1.2

Other specs affected:

Other 3G core specifications → List of CRs: 23.003, 23.018, 29.002, 23.078
 Other GSM core specifications → List of CRs:
 MS test specifications → List of CRs:
 BSS test specifications → List of CRs:
 O&M specifications → List of CRs:

Other comments:



help.doc

<----- double-click here for help and instructions on how to create a CR.

5 Common CAP Types

5.1 Data types

...

```
LocationInformationGPRS ::= SEQUENCE {  
|   cellGlobalIdOrServiceAreaIdOrLAI  _____[0] OCTET STRING (SIZE(5..7)) OPTIONAL,  
-- coded according to 3G TS 29.002.  
   geographicalInformation  [1] OCTET STRING (SIZE (8)) OPTIONAL,  
-- Refers to geographical Information defined in 3G TS 23.032.  
   sgsn-Number              [2]   ISDN-AddressString  OPTIONAL,  
}
```