3GPP TSG CN Plenary Meeting #15 6th – 8th March 2002.Cheju, Korea.

Source: TSG CN WG4

Title: CRs on R99 Camel3

Agenda item: 7.2

Document for: APPROVAL

Introduction:

This document contains 6 CRs on R99 Work Item " Camel3", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #15 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.018	096		N4-020133	R99	Correction on the Active Location Retrieval description	F	3.10.0
23.018	097		N4-020134	Rel-4	Correction on the Active Location Retrieval description	Α	4.5.0
23.018	098		N4-020135	Rel-5	Correction on the Active Location Retrieval description	Α	5.2.0
29.002	371	1	N4-020209	R99	Inclusion of complete ODB data in ATSI and NSDC	F	3.11.0
29.002	372	1	N4-020210	Rel-4	Inclusion of complete ODB data in ATSI and NSDC	Α	4.6.0
29.002	373		N4-020013	Rel-5	Inclusion of complete ODB data in ATSI and NSDC	Α	5.0.0

3GPP TSG CN WG4 Meeting #12

Sophia Antipolis, France, 28th January – 1st February 2002

CHANGE REQUEST

23.018 CR 096 # rev - # Current version: 3.10.0

For <u>HELP</u> 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:	ж	Correction on the Active Location Retrieval descrip	otion	
Source:	ж	CN4		
Work item code	· ¥£	CAMEL 3	Date: ℜ	
Work hom oode		OT WILL O	Date. 00	
Category:	æ	F Agreed by Consensus	Release: #	Raa
Category.	00			
		Use <u>one</u> of the following categories:	Use <u>one</u> of	the following releases:
		F (correction)	2	(GSM Phase 2)
		A (corresponds to a correction in an earlier release,) R96	(Release 1996)
		B (addition of feature),	R97	(Release 1997)
		C (functional modification of feature)	R98	(Release 1998)
		D (editorial modification)	R99	(Release 1999)
		Detailed explanations of the above categories can	REL-4	(Release 4)
		be found in 3GPP <u>TR 21.900</u> .	REL-5	(Release 5)
				· · · · ·

Reason for change: #	The UMTS specific location information (SAI) has to be taken into account
Summary of change: ₩	The Active Location Retrieval procedure allows the gsmSCF to know the
	location of the MS with the accuracy of the cell ID for GSM or SAI for UMTS
	at every time it is possible.
	The CN4 meeting #21 (CANCUN) has already corrected the § 7.2.3.4 (procedure Retrieve_Current_Location_VLR) and the SDL 64 (procedure Current_Location_Page_MSC) in order to take into account the specific UMTS procedure Location Reporting Control that has been previously forgotten
	However, the SDL 65 (procedure Current_Location_Search_MSC) has to be corrected too.
Consequences if # not approved:	Incomplete Active Location Retrieval mechanism

Clauses affected:	第 7.2.4	
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 \$\mathbb{X}\$ 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.

*** Change ***

7.2.4.7. Procedure Current_Location_Search_MSC

The test "MS connection exists" takes the "Yes" exit if there is a radio connection established between the MS and the network.

The test "GSM Access" takes the "Yes" exit if the MS is using a GSM radio access to communicate with the network.

The test "Report on change of service area?" takes the "Yes" exit if the MSC has performed the Location Reporting Control procedure (see 3GPP TS 25.413 [26]) with the Request Type IE set to "Change of service area".

If the test "Report on change of service area?" takes the "No" exit the MSC shall perform a Location Reporting Control procedure with the Request Type IE set to "Direct".

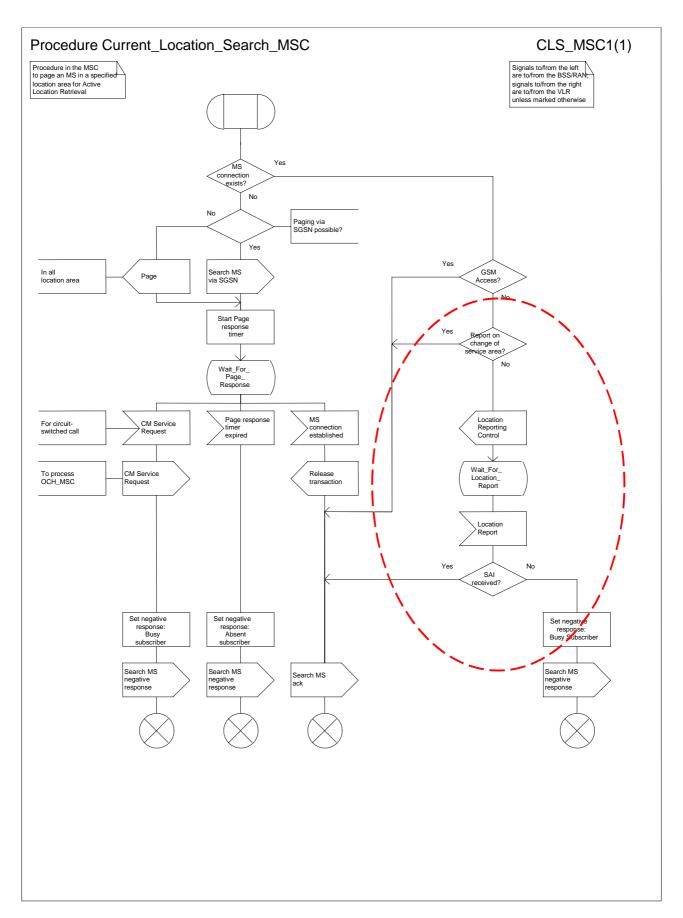
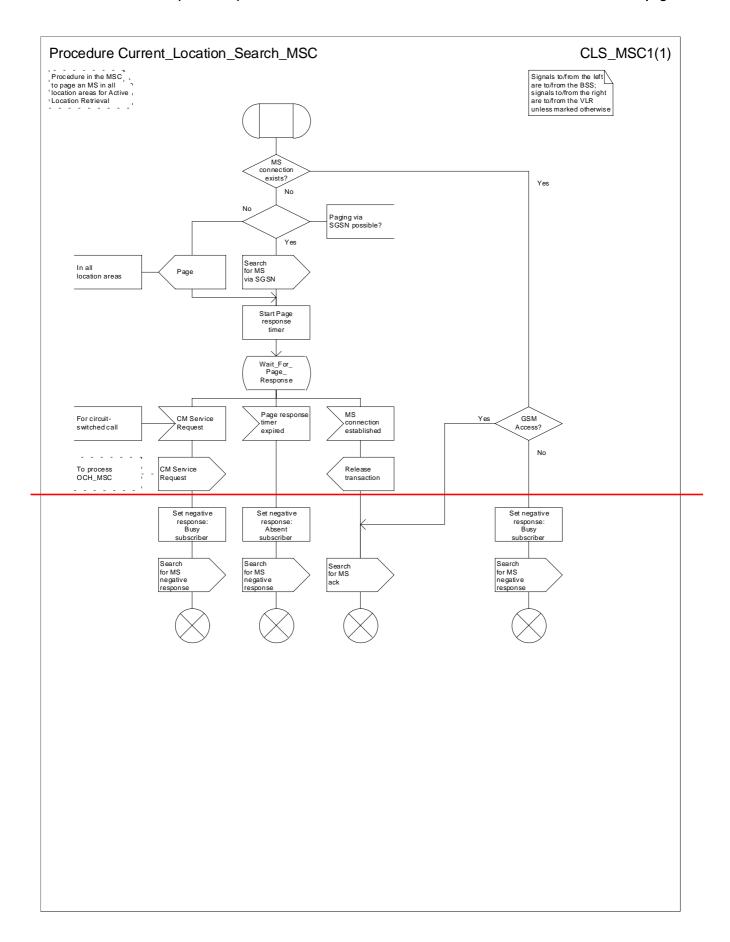


Figure 65: Procedure Current_Location_Search_MSC



3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, France, 28th January – 1st Febru

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For <u>HELP</u> on	using	this for	m, see botto	om of this pa	ge or le	ook at	t the p	oop-up text	over	the ₩ syr	mbols.
Proposed change	affec	ts: ೫	(U)SIM	ME/UE		Radio	Acce	ess Network		Core Ne	etwork X
Title:	f Inc	lusion	of complete	ODB data in	ATSI	and N	ISDC	;			
Source: #	€ Sie	mens /	٩G								
Work item code: ₽	€ CA	MEL3						Date: ₩	31 .	January 2	002
-	Deta be fo	F (corr A (corr B (add C (fund D (edit ailed exp bund in 3	responds to a lition of featur ctional modific orial modifica planations of t BGPP TR 21.	correction in re), cation of featuation) che above cate	ure) egories	can	ease)	R96 R97 R98 R99 REL-4 REL-5	the fo. (GSM (Rele (Rele (Rele (Rele (Rele	llowing rele 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4)	
Reason for chang	re: #	HLR to subscion of sub SS-CE one of if one the ch If one subsci Howev contain results requesting (It see	o query the criber data" is scriber data 3, ODB, CSI the data is of the data is aned data. of the operariber should ver, the defines only the control of the miss sted/modified ms this error of the control of the operariber should ver, the defines only the control of the miss sted/modified ms this error of the control of the operariber should were the defines only the control of the miss of the miss of the operariber of th	subscriber's to inform the to be interred and Support requested by such and subscriber include the inition of the ODB data whing data if, for d, i.e., the A	attribuse SCP ogated/ rted CA y ATSI of the H d for the complete ODB d hich are or exar TSI according to the en OD	tes. "It of the change of the	Notifice changed by Phase the Hune HL B data DB can clude to V ODB If the I merall	cation to CS nge of subs y these ope ses in VLR a HLR sends R sends NS a, the ODB ategory for the d in ATSI a LR/SGSN f for all incor NSDC req. Data which	SE of scribe eration and/o the data he sund Narom to ming are s	change of r data. The sinclude of r SGSN. Vata to the scriber. SDC, ODI he HLR. Totall, is ent without	f ne scope e SS-CF, When SCP, or P with oplied B-Info, This
Summary of chan	•		_	ries in ODB-					·		
Consequences if not approved:			above proble e data.	em remains.	The S	CP is	not a	ble to quer	y/be i	nformed a	about
Clauses affected:	ж	7, 8,	16, 17								
Other specs affected:	¥	Te	her core spo est specifica &M Specifica	tions	¥						
Other comments:	ж	This C	R includes	the following	correc	tions;	;				

- 7.6.3.9: All the missing ODB data added. They are stored in the HLR.
- 7.6.3.9 bottom line: New comment is added to note that the additional ODBs are not used for ISD
- 7.6.3.8.5 ODB Data: It does not contain Notification to CSE flag. Deleted.
- 7.6.3.xx ODB Info: Corrent ASN.1 for ATSI and NSDC contains ODB Info, not ODB data. This explanation for ODB Info is missing. Added as defined in ASN.1.
- 8.11.3.2 ATSI parameter table: as above.
- 8.11.5.2 NSDC parameter table: as above.
- 8.11.5.3 NSDC parameters: as above and correction of the reference sections.
- 16.2.2.4 Operation: anyTimeSubscriptionInterrogation (editorial).
- ASN.1 ODB-GeneralData: All the missing ODB data added as described above.

*** For information ***

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
1.1 Barring outgoing calls	allOG-CallsBarred (0)	ODB-GeneralData	HLR/VLR/SGSN
1.2 Barring outgoing	internationalOGCallsBarred (1)	ODB-GeneralData	HLR/VLR/SGSN
international calls	internationalOGCallsNotToHPL	ODD ConorolData	LII DA/I D/CCCN
1.3 Barring outgoing international calls except those	MN-CountryBarred (2)	ODB-GeneralData	HLR/VLR/SGSN
directed to the home PLMN	Wild-Country Barred (2)		
country			
1.4 Barring of outgoing calls		none	HLR
when roaming outside the home			
PLMN country	into managed (C)	ODD CanavalData	LII DA/I D/CCCN
1.5 Barring of outgoing inter- zonal calls	interzonalOGCallsBarred (6)	ODB-GeneralData	HLR/VLR/SGSN
1.6 Barring of outgoing inter-	interzonalOGCallsNotToHPLMN	ODB-GeneralData	HLR/VLR/SGSN
zonal calls except those directed	-CountryBarred (7)		
to the home PLMN country	1000 !! !!	0000	
1.7 Barring of outgoing international calls except those	interzonalOGCallsAndInternatio	ODB-GeneralData	HLR/VLR/SGSN
directed to the home PLMN	nalOGCallsNotToHPLMN- CountryBarred (8)		
country AND barring of outgoing	CodmityBarred (6)		
inter-zonal calls			
2.1 Barring incoming calls		none	HLR
2.2 Barring incoming calls when		none	HLR
roaming outside the home PLMN country			
2.3 Barring incoming calls when		none	HLR
roaming outside the zone of the			
home PLMN country			
3.1 Barring of Roaming outside		none	HLR
the home PLMN 3.2 Barring of Roaming outside		none	HLR
the home PLMN country		110116	TIEIX
4.1 Barring of outgoing Premium	premiumRateInformationOGCall	ODB-GeneralData	HLR/VLR
Rate Calls (Information)	sBarred (3)		
4.2 Barring of outgoing Premium	premiumRateEntertainementOG CallsBarred (4)	ODB-GeneralData	HLR/VLR
Rate Calls (Entertainment) 5.1 When registered in the	plmn-SpecificBarringType1 (0)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific	pinin openiobaning type (e)	ODD III LIVIIV Data	THE COURT OF THE C
Barring (Type 1)			
5.2 When registered in the	plmn-SpecificBarringType1 (1)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific			
Barring (Type 2) 5.3 When registered in the	plmn-SpecificBarringType1 (2)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific	pillin-SpecificBarringTypeT (2)	ODB-HELIVIN-Data	TIER/VER/3G3N
Barring (Type 3)			
5.4 When registered in the	plmn-SpecificBarringType1 (3)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific			
Barring (Type 4) 6.1 Barring of Supplementary	as AssessBorred (E)	ODD CongrelDate	HLR/VLR
Services Management	ss-AccessBarred (5)	ODB-GeneralData	HLR/VLR
7.1 Barring of registration of any		none	HLR
call forwarded-to number			
7.2 Barring of registration of any		none	HLR
international call forwarded-to			
number 7.3 Barring or registration of any		none	HLR
international call forwarded-to		Hone	1141
number except to a number			
within the HPLMN country			15
7.4 Barring of registration of any		none	HLR
inter-zone call forwarded-to number			
7.5 Barring of registration of any		none	HLR
inter-zone call forwarded-to			
number except to a number			
within the HPLMN country			

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
8.1 Barring of invocation of call transfer	allECT-Barred (9)	ODB-GeneralData	HLR/VLR
8.2 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber	chargeableECT-Barred (10)	ODB-GeneralData	HLR/VLR
8.3 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at international rates	internationalECT-Barred (11)	ODB-GeneralData	HLR/VLR
8.4 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at interzonal rates	interzonalECT-Barred (12)	ODB-GeneralData	HLR/VLR
9 Barring of invocation of call transfer where both calls are calls charged to the served subscriber	doublyChargeableECT-Barred (13)	ODB-GeneralData	HLR/VLR
10 Barring of further invocation of call transfer if there is already one ongoing transferred call for the served subscriber in the serving MSC/VLR	multipleECT-Barred (14)	ODB-GeneralData	HLR/VLR
Packets (subclause 5.2)	allPacketOrientedServicesBarre d (15)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (16)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (17)	ODB-GeneralData	HLR/SGSN

*** First modified part ***

7.6.3.9 Operator Determined Barring General Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- All outgoing calls barred; (*)
- International outgoing calls barred; (*)
- International outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls barred; (*)
- Interzonal outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls AND international outgoing calls except those directed to the home PLMN country barred; (*)
- Premium rate (information) outgoing calls barred;
- Premium rate (entertainment) outgoing calls barred;
- Supplementary service access barred;
- Invocation of call transfer barred;
- Invocation of chargeable call transfer barred;
- Invocation of internationally chargeable call transfer barred;
- Invocation of interzonally chargeable call transfer barred;
- Invocation of call transfer where both legs are chargeable barred;
- Outgoing calls when roaming outside the home PLMN country; (**)
- All incoming calls; (**)
- Incoming calls when roaming outside the home PLMN country; (**)

- Incoming calls when roaming outside the zone of the home PLMN country; (**)
- Roaming outside the home PLMN; (**)
- Roaming outside the home PLMN country; (**)
- Registration of any call forwarded-to number; (**)
- Registration of any international call forwarded-to number; (**)
- Registration of any international call forwarded-to number except to a number within the HPLMN country; (**)
- Registration of any inter-zone call forwarded-to number; (**)
- Registration of any inter-zone call forwarded-to number except to a number within the HPLMN country. (**)
- (*) Only these ODBs are supported by the SGSN. The SGSN applies them only for short message transfer.
- (**) These ODBs are not used for InsertSubscriberData.

7.6.3.10 ODB HPLMN Specific Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate only when the subscriber is registered in the HPLMN. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- Operator Determined Barring Type 1;
- Operator Determined Barring Type 2;
- Operator Determined Barring Type 3;
- Operator Determined Barring Type 4.

7.6.3.85 ODB Data

This parameter contains the ODB general data, ODB HPLMN specific data-and Notification to CSE flag.

7.6.3.xx ODB Info

This parameter contains the ODB data and Notification to CSE flag.

*** Next modified part ***

8.11.3 MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION service

8.11.3.1 Definition

This service is used by the gsmSCF, to request subscription information (e.g. call forwarding supplementary service data or CSI) from the HLR at any time.

8.11.3.2 Service primitives

Table 8.11/3: Any Time Subscription Interrogation

	<i>3</i> — — — — — — — — — — — — — — — — — — —	_		
Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
Requested Subscription Info	М	M(=)		
GsmSCF-Address	М	M(=)		
IMSI	С	C(=)		
MSISDN	С	C(=)		
Long FTN Supported	С	C(=)		

Call Forwarding Data	С	C(=)
Call Barring Data	С	C(=)
ODB InfoData	С	C(=)
CAMEL Subscription Info	С	C(=)
Supported CAMEL phases in VLR	С	C(=)
Supported CAMEL phases in SGSN	С	C(=)
User error	С	C(=)
Provider error		0

8.11.3.3 Parameter definition and use

All parameters are described in clause 7.6.

The HLR may be able to use the value of the parameter gsmSCF-address to screen a

MAP_Any_Time_Subscription_Interrogation indication.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078. <u>User error</u>

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Unexpected Data Value;
- Unknown Subscriber;
- BearerServiceNotProvisioned;
- TeleserviceNotProvisioned;
- CallBarred;
- IllegalSS-Operation;
- SS-NotAvailable;
- InformationNotAvailable:
- Any Time Subscription Interrogation Not Allowed;
- Data Missing.

Provider error

These are defined in clause 7.6.1.

*** Next modified part ***

8.11.5 MAP-NOTE-SUBSCRIBER-DATA-MODIFIED service

8.11.5.1 Definition

This service is used by the HLR to inform the gsmSCF that subscriber data have been modified.

8.11.5.2 Service primitives

Table 8.11/5: Note Subscriber Data Modified

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
IMSI	M	M(=)		
MSISDN	M	M(=)		
Ext Forwarding information-for-CSE	С	C(=)		
Ext Call barring information-for-CSE	С	C(=)		
ODB data Info	С	C(=)		
CAMEL subscription info	С	C(=)		
All Information Sent	С	C(=)		
User error			С	C(=)

CR page 7

Parameter name	Request	Indication	Response	Confirm
Provider error				0

8.11.5.3 Parameter definition and use

Invoke id

See clause 7.6.1 for the use of this parameter.

IMSI

See clause 7.6.2 for the use of this parameter.

MSISDN

See clause 7.6.2 for the use of this parameter.

Ext Forwarding information-for-CSE

See clause 7.6.<u>32</u> for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

Ext Call barring information-for-CSE

See clause 7.6.<u>32</u> for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

ODB Infodata

See clause 7.6.<u>32</u> for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

CAMEL subscription info

See clause 7.6.<u>32</u> for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

All Information Sent

This parameter is set when the HLR has sent all information to gsmSCF.

User error

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Data Missing;
- Unexpected Data Value;
- Unknown Subscriber.

Provider error

These are defined in clause 7.6.1.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078.

*** Next modified part ***

16.2.2.4 Operation

When mapping a request primitive on to a Remote Operations PDU (invoke), the MAP PM shall set the operation code according to the mapping described in table 16.2/1.

When mapping a response primitive on to a Remote Operations service, the MAP PM shall set the operation code of the TC-RESULT-L/NL primitive (if required) to the same value as the one received at invocation time.

Table 16.2/1: Mapping of MAP specific services on to MAP operations

MAP-SERVICE	operation
MAP-ACTIVATE-SS	activateSS
MAP-ACTIVATE-TRACE-MODE	activateTraceMode
MAP-ALERT-SERVICE-CENTRE	alertServiceCentre
MAP-ANY-TIME-INTERROGATION	anyTimeInterrogaton
MAP_AUTHENTICATION_FAILURE_REPORT	authenticationFailureReport
MAP-ANY-TIME-MODIFICATION	anyTimeModification
MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION	anyTimeSubscriptionInterrogation

	1
MAP-CANCEL-LOCATION	cancelLocation
MAP-CHECK-IMEI	checkIMEI
MAP-DEACTIVATE-SS	deactivateSS
MAP-DEACTIVATE-TRACE-MODE	deactivateTraceMode
MAP-DELETE-SUBSCRIBER-DATA	deleteSubscriberData
MAP-ERASE-CC-ENTRY	eraseCC-Entry
MAP-ERASE-SS	eraseSS
MAP-FAILURE-REPORT	failureReport
MAP-FORWARD-ACCESS-SIGNALLING	forwardAccessSignalling
MAP-FORWARD-CHECK-SS-INDICATION	forwardCheckSsIndication
MAP-FORWARD-GROUP-CALL-SIGNALLING	forwardGroupCallSignalling
MAP-MT-FORWARD-SHORT-MESSAGE	mt-forwardSM
MAP-MO-FORWARD-SHORT-MESSAGE	mo-forwardSM
MAP-GET-PASSWORD	getPassword
MAP-INFORM-SERVICE-CENTRE	informServiceCentre
MAP-INSERT-SUBSCRIBER-DATA	insertSubscriberData
MAP-INTERROGATE-SS	interrogateSs
MAP-IST-ALERT	istAlert
MAP-IST-COMMAND	istCommand
MAP-NOTE-MS-PRESENT-FOR-GPRS	noteMsPresentForGprs
MAP-NOTE-SUBSCRIBER-DATA-MODIFIED	noteSubscriberDataModified
MAP-PREPARE-GROUP-CALL	prepareGroupCall
MAP-PREPARE-HANDOVER	prepareHandover
MAP-PREPARE-SUBSEQUENT-HANDOVER	prepareSubsequentHandover
MAP-PROCESS-ACCESS-SIGNALLING	processAccessSignalling
MAP-PROCESS-GROUP-CALL-SIGNALLING	processGroupCallSignalling
MAP-PROCESS-UNSTRUCTURED-SS-REQUEST	processUnstructuredSS-Request
MAP-PROVIDE-ROAMING-NUMBER	provideRoamingNumber
MAP-PROVIDE-SIWFS-NUMBER	provideSIWFSNumber
MAP-PROVIDE-SUBSCRIBER-LOCATION	provideSubscriberLocation
MAP-PROVIDE-SUBSCRIBER-INFO	provideSubscriberInfo
MAP-PURGE-MS	purgeMS
MAP-READY-FOR-SM	readyForSM
MAP-REGISTER-CC-ENTRY	registerCC-Entry
MAP-REGISTER-PASSWORD	registerOo-Entry
MAP-REGISTER-PASSWORD	registerSS
MAP-REMOTE-USER-FREE	remoteUserFree
MAP-REPORT-SM-DELIVERY-STATUS	reportSmDeliveryStatus
MAP-RESET	
_	reset
MAP-RESTORE-DATA	restoreData
MAP-SECURE-TRANSPORT-CLASS-1	secureTransportClass1
MAP-SECURE-TRANSPORT-CLASS-2	secureTransportClass2
MAP-SECURE-TRANSPORT-CLASS-3	secureTransportClass3
MAP-SECURE-TRANSPORT-CLASS-4	secureTransportClass4
MAP-SEND_GROUP-CALL_END_SIGNAL	sendGroupCallEndSignal
MAP-SEND-END-SIGNAL	sendEndSignal
MAP-SEND-AUTHENTICATION-INFO	sendAuthenticationInfo
MAP-SEND-IMSI	sendIMSI
MAP-SEND-IDENTIFICATION	sendIdentification
MAP-SEND-ROUTING-INFO-FOR-SM	sendRoutingInfoForSM
MAP-SEND-ROUTING-INFO-FOR-GPRS	sendRoutingInfoForGprs
MAP-SEND-ROUTING-INFO-FOR-LCS	sendRoutingInfoForLCS
MAP-SEND-ROUTING-INFORMATION	sendRoutingInfo
MAP-SET-REPORTING-STATE	setReportingState
MAP-SIWFS-SIGNALLING-MODIFY	SIWFSSignallingModify
MAP-STATUS-REPORT	statusReport
MAP-SUBSCRIBER-LOCATION-REPORT	subscriberLocationReport
MAP-SUPPLEMENTARY-SERVICE-INVOCATION-NOTIFICATION	ss-Invocation-Notification
MAP-UNSTRUCTURED-SS-NOTIFY	unstructuredSS-Notify
MAP-UNSTRUCTURED-SS-REQUEST	unstructuredSS-Request
MAP-UPDATE-GPRS-LOCATION	updateGprsLocation
MAP-UPDATE-LOCATION	updateLocation
MAP-NOTE-MM-EVENT	NoteMM-Event

*** Next modified part ***

CR editor's note: This part contains the description of the operation for information as well as the correction. The highlights below are only for reader's convenience to indicate the data types. Actual change is applied to ODB-GeneralData data type only.

17.7 MAP constants and data types

17.7.1 Mobile Service data types

•••

-- any time information handling operations

```
AnyTimeSubscriptionInterrogation ::= OPERATION
                                                                --Timer m
   ARGUMENT
       RESULT
       anyTimeSubscriptionInterrogationRes AnyTimeSubscriptionInterrogationRes
   ERRORS {
       ATSI-NotAllowed,
       DataMissing,
       UnexpectedDataValue,
       UnknownSubscriber,
       BearerServiceNotProvisioned,
       TeleserviceNotProvisioned,
       CallBarred,
       IllegalSS-Operation,
       SS-NotAvailable.
       InformationNotAvailable}
```

-- subscriber data modification notification operations

```
NoteSubscriberDataModified ::= OPERATION --Timer m

ARGUMENT noteSubscriberDataModifiedArg NoteSubscriberDataModifiedArg

RESULT noteSubscriberDataModifiedRes NoteSubscriberDataModifiedRes
-- optional

ERRORS {
    DataMissing,
    UnexpectedDataValue,
    UnknownSubscriber}
```

-- any time information handling types

${ t nyTimeSubscriptionInterrogationR}$	les ::= SEQUENCE {	
callForwardingData	[1] CallForwardingData	OPTIONAL,
callBarringData	[2] CallBarringData	OPTIONAL,
odb-Info	[3] ODB-Info	OPTIONAL,
camel-SubscriptionInfo	[4] CAMEL-SubscriptionInfo	OPTIONAL,
supportedVLR-CAMEL-Phases	[5] SupportedCamelPhases	OPTIONAL,
supportedSGSN-CAMEL-Phases	[6] SupportedCamelPhases	OPTIONAL,
extensionContainer	[7] ExtensionContainer	OPTIONAL,
}		

⁻⁻ subscriber data modification notification types

```
NoteSubscriberDataModifiedArg ::= SEQUENCE {
     imsi
    msisdn
                                          ISDN-AddressString,
    forwardingInfoFor-CSE
                                          [0] Ext-ForwardingInfoFor-CSE
                                                                            OPTIONAL,
    callBarringInfoFor-CSE
                                          [1] Ext-CallBarringInfoFor-CSE
                                                                            OPTIONAL,
                                         [2] ODB-Info
    odb-Info
                                                                            OPTIONAL,
    camel-SubscriptionInfo
                                          [3] CAMEL-SubscriptionInfo
                                                                            OPTIONAL.
     allInformationSent
                                          [4] NULL
                                                                            OPTIONAL,
     extensionContainer
                                          ExtensionContainer
                                                                            OPTIONAL,
```

```
    ODB-Info
    SEQUENCE {

    odb-Data
    ODB-Data,

    notificationToCSE
    NULL
    OPTIONAL,

    extensionContainer
    ExtensionContainer
    OPTIONAL,

    ...}
```

```
    ODB-Data
    ::= SEQUENCE {

    odb-GeneralData
    ODB-GeneralData,

    odb-HPLMN-Data
    ODB-HPLMN-Data
    OPTIONAL,

    extensionContainer
    ExtensionContainer
    OPTIONAL,

    ...}
```

```
ODB-GeneralData ::= BIT STRING {
    allOG-CallsBarred (0),
    internationalOGCallsBarred (1),
    internationalOGCallsNotToHPLMN-CountryBarred (2),
    interzonalOGCallsBarred (6),
    interzonalOGCallsNotToHPLMN-CountryBarred (7),
    interzonal OGC alls {\tt And International OGC alls Not To {\tt HPLMN-Country Barred}} \ \ (8) \ ,
    premiumRateInformationOGCallsBarred (3),
    premiumRateEntertainementOGCallsBarred (4),
    ss-AccessBarred (5).
    allECT-Barred (9),
    chargeableECT-Barred (10),
    internationalECT-Barred (11),
    interzonalECT-Barred (12),
    doublyChargeableECT-Barred (13),
    multipleECT-Barred (14),
    allPacketOrientedServicesBarred (15),
    roamerAccessToHPLMN-AP-Barred (16),
    roamerAccessToVPLMN-AP-Barred (17),
    roamingOutsidePLMNOG-CallsBarred
                                       (18),
    allIC-CallsBarred (19),
    roamingOutsidePLMNIC-CallsBarred
                                       (20),
    roamingOutsidePLMNICountryIC-CallsBarred (21),
    roamingOutsidePLMN-Barred (22),
                                       (23),
    roamingOutsidePLMN-CountryBarred
    registrationAllCF-Barred (24),
    registrationCFNotToHPLMN-Barred
                                      (25),
    registrationInterzonalCF-Barred (26),
    registrationInterzonalCFNotToHPLMN-Barred (27) (SIZE (15..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-GeneralData type shall be treated like unsupported ODB-GeneralData
    -- When the ODB-GeneralData type is removed from the HLR for a given subscriber,
    -- in NoteSubscriberDataModified operation sent toward the gsmSCF
    -- all bits shall be set to "O"
```

```
ODB-HPLMN-Data ::= BIT STRING {
    plmn-SpecificBarringType1 (0),
    plmn-SpecificBarringType2 (1),
    plmn-SpecificBarringType3 (2),
    plmn-SpecificBarringType4 (3)} (SIZE (4..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-HPLMN-Data type shall be treated like unsupported ODB-HPLMN-Data
```

3GPP TSG CN WG4 Meeting #12

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ж		29.0	02	CR <mark>372</mark>	жr	ev	1	ж	Current vers	ion:	4.6.0	¥
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Proposed	l change	affects:	* #	(U)SIM	ME/UE		Radi	о Ас	cess Network		Core Ne	etwork X
Title:	*	Inclus	sion of	complete	ODB data in	ATSI	and	NSD	С			
Source:	ж	CN4										
Work iten	n code: ₩	CAMI	EL3						Date: ₩	31 .	January 2	2002
Category	: *	Use <u>on</u> F A B C D Detailed	(corred) (corred) (addition (function (editon d expla	sponds to a ion of feature ional modific rial modifica	correction in a e), cation of featur tion) he above cate	re)		lease	Release: # Use <u>one</u> of 2 e) R96 R97 R98 R99 REL-4 REL-5	(GSM (Relea (Relea (Relea (Relea (Relea		
Reason fo	or change	H su of standard o	LR to ubscrill subscrill subscrill subscrill one of the cone of th	query the sper data" is criber data. ODB, CSI he data is ned data. If the operator should ber, the defins only the Coin the missing ded/modified this ethics error of this error of the columns.	subscriber's a to inform the to be interrogand Support requested by schanged in tions is used include the contion of the CODB data whing data if, for d, i.e., the AT d data.	esttribue SCF gated C/v ATSi the Forth comple DDB coich are rexains and control of the comple of the complete of the complet	of the control of the	"Noting the changed L Phase In the Hood B da notice Included the change of the change	ature which the fication to CS mange of substance of subs	SE of scribe eration and/o the data he sund NS rom the are se	change of r data. The sinclude of SGSN. at a to the so the SC for the appropriate of the HLR. at a to the HLR. at a to the sent without the solution of the HLR. at a to the sent without the solution of the HLR. at a to the sent without the solution of the HLR. at a to the solution of the HLR. at a to the solution of	f ne scope e SS-CF, When SCP, or P with oplied B-Info, This
Summary	of chang				used for ATS				form the con	nplete	e ODB in	the HLR.
Consequence not appro			The at	•	em remains.	The S	CP is	s not	able to quer	y/be ii	nformed a	about
Clauses a	ffected:	₩ 7	7, 8, 1	6, 17								
Other spe		#	Oth Tes	er core spe t specificat M Specifica	ions	Ж						
Other cor	nments:	₩ <mark>TI</mark>	his CF	R includes t	he following	corre	ctions	s;				

- 7.6.3.9: All the missing ODB data added. They are stored in the HLR.
- 7.6.3.9 bottom line: New comment is added to note that the additional ODBs are not used for ISD
- 7.6.3.8.5 ODB Data: It does not contain Notification to CSE flag. Deleted.
- 7.6.3.xx ODB Info: Corrent ASN.1 for ATSI and NSDC contains ODB Info, not ODB data. This explanation for ODB Info is missing. Added as defined in ASN.1.
- 8.11.3.2 ATSI parameter table: as above.
- 8.11.5.2 NSDC parameter table: as above.
- 8.11.5.3 NSDC parameters: as above and correction of the reference sections.
- 16.2.2.4 Operation: anyTimeSubscriptionInterrogation (editorial).
- ASN.1 ODB-GeneralData: All the missing ODB data added as described above.

*** For information ***

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
1.1 Barring outgoing calls	allOG-CallsBarred (0)	ODB-GeneralData	HLR/VLR/SGSN
1.2 Barring outgoing	internationalOGCallsBarred (1)	ODB-GeneralData	HLR/VLR/SGSN
international calls	internationalOGCallsNotToHPL	ODD ConorolData	LII DA/I D/CCCN
1.3 Barring outgoing international calls except those	MN-CountryBarred (2)	ODB-GeneralData	HLR/VLR/SGSN
directed to the home PLMN	Wild-Country Barred (2)		
country			
1.4 Barring of outgoing calls		none	HLR
when roaming outside the home			
PLMN country	into managed (C)	ODD CanavalData	LII DA/I D/CCCN
1.5 Barring of outgoing inter- zonal calls	interzonalOGCallsBarred (6)	ODB-GeneralData	HLR/VLR/SGSN
1.6 Barring of outgoing inter-	interzonalOGCallsNotToHPLMN	ODB-GeneralData	HLR/VLR/SGSN
zonal calls except those directed	-CountryBarred (7)		
to the home PLMN country	1000 !! !!	0000	
1.7 Barring of outgoing international calls except those	interzonalOGCallsAndInternatio	ODB-GeneralData	HLR/VLR/SGSN
directed to the home PLMN	nalOGCallsNotToHPLMN- CountryBarred (8)		
country AND barring of outgoing	CodmityBarred (6)		
inter-zonal calls			
2.1 Barring incoming calls		none	HLR
2.2 Barring incoming calls when		none	HLR
roaming outside the home PLMN country			
2.3 Barring incoming calls when		none	HLR
roaming outside the zone of the			
home PLMN country			
3.1 Barring of Roaming outside		none	HLR
the home PLMN 3.2 Barring of Roaming outside		none	HLR
the home PLMN country		110116	TIEIX
4.1 Barring of outgoing Premium	premiumRateInformationOGCall	ODB-GeneralData	HLR/VLR
Rate Calls (Information)	sBarred (3)		
4.2 Barring of outgoing Premium	premiumRateEntertainementOG CallsBarred (4)	ODB-GeneralData	HLR/VLR
Rate Calls (Entertainment) 5.1 When registered in the	plmn-SpecificBarringType1 (0)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific	pinin opecinobaning type (e)	ODD III LIVIIV Data	THE COURT OF THE C
Barring (Type 1)			
5.2 When registered in the	plmn-SpecificBarringType1 (1)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific			
Barring (Type 2) 5.3 When registered in the	plmn-SpecificBarringType1 (2)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific	pillin-SpecificBarringTypeT (2)	ODB-HELIVIN-Data	TIER/VER/3G3N
Barring (Type 3)			
5.4 When registered in the	plmn-SpecificBarringType1 (3)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific			
Barring (Type 4) 6.1 Barring of Supplementary	as AssessBorred (E)	ODD CongrelDate	HLR/VLR
Services Management	ss-AccessBarred (5)	ODB-GeneralData	HLR/VLR
7.1 Barring of registration of any		none	HLR
call forwarded-to number			
7.2 Barring of registration of any		none	HLR
international call forwarded-to			
number 7.3 Barring or registration of any		none	HLR
international call forwarded-to		Hone	1141
number except to a number			
within the HPLMN country			15
7.4 Barring of registration of any		none	HLR
inter-zone call forwarded-to number			
7.5 Barring of registration of any		none	HLR
inter-zone call forwarded-to			
number except to a number			
within the HPLMN country			

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
8.1 Barring of invocation of call transfer	allECT-Barred (9)	ODB-GeneralData	HLR/VLR
8.2 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber	chargeableECT-Barred (10)	ODB-GeneralData	HLR/VLR
8.3 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at international rates	internationalECT-Barred (11)	ODB-GeneralData	HLR/VLR
8.4 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at interzonal rates	interzonalECT-Barred (12)	ODB-GeneralData	HLR/VLR
9 Barring of invocation of call transfer where both calls are calls charged to the served subscriber	doublyChargeableECT-Barred (13)	ODB-GeneralData	HLR/VLR
10 Barring of further invocation of call transfer if there is already one ongoing transferred call for the served subscriber in the serving MSC/VLR	multipleECT-Barred (14)	ODB-GeneralData	HLR/VLR
Packets (subclause 5.2)	allPacketOrientedServicesBarre d (15)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (16)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (17)	ODB-GeneralData	HLR/SGSN

*** First modified part ***

7.6.3.9 Operator Determined Barring General Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- All outgoing calls barred; (*)
- International outgoing calls barred; (*)
- International outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls barred; (*)
- Interzonal outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls AND international outgoing calls except those directed to the home PLMN country barred; (*)
- Premium rate (information) outgoing calls barred;
- Premium rate (entertainment) outgoing calls barred;
- Supplementary service access barred;
- Invocation of call transfer barred;
- Invocation of chargeable call transfer barred;
- Invocation of internationally chargeable call transfer barred;
- Invocation of interzonally chargeable call transfer barred;
- Invocation of call transfer where both legs are chargeable barred:
- Outgoing calls when roaming outside the home PLMN country; (**)
- All incoming calls; (**)
- Incoming calls when roaming outside the home PLMN country; (**)
- Incoming calls when roaming outside the zone of the home PLMN country; (**)
- Roaming outside the home PLMN; (**)
- Roaming outside the home PLMN country; (**)
- Registration of any call forwarded-to number; (**)
- Registration of any international call forwarded-to number; (**)
- Registration of any international call forwarded-to number except to a number within the HPLMN country; (**)

- Registration of any inter-zone call forwarded-to number; (**)
- Registration of any inter-zone call forwarded-to number except to a number within the HPLMN country. (**)
- (*) Only these ODBs are supported by the SGSN. The SGSN applies them only for short message transfer.
- (**) These ODBs are not used for InsertSubscriberData.

7.6.3.10 ODB HPLMN Specific Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate only when the subscriber is registered in the HPLMN. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- Operator Determined Barring Type 1;
- Operator Determined Barring Type 2;
- Operator Determined Barring Type 3;
- Operator Determined Barring Type 4.

7.6.3.85 ODB Data

This parameter contains the ODB general data, ODB HPLMN specific data and Notification to CSE flag.

7.6.3.xx ODB Info

This parameter contains the ODB data and Notification to CSE flag.

*** Next modified part ***

8.11.3 MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION service

8.11.3.1 Definition

This service is used by the gsmSCF, to request subscription information (e.g. call forwarding supplementary service data or CSI) from the HLR at any time.

8.11.3.2 Service primitives

Table 8.11/3: Any_Time_Subscription_Interrogation

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
Requested Subscription Info	M	M(=)		
GsmSCF-Address	M	M(=)		
IMSI	С	C(=)		
MSISDN	С	C(=)		
Long FTN Supported	С	C(=)		
Call Forwarding Data			С	C(=)
Call Barring Data			С	C(=)
ODB InfoData			С	C(=)
CAMEL Subscription Info			С	C(=)
Supported CAMEL phases in VLR			С	C(=)
Supported CAMEL phases in SGSN			С	C(=)
User error			С	C(=)
Provider error				0

8.11.3.3 Parameter definition and use

All parameters are described in clause 7.6.

The HLR may be able to use the value of the parameter gsmSCF-address to screen a

MAP_Any_Time_Subscription_Interrogation indication.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078.

User error

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Unexpected Data Value;
- Unknown Subscriber;
- BearerServiceNotProvisioned;
- TeleserviceNotProvisioned;
- CallBarred;
- IllegalSS-Operation;
- SS-NotAvailable;
- InformationNotAvailable;
- Any Time Subscription Interrogation Not Allowed;
- Data Missing.

Provider error

These are defined in clause 7.6.1.

*** Next modified part ***

8.11.5 MAP-NOTE-SUBSCRIBER-DATA-MODIFIED service

8.11.5.1 Definition

This service is used by the HLR to inform the gsmSCF that subscriber data have been modified.

8.11.5.2 Service primitives

Table 8.11/5: Note Subscriber Data Modified

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
IMSI	М	M(=)		
MSISDN	M	M(=)		
Ext Forwarding	С	C(=)		
information-for-CSE				
Ext Call barring	С	C(=)		
information-for-CSE				
ODB dataInfo	С	C(=)		
CAMEL subscription	С	C(=)		
info				
All Information Sent	С	C(=)		
User error			С	C(=)
Provider error				0

8.11.5.3 Parameter definition and use

Invoke id

See clause 7.6.1 for the use of this parameter.

<u>IMSI</u>

See clause 7.6.2 for the use of this parameter.

MSISDN

See clause 7.6.2 for the use of this parameter.

Ext Forwarding information-for-CSE

See clause $7.6.\underline{32}$ for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

Ext Call barring information-for-CSE

See clause 7.6.<u>32</u> for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

ODB Infodata

See clause 7.6.32 for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

CAMEL subscription info

See clause $7.6.\overline{32}$ for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

All Information Sent

This parameter is set when the HLR has sent all information to gsmSCF.

User error

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Data Missing;
- Unexpected Data Value;
- Unknown Subscriber.

Provider error

These are defined in clause 7.6.1.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078.

*** Next modified part ***

16.2.2.4 Operation

When mapping a request primitive on to a Remote Operations PDU (invoke), the MAP PM shall set the operation code according to the mapping described in table 16.2/1.

When mapping a response primitive on to a Remote Operations service, the MAP PM shall set the operation code of the TC-RESULT-L/NL primitive (if required) to the same value as the one received at invocation time.

Table 16.2/1: Mapping of MAP specific services on to MAP operations

Table 16.2/1: Mapping of MAP specific servi	ces on to MAP operations
MAP-SERVICE	operation
MAP-ACTIVATE-SS	activateSS
MAP-ACTIVATE-TRACE-MODE	activateTraceMode
MAP-ALERT-SERVICE-CENTRE	alertServiceCentre
MAP-ANY-TIME-INTERROGATION	anyTimeInterrogaton
MAP_AUTHENTICATION_FAILURE_REPORT	authenticationFailureReport
MAP-ANY-TIME-MODIFICATION	anyTimeModification
MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION	anyTimeSubscriptionInterrogation
MAP-CANCEL-LOCATION	cancelLocation
MAP-CHECK-IMEI	checkIMEI
MAP-DEACTIVATE-SS	deactivateSS
MAP-DEACTIVATE-TRACE-MODE	deactivateTraceMode
MAP-DELETE-SUBSCRIBER-DATA	deleteSubscriberData
MAP-ERASE-CC-ENTRY	eraseCC-Entry
MAP-ERASE-SS	eraseSS
MAP-FAILURE-REPORT	failureReport
MAP-FORWARD-ACCESS-SIGNALLING	forwardAccessSignalling
MAP-FORWARD-CHECK-SS-INDICATION	forwardCheckSsIndication
MAP-FORWARD-GROUP-CALL-SIGNALLING	forwardGroupCallSignalling
MAP-MT-FORWARD-SHORT-MESSAGE	mt-forwardSM
MAP-MO-FORWARD-SHORT-MESSAGE	mo-forwardSM
MAP-GET-PASSWORD	getPassword
MAP-INFORM-SERVICE-CENTRE	informServiceCentre
MAP-INSERT-SUBSCRIBER-DATA	insertSubscriberData
MAP-INTERROGATE-SS	interrogateSs
MAP-IST-ALERT	istAlert
MAP-IST-COMMAND	istCommand
MAP-NOTE-MS-PRESENT-FOR-GPRS	noteMsPresentForGprs
MAP-NOTE-SUBSCRIBER-DATA-MODIFIED	noteSubscriberDataModified
MAP-PREPARE-GROUP-CALL	prepareGroupCall
MAP-PREPARE-HANDOVER	prepareHandover
MAP-PREPARE-SUBSEQUENT-HANDOVER	prepareSubsequentHandover
MAP-PROCESS-ACCESS-SIGNALLING	processAccessSignalling
MAP-PROCESS-GROUP-CALL-SIGNALLING	processGroupCallSignalling
MAP-PROCESS-UNSTRUCTURED-SS-REQUEST	processUnstructuredSS-Request
MAP-PROVIDE-ROAMING-NUMBER	provideRoamingNumber
MAP-PROVIDE-SIWFS-NUMBER	provideSIWFSNumber
MAP-PROVIDE-SUBSCRIBER-LOCATION	provideSubscriberLocation
MAP-PROVIDE-SUBSCRIBER-INFO	provideSubscriberInfo
MAP-PURGE-MS	purgeMS
MAP-READY-FOR-SM	readyForSM
MAP-REGISTER-CC-ENTRY	registerCC-Entry

MAP-REGISTER-PASSWORD	registerPassword
MAP-REGISTER-SS	registerSS
MAP-REMOTE-USER-FREE	remoteUserFree
MAP-REPORT-SM-DELIVERY-STATUS	reportSmDeliveryStatus
MAP-RESET	reset
MAP-RESTORE-DATA	restoreData
MAP-SECURE-TRANSPORT-CLASS-1	secureTransportClass1
MAP-SECURE-TRANSPORT-CLASS-2	secureTransportClass2
MAP-SECURE-TRANSPORT-CLASS-3	secureTransportClass3
MAP-SECURE-TRANSPORT-CLASS-4	secureTransportClass4
MAP-SEND_GROUP-CALL_END_SIGNAL	sendGroupCallEndSignal
MAP-SEND-END-SIGNAL	sendEndSignal
MAP-SEND-AUTHENTICATION-INFO	sendAuthenticationInfo
MAP-SEND-IMSI	sendIMSI
MAP-SEND-IDENTIFICATION	sendIdentification
MAP-SEND-ROUTING-INFO-FOR-SM	sendRoutingInfoForSM
MAP-SEND-ROUTING-INFO-FOR-GPRS	sendRoutingInfoForGprs
MAP-SEND-ROUTING-INFO-FOR-LCS	sendRoutingInfoForLCS
MAP-SEND-ROUTING-INFORMATION	sendRoutingInfo
MAP-SET-REPORTING-STATE	setReportingState
MAP-SIWFS-SIGNALLING-MODIFY	SIWFSSignallingModify
MAP-STATUS-REPORT	statusReport
MAP-SUBSCRIBER-LOCATION-REPORT	subscriberLocationReport
MAP-SUPPLEMENTARY-SERVICE-INVOCATION-NOTIFICATION	ss-Invocation-Notification
MAP-UNSTRUCTURED-SS-NOTIFY	unstructuredSS-Notify
MAP-UNSTRUCTURED-SS-REQUEST	unstructuredSS-Request
MAP-UPDATE-GPRS-LOCATION	updateGprsLocation
MAP-UPDATE-LOCATION	updateLocation
MAP-NOTE-MM-EVENT	NoteMM-Event

*** Next modified part ***

CR editor's note: This part contains the description of the operation for information as well as the correction. The highlights below are only for reader's convenience to indicate the data types. Actual change is applied to ODB-GeneralData data type only.

17.7 MAP constants and data types

17.7.1 Mobile Service data types

-- any time information handling operations

```
AnyTimeSubscriptionInterrogation ::= OPERATION
                                                                   --Timer m
    ARGUMENT
        \verb"anyTimeSubscriptionInterrogationRes" AnyTimeSubscriptionInterrogationRes"
    ERRORS {
        ATSI-NotAllowed,
        DataMissing,
        UnexpectedDataValue,
        UnknownSubscriber,
        {\tt BearerServiceNotProvisioned,}
        TeleserviceNotProvisioned,
        CallBarred,
        IllegalSS-Operation,
        SS-NotAvailable,
        InformationNotAvailable
```

-- subscriber data modification notification operations

```
NoteSubscriberDataModified ::= OPERATION --Timer m

ARGUMENT noteSubscriberDataModifiedArg NoteSubscriberDataModifiedArg

RESULT noteSubscriberDataModifiedRes NoteSubscriberDataModifiedRes
-- optional

ERRORS {
    DataMissing,
    UnexpectedDataValue,
    UnknownSubscriber}
```

-- any time information handling types

AnyTimeSubscriptionInterrogationArg	::= SEQUENCE {	
subscriberIdentity	[0] SubscriberIdentity,	
requestedSubscriptionInfo	[1] RequestedSubscriptionInfo,	
gsmSCF-Address	[2] ISDN-AddressString,	
extensionContainer	[3] ExtensionContainer OPTIONAL,	
longFTN-Supported	[4] NULL OPTIONAL,	
}		

yTimeSubscriptionInterrogation	Res ::= SEQUENCE {	
callForwardingData	[1] CallForwardingData	OPTIONAL,
callBarringData	[2] CallBarringData	OPTIONAL,
odb-Info	[3] ODB-Info	OPTIONAL,
camel-SubscriptionInfo	[4] CAMEL-SubscriptionInfo	OPTIONAL,
supportedVLR-CAMEL-Phases	[5] SupportedCamelPhases	OPTIONAL,
supportedSGSN-CAMEL-Phases	[6] SupportedCamelPhases	OPTIONAL,
extensionContainer	[7] ExtensionContainer	OPTIONAL,
}		

-- subscriber data modification notification types

imsi	IMSI,	
msisdn	ISDN-AddressString,	
forwardingInfoFor-CSE	[0] Ext-ForwardingInfoFor-CSE	OPTIONAL,
callBarringInfoFor-CSE	[1] Ext-CallBarringInfoFor-CSE	OPTIONAL,
odb-Info	[2] ODB-Info	OPTIONAL,
camel-SubscriptionInfo	[3] CAMEL-SubscriptionInfo	OPTIONAL,
allInformationSent	[4] NULL	OPTIONAL,
extensionContainer	ExtensionContainer	OPTIONAL,
}		

NoteSubscriberDataModifiedRes	::= SEQUENCE {	
extensionContainer	ExtensionContainer	OPTIONAL,
}		

ODB-Info ::= SEQUENCE {		
odb-Data	ODB-Data,	
notificationToCSE	NULL	OPTIONAL,
extensionContainer	ExtensionContainer	OPTIONAL,
}		

ODB-Data ::= SEQUENCE {		
odb-GeneralData	ODB-GeneralData,	
odb-HPLMN-Data	ODB-HPLMN-Data	OPTIONAL,
extensionContainer	ExtensionContainer	OPTIONAL,
}		

```
ODB-GeneralData ::= BIT STRING {
    allOG-CallsBarred (0),
    internationalOGCallsBarred (1),
    internationalOGCallsNotToHPLMN-CountryBarred (2),
    interzonalOGCallsBarred (6),
    interzonalOGCallsNotToHPLMN-CountryBarred (7),
    interzonalOGCallsAndInternationalOGCallsNotToHPLMN-CountryBarred (8),
    premiumRateInformationOGCallsBarred (3),
    premiumRateEntertainementOGCallsBarred (4),
    ss-AccessBarred (5),
    allECT-Barred (9),
    chargeableECT-Barred (10),
    internationalECT-Barred (11),
    interzonalECT-Barred (12),
    doublyChargeableECT-Barred (13),
    multipleECT-Barred (14),
    allPacketOrientedServicesBarred (15),
    roamerAccessToHPLMN-AP-Barred (16),
    roamerAccessToVPLMN-AP-Barred (17),
    roamingOutsidePLMNOG-CallsBarred (18),
    allIC-CallsBarred (19),
    roamingOutsidePLMNIC-CallsBarred (20),
    roamingOutsidePLMNICountryIC-CallsBarred (21),
    roamingOutsidePLMN-Barred (22),
    roamingOutsidePLMN-CountryBarred
    registrationAllCF-Barred (24),
    registrationCFNotToHPLMN-Barred (25),
    registrationInterzonalCF-Barred (26),
    registrationInterzonalCFNotToHPLMN-Barred (27)} (SIZE (15..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-GeneralData type shall be treated like unsupported ODB-GeneralData
    -- When the ODB-GeneralData type is removed from the HLR for a given subscriber,
    -- in NoteSubscriberDataModified operation sent toward the gsmSCF
    -- all bits shall be set to "O"
```

```
ODB-HPLMN-Data ::= BIT STRING {
    plmn-SpecificBarringType1 (0),
    plmn-SpecificBarringType2 (1),
    plmn-SpecificBarringType3 (2),
    plmn-SpecificBarringType4 (3)} (SIZE (4..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-HPLMN-Data type shall be treated like unsupported ODB-HPLMN-Data
```

3GPP TSG CN WG4 Meeting #12 Sophia Antipolis France 28th Jan

Sophia Antipolis, France, 28" January – 1 st February 2002 CR-Form-v5						orm-v5									
CHANGE REQUEST															
¥		29	.002	CR	371		жrev	1	ж	Curre	ent vers	sion:	3.11	.0 *	
For H I	ELP on ι	ısina	this fo	rm so	o hotton	n of this	2 0200 0	r look	at th	10 non-	un toyt	f 0./0/	tho 9f	symbol	
						-	·							-	
Proposed	l change	affec	ts: #	(U))SIM] ME	/UE	Ra	dio A	ccess N	Networ	k	Core	e Networ	rk X
Title:	H	Inc	lusion	of con	nplete O	DB da	ta in AT	SI and	SN b	DC					
Source:	H	CN	l4												
Work iten	n code: ₩	CA	MEL3							D	oate:	31	Janua	ry 2002	
Category	: ≆	Use	one of F (con A (con B (ad C (fur D (ed iiled ex	the foli rrection rrespor dition o nctional itorial n planati	orrection lowing care of the acture of the acture of the acture of the acture on a constitution of the acture on acture of the a	tegories correction), tion of toon on) e above	n in an e eature)			Use 2 se) F F F F	ase: # e <u>one</u> of 2 R96 R97 R98 R99 REL-4 REL-5	the for (GSI) (Rele (Rele (Rele (Rele (Rele		996) 997) 998) 999)	s:
* "Any time subscription interrogation" is the feature which the SCP interrogates the HLR to query the subscriber's attributes. "Notification to CSE of change of subscriber data" is to inform the SCP of the change of subscriber data. The scope of subscriber data to be interrogated/changed by these operations include SS-CF, SS-CB, ODB, CSI and Supported CAMEL Phases in VLR and/or SGSN. When one of the data is requested by ATSI, then the HLR sends the data to the SCP, or if one of the data is changed in the HLR, the HLR sends NSDC to the SCP with the chaned data. If one of the operations is used for the ODB data, the ODB data for the applied subscriber should include the complete ODB category for the subscriber. However, the definition of the ODB data included in ATSI and NSDC, ODB-Info, contains only the ODB data which are sent to VLR/SGSN from the HLR. This results in the missing data if, for example, ODB for all incoming call, is requested/modified, i.e., the ATSI ack. and the NSDC req. are sent without requested/modified data. (It seems this error caused when ODB-GeneralData which had been defined for ISD before was reused for ATSI and NSDC in R99)						cope -CF, n P, or th									
Summary	of chan	ge: ૠ	Add	ODB	categori	es in O	DB-Ger	eralD	ata t	o form	the cor	mplet	e ODE	in the F	ILR.
Consequence not appro		#		above e data		n rema	ins. The	SCP	is no	ot able	to quer	y/be	inform	ed abou	t
Clauses a	affected:	¥	7, 8,	16, 17	7										
Other spe affected:	ecs	æ	T	est sp	ore spece ecification pecification	ons	ns	H							
Other co	nments:	¥	This	CR inc	ludes th	e follov	ving cor	rectio	ns;						

- 7.6.3.9: All the missing ODB data added. They are stored in the HLR.
- 7.6.3.9 bottom line: New comment is added to note that the additional ODBs are not used for ISD
- 7.6.3.8.5 ODB Data: It does not contain Notification to CSE flag. Deleted.
- 7.6.3.xx ODB Info: Corrent ASN.1 for ATSI and NSDC contains ODB Info, not ODB data. This explanation for ODB Info is missing. Added as defined in ASN.1.
- 8.11.3.2 ATSI parameter table: as above.
- 8.11.5.2 NSDC parameter table: as above.
- 8.11.5.3 NSDC parameters: as above and correction of the reference sections.
- 16.2.2.4 Operation: anyTimeSubscriptionInterrogation (editorial).
- ASN.1 ODB-GeneralData: All the missing ODB data added as described above.

*** For information ***

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
1.1 Barring outgoing calls	allOG-CallsBarred (0)	ODB-GeneralData	HLR/VLR/SGSN
1.2 Barring outgoing	internationalOGCallsBarred (1)	ODB-GeneralData	HLR/VLR/SGSN
international calls	internationalOGCallsNotToHPL	ODD ConoralData	LII DA/I D/CCCN
1.3 Barring outgoing international calls except those	MN-CountryBarred (2)	ODB-GeneralData	HLR/VLR/SGSN
directed to the home PLMN	Wild-Country Barred (2)		
country			
1.4 Barring of outgoing calls		none	HLR
when roaming outside the home			
PLMN country	into managed (C)	ODD CanaralData	LILDA/LD/CCCN
1.5 Barring of outgoing inter- zonal calls	interzonalOGCallsBarred (6)	ODB-GeneralData	HLR/VLR/SGSN
1.6 Barring of outgoing inter-	interzonalOGCallsNotToHPLMN	ODB-GeneralData	HLR/VLR/SGSN
zonal calls except those directed	-CountryBarred (7)		
to the home PLMN country			
1.7 Barring of outgoing	interzonalOGCallsAndInternatio	ODB-GeneralData	HLR/VLR/SGSN
international calls except those directed to the home PLMN	nalOGCallsNotToHPLMN- CountryBarred (8)		
country AND barring of outgoing	Country Barrea (6)		
inter-zonal calls			
2.1 Barring incoming calls		none	HLR
2.2 Barring incoming calls when		none	HLR
roaming outside the home PLMN country			
2.3 Barring incoming calls when		none	HLR
roaming outside the zone of the		Horio	TIEIX
home PLMN country			
3.1 Barring of Roaming outside		none	HLR
the home PLMN			
3.2 Barring of Roaming outside the home PLMN country		none	HLR
4.1 Barring of outgoing Premium	premiumRateInformationOGCall	ODB-GeneralData	HLR/VLR
Rate Calls (Information)	sBarred (3)	ODD Contraidad	1.2.0 7 2.1
4.2 Barring of outgoing Premium	premiumRateEntertainementOG	ODB-GeneralData	HLR/VLR
Rate Calls (Entertainment)	CallsBarred (4)	ODD HDHAN D	
5.1 When registered in the HPLMN, Operator Specific	plmn-SpecificBarringType1 (0)	ODB-HPLMN-Data	HLR/VLR/SGSN
Barring (Type 1)			
5.2 When registered in the	plmn-SpecificBarringType1 (1)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific			
Barring (Type 2)			
5.3 When registered in the	plmn-SpecificBarringType1 (2)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific Barring (Type 3)			
5.4 When registered in the	plmn-SpecificBarringType1 (3)	ODB-HPLMN-Data	HLR/VLR/SGSN
HPLMN, Operator Specific	,pg.,po. (0)		
Barring (Type 4)			
6.1 Barring of Supplementary	ss-AccessBarred (5)	ODB-GeneralData	HLR/VLR
Services Management 7.1 Barring of registration of any		none	HLR
call forwarded-to number		none	TILN
7.2 Barring of registration of any		none	HLR
international call forwarded-to			
number			
7.3 Barring or registration of any		none	HLR
international call forwarded-to number except to a number			
within the HPLMN country			
7.4 Barring of registration of any		none	HLR
inter-zone call forwarded-to			
number			
7.5 Barring of registration of any		none	HLR
inter-zone call forwarded-to number except to a number			
within the HPLMN country			
	l	ı	

3GPP TS 22.041	3GPP TS 29.002	defined in;	stored in
8.1 Barring of invocation of call transfer	allECT-Barred (9)	ODB-GeneralData	HLR/VLR
8.2 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber	chargeableECT-Barred (10)	ODB-GeneralData	HLR/VLR
8.3 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at international rates	internationalECT-Barred (11)	ODB-GeneralData	HLR/VLR
8.4 Barring of invocation of call transfer where at least one of the two calls is a call charged to the served subscriber at interzonal rates	interzonalECT-Barred (12)	ODB-GeneralData	HLR/VLR
9 Barring of invocation of call transfer where both calls are calls charged to the served subscriber	doublyChargeableECT-Barred (13)	ODB-GeneralData	HLR/VLR
10 Barring of further invocation of call transfer if there is already one ongoing transferred call for the served subscriber in the serving MSC/VLR	multipleECT-Barred (14)	ODB-GeneralData	HLR/VLR
Packets (subclause 5.2)	allPacketOrientedServicesBarre d (15)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (16)	ODB-GeneralData	HLR/SGSN
Packets (subclause 5.2)	roamerAccessToHPLMN-AP- Barred (17)	ODB-GeneralData	HLR/SGSN

*** First modified part ***

7.6.3.9 Operator Determined Barring General Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- All outgoing calls barred; (*)
- International outgoing calls barred; (*)
- International outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls barred; (*)
- Interzonal outgoing calls except those to the home PLMN country barred; (*)
- Interzonal outgoing calls AND international outgoing calls except those directed to the home PLMN country barred; (*)
- Premium rate (information) outgoing calls barred;
- Premium rate (entertainment) outgoing calls barred;
- Supplementary service access barred;
- Invocation of call transfer barred;
- Invocation of chargeable call transfer barred;
- Invocation of internationally chargeable call transfer barred;
- Invocation of interzonally chargeable call transfer barred;
- Invocation of call transfer where both legs are chargeable barred:
- Outgoing calls when roaming outside the home PLMN country; (**)
- All incoming calls; (**)
- Incoming calls when roaming outside the home PLMN country; (**)
- Incoming calls when roaming outside the zone of the home PLMN country; (**)
- Roaming outside the home PLMN; (**)
- Roaming outside the home PLMN country; (**)
- Registration of any call forwarded-to number; (**)
- Registration of any international call forwarded-to number; (**)
- Registration of any international call forwarded-to number except to a number within the HPLMN country; (**)

- Registration of any inter-zone call forwarded-to number; (**)
- Registration of any inter-zone call forwarded-to number except to a number within the HPLMN country. (**)
- (*) Only these ODBs are supported by the SGSN. The SGSN applies them only for short message transfer.
- (**) These ODBs are not used for InsertSubscriberData.

7.6.3.10 ODB HPLMN Specific Data

This parameter refers to the set of subscriber features that the network operator or the service provider can regulate only when the subscriber is registered in the HPLMN. This set only includes those limitations that can be controlled in the VLR or in the SGSN:

- Operator Determined Barring Type 1;
- Operator Determined Barring Type 2;
- Operator Determined Barring Type 3;
- Operator Determined Barring Type 4.

7.6.3.85 ODB Data

This parameter contains the ODB general data, ODB HPLMN specific data and Notification to CSE flag.

7.6.3.xx ODB Info

This parameter contains the ODB data and Notification to CSE flag.

*** Next modified part ***

8.11.3 MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION service

8.11.3.1 Definition

This service is used by the gsmSCF, to request subscription information (e.g. call forwarding supplementary service data or CSI) from the HLR at any time.

8.11.3.2 Service primitives

Table 8.11/3: Any_Time_Subscription_Interrogation

Parameter name	Request	Indication	Response	Confirm
Invoke id	M	M(=)	M(=)	M(=)
Requested Subscription Info	M	M(=)		
GsmSCF-Address	M	M(=)		
IMSI	С	C(=)		
MSISDN	С	C(=)		
Long FTN Supported	С	C(=)		
Call Forwarding Data			С	C(=)
Call Barring Data			С	C(=)
ODB InfoData			С	C(=)
CAMEL Subscription Info			С	C(=)
Supported CAMEL phases in VLR			С	C(=)
Supported CAMEL phases in SGSN			С	C(=)
User error			С	C(=)
Provider error				0

8.11.3.3 Parameter definition and use

All parameters are described in clause 7.6.

The HLR may be able to use the value of the parameter gsmSCF-address to screen a

MAP_Any_Time_Subscription_Interrogation indication.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078.

User error

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Unexpected Data Value;
- Unknown Subscriber;
- BearerServiceNotProvisioned;
- TeleserviceNotProvisioned;
- CallBarred;
- IllegalSS-Operation;
- SS-NotAvailable;
- InformationNotAvailable;
- Any Time Subscription Interrogation Not Allowed;
- Data Missing.

Provider error

These are defined in clause 7.6.1.

*** Next modified part ***

8.11.5 MAP-NOTE-SUBSCRIBER-DATA-MODIFIED service

8.11.5.1 Definition

This service is used by the HLR to inform the gsmSCF that subscriber data have been modified.

8.11.5.2 Service primitives

Table 8.11/5: Note Subscriber Data Modified

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
IMSI	М	M(=)		
MSISDN	М	M(=)		
Ext Forwarding	С	C(=)		
information-for-CSE				
Ext Call barring	С	C(=)		
information-for-CSE				
ODB dataInfo	С	C(=)		
CAMEL subscription	С	C(=)		
info				
All Information Sent	С	C(=)		
User error			С	C(=)
Provider error				0

8.11.5.3 Parameter definition and use

Invoke id

See clause 7.6.1 for the use of this parameter.

IMSI

See clause 7.6.2 for the use of this parameter.

MSISDN

See clause 7.6.2 for the use of this parameter.

Ext Forwarding information-for-CSE

See clause 7.6.32 for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

Ext Call barring information-for-CSE

See clause $7.6.\underline{32}$ for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

ODB Infodata

See clause 7.6.32 for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

CAMEL subscription info

See clause $7.6.\overline{32}$ for the use of this parameter. The use of this parameter and the requirements for their presence are specified in 3G TS 23.078.

All Information Sent

This parameter is set when the HLR has sent all information to gsmSCF.

User error

This parameter is sent by the responder when an error is detected and if present, takes one of the following values:

- Data Missing;
- Unexpected Data Value;
- Unknown Subscriber.

Provider error

These are defined in clause 7.6.1.

The use of the parameters and the requirements for their presence are specified in 3G TS 23.078.

*** Next modified part ***

16.2.2.4 Operation

When mapping a request primitive on to a Remote Operations PDU (invoke), the MAP PM shall set the operation code according to the mapping described in table 16.2/1.

When mapping a response primitive on to a Remote Operations service, the MAP PM shall set the operation code of the TC-RESULT-L/NL primitive (if required) to the same value as the one received at invocation time.

Table 16.2/1: Mapping of MAP specific services on to MAP operations

Table 16.2/1: Mapping of MAP specific services on to MAP operations					
MAP-SERVICE	operation				
MAP-ACTIVATE-SS	activateSS				
MAP-ACTIVATE-TRACE-MODE	activateTraceMode				
MAP-ALERT-SERVICE-CENTRE	alertServiceCentre				
MAP-ANY-TIME-INTERROGATION	anyTimeInterrogaton				
MAP_AUTHENTICATION_FAILURE_REPORT	authenticationFailureReport				
MAP-ANY-TIME-MODIFICATION	anyTimeModification				
MAP-ANY-TIME-SUBSCRIPTION-INTERROGATION	anyTimeSubscriptionInterrogation				
MAP-CANCEL-LOCATION	cancelLocation				
MAP-CHECK-IMEI	checkIMEI				
MAP-DEACTIVATE-SS	deactivateSS				
MAP-DEACTIVATE-TRACE-MODE	deactivateTraceMode				
MAP-DELETE-SUBSCRIBER-DATA	deleteSubscriberData				
MAP-ERASE-CC-ENTRY	eraseCC-Entry				
MAP-ERASE-SS	eraseSS				
MAP-FAILURE-REPORT	failureReport				
MAP-FORWARD-ACCESS-SIGNALLING	forwardAccessSignalling				
MAP-FORWARD-CHECK-SS-INDICATION	forwardCheckSsIndication				
MAP-FORWARD-GROUP-CALL-SIGNALLING	forwardGroupCallSignalling				
MAP-MT-FORWARD-SHORT-MESSAGE	mt-forwardSM				
MAP-MO-FORWARD-SHORT-MESSAGE	mo-forwardSM				
MAP-GET-PASSWORD	getPassword				
MAP-INFORM-SERVICE-CENTRE	informServiceCentre				
MAP-INSERT-SUBSCRIBER-DATA	insertSubscriberData				
MAP-INTERROGATE-SS	interrogateSs				
MAP-IST-ALERT	istAlert				
MAP-IST-COMMAND	istCommand				
MAP-NOTE-MS-PRESENT-FOR-GPRS	noteMsPresentForGprs				
MAP-NOTE-SUBSCRIBER-DATA-MODIFIED	noteSubscriberDataModified				
MAP-PREPARE-GROUP-CALL	prepareGroupCall				
MAP-PREPARE-HANDOVER	prepareHandover				
MAP-PREPARE-SUBSEQUENT-HANDOVER	prepareSubsequentHandover				
MAP-PROCESS-ACCESS-SIGNALLING	processAccessSignalling				
MAP-PROCESS-GROUP-CALL-SIGNALLING	processGroupCallSignalling				
MAP-PROCESS-UNSTRUCTURED-SS-REQUEST	processUnstructuredSS-Request				
MAP-PROVIDE-ROAMING-NUMBER	provideRoamingNumber				
MAP-PROVIDE-SIWFS-NUMBER	provideSIWFSNumber				
MAP-PROVIDE-SUBSCRIBER-LOCATION	provideSubscriberLocation				
MAP-PROVIDE-SUBSCRIBER-INFO	provideSubscriberInfo				
MAP-PURGE-MS	purgeMS				
MAP-READY-FOR-SM	readyForSM				
MAP-REGISTER-CC-ENTRY	registerCC-Entry				

MAP-REGISTER-PASSWORD	registerPassword
MAP-REGISTER-SS	registerSS
MAP-REMOTE-USER-FREE	remoteUserFree
MAP-REPORT-SM-DELIVERY-STATUS	reportSmDeliveryStatus
MAP-RESET	reset
MAP-RESTORE-DATA	restoreData
MAP-SECURE-TRANSPORT-CLASS-1	secureTransportClass1
MAP-SECURE-TRANSPORT-CLASS-2	secureTransportClass2
MAP-SECURE-TRANSPORT-CLASS-3	secureTransportClass3
MAP-SECURE-TRANSPORT-CLASS-4	secureTransportClass4
MAP-SEND_GROUP-CALL_END_SIGNAL	sendGroupCallEndSignal
MAP-SEND-END-SIGNAL	sendEndSignal
MAP-SEND-AUTHENTICATION-INFO	sendAuthenticationInfo
MAP-SEND-IMSI	sendIMSI
MAP-SEND-IDENTIFICATION	sendIdentification
MAP-SEND-ROUTING-INFO-FOR-SM	sendRoutingInfoForSM
MAP-SEND-ROUTING-INFO-FOR-GPRS	sendRoutingInfoForGprs
MAP-SEND-ROUTING-INFO-FOR-LCS	sendRoutingInfoForLCS
MAP-SEND-ROUTING-INFORMATION	sendRoutingInfo
MAP-SET-REPORTING-STATE	setReportingState
MAP-SIWFS-SIGNALLING-MODIFY	SIWFSSignallingModify
MAP-STATUS-REPORT	statusReport
MAP-SUBSCRIBER-LOCATION-REPORT	subscriberLocationReport
MAP-SUPPLEMENTARY-SERVICE-INVOCATION-NOTIFICATION	ss-Invocation-Notification
MAP-UNSTRUCTURED-SS-NOTIFY	unstructuredSS-Notify
MAP-UNSTRUCTURED-SS-REQUEST	unstructuredSS-Request
MAP-UPDATE-GPRS-LOCATION	updateGprsLocation
MAP-UPDATE-LOCATION	updateLocation
MAP-NOTE-MM-EVENT	NoteMM-Event

*** Next modified part ***

CR editor's note: This part contains the description of the operation for information as well as the correction. The highlights below are only for reader's convenience to indicate the data types. Actual change is applied to ODB-GeneralData data type only.

17.7 MAP constants and data types

17.7.1 Mobile Service data types

```
AnyTimeSubscriptionInterrogation ::= OPERATION
                                                                 --Timer m
   ARGUMENT
       anyTimeSubscriptionInterrogationRes AnyTimeSubscriptionInterrogationRes
    ERRORS {
        ATSI-NotAllowed,
        DataMissing,
        UnexpectedDataValue,
        UnknownSubscriber,
        {\tt BearerServiceNotProvisioned},
        TeleserviceNotProvisioned,
        CallBarred,
        IllegalSS-Operation,
        SS-NotAvailable,
        InformationNotAvailable]
```

⁻⁻ any time information handling operations

⁻⁻ subscriber data modification notification operations

```
NoteSubscriberDataModified ::= OPERATION --Timer m

ARGUMENT noteSubscriberDataModifiedArg NoteSubscriberDataModifiedArg

RESULT noteSubscriberDataModifiedRes NoteSubscriberDataModifiedRes
-- optional

ERRORS {
    DataMissing,
    UnexpectedDataValue,
    UnknownSubscriber}
```

-- any time information handling types

AnyTimeSubscriptionInterrogationArg ::= SEQUENCE {			
subscriberIdentity	[0] SubscriberIdentity,		
requestedSubscriptionInfo	[1] RequestedSubscriptionInfo,		
gsmSCF-Address	[2] ISDN-AddressString,		
extensionContainer	[3] ExtensionContainer OPTIONAL,		
longFTN-Supported	[4] NULL OPTIONAL,		
}			

AnyTimeSubscriptionInterrogationRe	s ::= SEQUENCE {	
callForwardingData	[1] CallForwardingData	OPTIONAL,
callBarringData	[2] CallBarringData	OPTIONAL,
odb-Info	[3] ODB-Info	OPTIONAL,
camel-SubscriptionInfo	[4] CAMEL-SubscriptionInfo	OPTIONAL,
supportedVLR-CAMEL-Phases	<pre>[5] SupportedCamelPhases</pre>	OPTIONAL,
supportedSGSN-CAMEL-Phases	<pre>[6] SupportedCamelPhases</pre>	OPTIONAL,
extensionContainer	[7] ExtensionContainer	OPTIONAL,
}		

-- subscriber data modification notification types

NoteSubscriberDataModifiedArg	::= SEQUENCE {		
imsi	IMSI,		
msisdn	ISDN-AddressString,		
forwardingInfoFor-CSE	<pre>[0] Ext-ForwardingInfoFor-CSE</pre>	OPTIONAL,	
callBarringInfoFor-CSE	[1] Ext-CallBarringInfoFor-CSE	OPTIONAL,	
odb-Info	[2] ODB-Info	OPTIONAL,	
camel-SubscriptionInfo	[3] CAMEL-SubscriptionInfo	OPTIONAL,	
allInformationSent	[4] NULL	OPTIONAL,	
extensionContainer	ExtensionContainer	OPTIONAL,	
}			

NoteSubscriberDataModifiedRes	::= SEQUENCE {	
extensionContainer	ExtensionContainer	OPTIONAL,
}		

ODB-Info ::= SEQUENCE {		
odb-Data	ODB-Data,	
notificationToCSE	NULL	OPTIONAL,
extensionContainer	ExtensionContainer	OPTIONAL,
}		

ODB-Data ::= SEQUENCE {		
odb-GeneralData	ODB-GeneralData,	
odb-HPLMN-Data	ODB-HPLMN-Data	OPTIONAL,
extensionContainer	ExtensionContainer	OPTIONAL,
}		

```
ODB-GeneralData ::= BIT STRING {
    allOG-CallsBarred (0),
    internationalOGCallsBarred (1),
    internationalOGCallsNotToHPLMN-CountryBarred (2),
    interzonalOGCallsBarred (6),
    interzonalOGCallsNotToHPLMN-CountryBarred (7),
    interzonalOGCallsAndInternationalOGCallsNotToHPLMN-CountryBarred (8),
    premiumRateInformationOGCallsBarred (3),
    premiumRateEntertainementOGCallsBarred (4),
    ss-AccessBarred (5),
    allECT-Barred (9),
    chargeableECT-Barred (10),
    internationalECT-Barred (11),
    interzonalECT-Barred (12),
    doublyChargeableECT-Barred (13),
    multipleECT-Barred (14),
    roamingOutsidePLMNOG-CallsBarred (18),
    allIC-CallsBarred (19),
roamingOutsidePLMNIC-CallsBarred (20),
    roamingOutsidePLMNICountryIC-CallsBarred
    roamingOutsidePLMN-Barred (22),
    roamingOutsidePLMN-CountryBarred
                                       (23),
    registrationAllCF-Barred (24),
    registrationCFNotToHPLMN-Barred
                                     (26),
    registrationInterzonalCF-Barred
    registrationInterzonalCFNotToHPLMN-Barred (27)} (SIZE (15..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-GeneralData type shall be treated like unsupported ODB-GeneralData
    -- When the ODB-GeneralData type is removed from the HLR for a given subscriber,
    -- in NoteSubscriberDataModified operation sent toward the gsmSCF
    -- all bits shall be set to "O"
```

```
ODB-HPLMN-Data ::= BIT STRING {
    plmn-SpecificBarringType1 (0),
    plmn-SpecificBarringType2 (1),
    plmn-SpecificBarringType3 (2),
    plmn-SpecificBarringType4 (3)} (SIZE (4..32))
    -- exception handling: reception of unknown bit assignments in the
    -- ODB-HPLMN-Data type shall be treated like unsupported ODB-HPLMN-Data
```

3GPP TSG CN WG4 Meeting #12

Sophia Antipolis, France, 28th January – 1st February 2002 CR-Form-v5 CHANGE REQUEST \mathfrak{R} 23.018 CR 098 Current version: **# rev** 5.2.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the \$\mathbb{X}\$ symbols. (U)SIM ME/UE Radio Access Network Core Network x Proposed change affects: ₩ Title: Correction on the Active Location Retrieval description Source: CN4 Work item code: # CAMEL 3 Date: # Category: Release: ₩ R5 Use one of the following categories: Use one of the following releases: F (correction) (GSM Phase 2) 2 A (corresponds to a correction in an earlier release) R96 (Release 1996) **B** (addition of feature). R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification) (Release 1999) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # The UMTS specific location information (SAI) has to be taken into account Summary of change: # The Active Location Retrieval procedure allows the gsmSCF to know the location of the MS with the accuracy of the cell ID for GSM or SAI for UMTS at every time it is possible. The CN4 meeting #21 (CANCUN) has already corrected the § 7.2.3.4 (procedure Retrieve_Current_Location_VLR) and the SDL 64 (procedure Current_Location_Page_MSC) in order to take into account the specific UMTS procedure Location Reporting Control that has been previously forgotten.-However, the SDL 65 (procedure Current Location Search MSC) has to be corrected too. Consequences if ★ Incomplete Active Location Retrieval mechanism

Clauses affected:	ж	7.2.4	

Other specs affected:

not approved:

ж Other core specifications Test specifications **O&M Specifications**

 \mathfrak{R} 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:

 \mathfrak{R}

1) Fill out the above form. The symbols above marked \(\mathcal{X} \) 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.

*** Change ***

7.2.4.7. Procedure Current_Location_Search_MSC

The test "MS connection exists" takes the "Yes" exit if there is a radio connection established between the MS and the network.

The test "GSM Access" takes the "Yes" exit if the MS is using a GSM radio access to communicate with the network.

The test "Report on change of service area?" takes the "Yes" exit if the MSC has performed the Location Reporting Control procedure (see 3GPP TS 25.413 [26]) with the Request Type IE set to "Change of service area".

If the test "Report on change of service area?" takes the "No" exit the MSC shall perform a Location Reporting Control procedure with the Request Type IE set to "Direct".

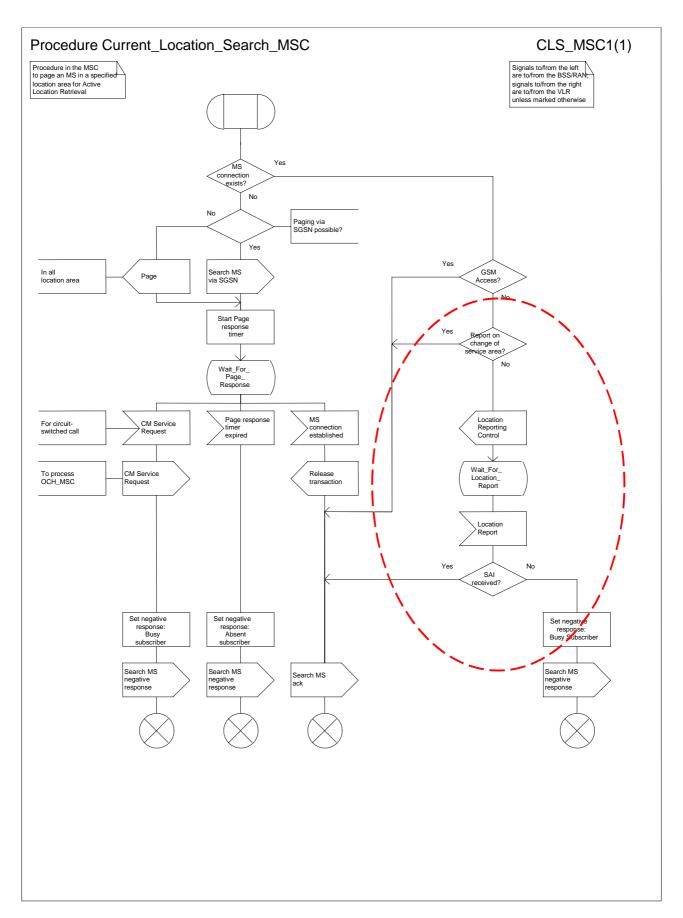
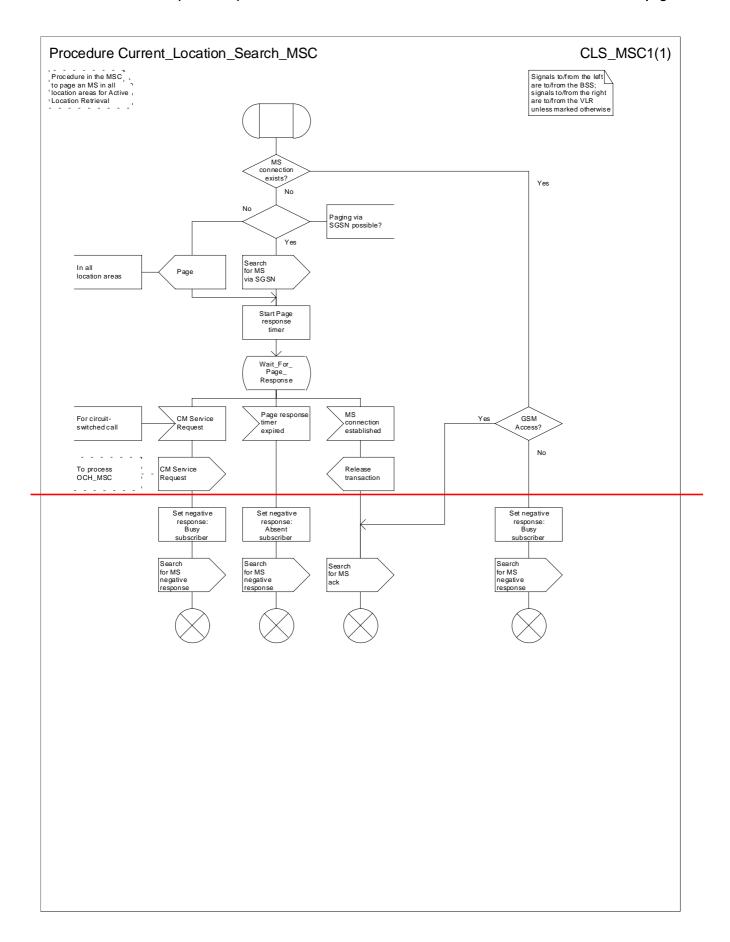


Figure 65: Procedure Current_Location_Search_MSC



3GPP TSG CN WG4 Meeting #12 N4-020134 Sophia Antipolis, France, 28th January – 1st February 2002 CR-Form-v5 CHANGE REQUEST \mathfrak{R} 23.018 CR 097 Current version: 4.5.0 **#rev** For **HELP** on using this form, see bottom of this page or look at the pop-up text over the \$\mathbb{X}\$ symbols. (U)SIM ME/UE Radio Access Network Core Network x Proposed change affects: ₩ Title: Correction on the Active Location Retrieval description Source: CN4 Date: # Category: Release: # R4 Use one of the following categories: Use one of the following releases: F (correction) (GSM Phase 2) 2 A (corresponds to a correction in an earlier release) R96 (Release 1996) **B** (addition of feature). R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998) (Release 1999) **D** (editorial modification) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # The UMTS specific location information (SAI) has to be taken into account Summary of change: # The Active Location Retrieval procedure allows the gsmSCF to know the location of the MS with the accuracy of the cell ID for GSM or SAI for UMTS at every time it is possible. The CN4 meeting #21 (CANCUN) has already corrected the § 7.2.3.4 (procedure Retrieve_Current_Location_VLR) and the SDL 64 (procedure Current_Location_Page_MSC) in order to take into account the specific UMTS procedure Location Reporting Control that has been previously forgotten.-However, the SDL 65 (procedure Current Location Search MSC) has to be corrected too. Consequences if Incomplete Active Location Retrieval mechanism not approved: Clauses affected: 第 7.2.4

How to create CRs using this form:

ж

 \mathfrak{R}

Other specs

Other comments:

affected:

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:

 \mathfrak{R}

Other core specifications

Test specifications O&M Specifications

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.

*** Change ***

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If the test "Report on change of service area?" takes the "No" exit the MSC shall perform a Location Reporting Control procedure with the Request Type IE set to "Direct".

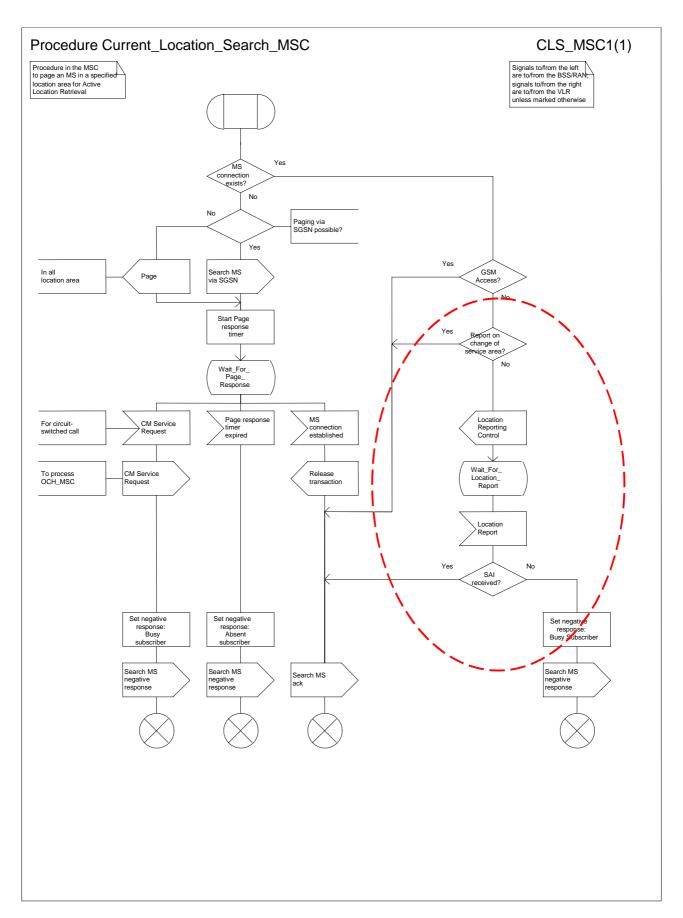


Figure 65: Procedure Current_Location_Search_MSC

