3GPP TSG CN Plenary Meeting #26 8th – 10th December 2004 Athens, Greece.

Source:	TSG CN WG4
Title:	Corrections on LCS2
Agenda item:	9.18
Document for:	APPROVAL

Spec	CR	Rev	Doc-2nd-Level N4-040	Phase	Subject	Cat	Ver_C
29.002	747		1272	Rel-6	Incorrect Implementation of CR 731	F	6.7.0
29.002	748	1	1684	Rel-6	LCS Capability Handling for UE's	F	6.7.0
29.002	753	1	1685	Rel-6	Enable NA-ESRD Provision from a GMLC for E911 Location in North America	F	6.7.0
24.080	038		1352	Rel-6	Correction of setting for timer T(LCSL)	F	6.1.0
24.030	020	1	1682	Rel-6	Correction of missing description for T(LCSN) and T(LCSL)	F	6.1.0

3GPP TSG-CN WG4 Meeting #25

N4-041272

Seoul, KOREA. 15th to 19th November 2004.

	CHANGE	E REQ	UEST		C	R-Form-v7.1
ж	29.002 CR 747	жrev	- X	Current vers	^{ion:} 6.7.0	ж
For <u>HELP</u> or	n using this form, see bottom of thi	s page or	look at th	e pop-up text	over the X syr	nbols.
Proposed chang	e affects: UICC apps೫	ME] Radio A	ccess Networ	k 📃 Core Ne	etwork X
Title:	第 Incorrect Implementation of C	R 731				
Source:	策 CN4					
Work item code.	ж LCS2			<i>Date:</i> ೫	13/10/2004	
Category:	 F Use <u>one</u> of the following categorie F (correction) A (corresponds to a correction B (addition of feature), C (functional modification of D (editorial modification) Detailed explanations of the above be found in 3GPP <u>TR 21.900</u>. 	es: on in an ear feature) e categories	lier releas	Release: ₩ Use <u>one</u> of Ph2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6 Rel-7	Rel-6 the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6) (Release 7)	eases:

Decess for channel 00	OD 704 (NIA 040500) enground at ON//04 has not have some the implemented
Reason for change: ж	CR 731 (N4-040520) approved at CN#24 has not been correctly implemented
Summary of change: X	Remedy the incorrect (incomplete) implementation of CR 731 by adding the
· · · · · · · · · · · · · · · · · · ·	missing parts in chapter 17.7.13
Consequences if #	Emergency calls may be routed to a non-optimal PSAP, resulting ultimately in
not approved:	delays in responses to emergencies. FCC requirements are not met.
Clauses affected: #	17.7.13
	X N
O (1)	
Other specs ж	Contractions #
affected:	X Test specifications
	X O&M Specifications
Other comments: ೫	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <u>http://www.3gpp.org/specs/CR.htm</u>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 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 http://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.

17.7.13 Location service data types

. . . ExtensionContainer, SLR-ArgExtensionContainer FROM MAP-ExtensionDataTypes { itu-t identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3) map-ExtensionDataTypes (21) version9 (9)} . . . SubscriberLocationReport-Arg ::= SEQUENCE lcs-Event LCS-Event. lcs-ClientID LCS-ClientID, lcsLocationInfo LCSLocationInfo, msisdn [0] ISDN-AddressString OPTIONAL, [1] IMSI imsi OPTIONAL. [2] IMEI imei OPTIONAL, na-ESRD [3] ISDN-AddressString OPTIONAL, na-ESRK [4] ISDN-AddressString OPTIONAL, [5] Ext-GeographicalInformation OPTIONAL, locationEstimate [6] AgeOfLocationInformation [7] <u>SLR-Arg</u>ExtensionContainer ageOfLocationEstimate OPTIONAL. slr-ArgEextensionContainer OPTIONAL, add-LocationEstimate [8] Add-GeographicalInformation OPTIONAL, deferredmt-lrData [9] Deferredmt-lrData OPTIONAL, [10] LCS-ReferenceNumber lcs-ReferenceNumber OPTIONAL. OPTIONAL, geranPositioningData [11] PositioningDataInformation utranPositioningData [12] UtranPositioningDataInfo OPTIONAL, na-ESRK-Request [16] NULL OPTIONAL, cellIdOrSai [13] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL . h-gmlc-Address [14] GSN-Address OPTIONAL, lcsServiceTypeID [15] LCSServiceTypeID OPTIONAL, sai-Present [17] NULL OPTIONAL } -- one of msisdn or imsi is mandatory -- a location estimate that is valid for the locationEstimate parameter should -- be transferred in this parameter in preference to the add-LocationEstimate. -- the deferredmt-lrData parameter shall be included if and only if the lcs-Event -- indicates a deferredmt-lrResponse. -- if the lcs-Event indicates a deferredmt-lrResponse then the locationEstimate -- and the add-locationEstimate parameters shall not be sent if the -- supportedGADShapes parameter had been received in ProvideSubscriberLocation-Arg -- and the shape encoded in locationEstimate or add-LocationEstimate was not marked -- as supported in supportedGADShapes. In such a case terminationCause -- in deferredmt-lrData shall be present with value -- shapeOfLocationEstimateNotSupported. -- If a lcs event indicates deferred mt-lr response, the lcs-Reference number shall be -- included. -- sai-Present indicates that the cellIdOrSai parameter contains a Service Area Identity.

3GPP TSG-CN WG4 Meeting #25

N4-041352

Seoul, Korea. 15th to 19th November 2004.

			CHA	ANGE	RE	QUE	EST			(CR-Form-v7.1
æ	24.0	<mark>)80</mark> C	R <mark>038</mark>		жrev	-	Ħ	Current ve	ersion:	6.1.0	Ħ
For <u>HELP</u> on t	using th	nis form,	see botto	om of this	s page o	or look	at th	e pop-up te	xt ovei	r the X syr	nbols.
Proposed change	affects	: UIC	C apps≆	3	ME	<mark>X</mark> Ra	idio A	ccess Netw	/ork	Core Ne	etwork
Title: #	Corre	ection o	f setting f	or timer	T(LCSL)					
Source: #	CN4										
Work item code: भ्र		2						Date:	ж <mark>05</mark>	/11/2004	
Category: ₩	Category: # F Release: # Rel-6 Use one of the following categories: Use one of the following releases: Ph2 (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 be found in 3GPP TR 21.900. Rel-4 (Release 5) Rel-6 (Release 6) Rel-6 (Release 7)							eases:			
Reason for change	e: ¥	The tim 30 seco reportin expire to causing In order the cha	er T(LCS onds. This g interval before MS g failure of r to avoid nge of se	L), for LC time is I for the s has sen the MO- introduci tting T(LC	CS MO- ess tha ubsequ it a pos -LR ope ng a ne CSL) ap	LR op n the r eent po ition m eration w time oplies	eratic maxin position leasu er for to this	on, is set to num allowa ing proced rement rep the Ics-Area s operation	a value ble pos ure, so ort to th aEvent as well	e between sition meas T(LCSL) (ne network Report op	10 and surement could c, eration,
Summary of chang	ge:	Setting	OF T(LUS	L) chang	ed from	110-30	J sec	onds to TU-	300 se	conas.	
Consequences if not approved:	Ħ	MO-LR	positionir	ng operat	tions co	uld fai	l due	to prematu	re expi	ration of T	(LCSL).
Clauses affected:	Ħ	4.2									
Other specs affected:	ж Г	Y N X C X X X C	other core est specif &M Spec	specifica ications ifications	ations	ж					
Other comments:	ж										

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

4.2 Operation types

[...]

lcs-MOLR OPERATION ::= { -- Timer T(LCSL)= 10s to 300s ARGUMENT LCS-MOLRArg RESULT LCS-MOLRRes ERRORS systemFailure | unexpectedDataValue dataMissing facilityNotSupported ss-SubscriptionViolation | positionMethodFailure}
local:115 } CODE OPERATION ::= { -- Timer T(LCSN)= 10s to 20s lcs-AreaEventRequest ARGUMENT LCS-AreaEventRequestArg RETURN RESULT TRUE ERRORS systemFailure | facilityNotSupported | unexpectedDataValue} CODE local:114 } lcs-AreaEventReport OPERATION ::= { -- Timer T(LCSL)= 10s to 300s ARGUMENT LCS-AreaEventReportArg RETURN RESULT TRUE ERRORS -{ systemFailure | unexpectedDataValue facilityNotSupported} local:113 } CODE lcs-AreaEventCancellation OPERATION ::= { -- Timer T(LCSN)= 10s to 20s ARGUMENT LCS-AreaEventCancellationArg RETURN RESULT TRUE ERRORS { systemFailure | facilityNotSupported | unexpectedDataValue} CODE local:112 }

END

3GPP TSG-CN WG4 Meeting #25

N4-041682 (N4-041357)

Seoul, Korea. 15th to 19th November 2004.

		CHANGE	REQ	UE	ST			C	R-Form-v7.1
ж		24.030 CR 020	жrev	1	Ħ	Current vers	^{ion:} 6	5.1.0	ж
For <mark>HELP</mark> o	n u	sing this form, see bottom of this	page or	look	at th	e pop-up text	over th	е Ж ѕуі	nbols.
Proposed chang	je a	affects: UICC apps೫ <mark></mark>	ME X	Rad	dio A	ccess Networ	k 📃 (Core Ne	etwork X
Title:	ж	Correction of missing description	on for T(L		I) an	d T(LCSL)			
Source:	ж	CN4							
Work item code	: X	LCS2				<i>Date:</i> ೫	19/11	/2004	
Category:	Ħ	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction B (addition of feature), C (functional modification of fe D (editorial modification) Detailed explanations of the above of be found in 3GPP <u>TR 21.900</u>. 	in an ear ature) categories	rlier re s can	elease	Release: # Use <u>one</u> of Ph2 R96 R97 R98 R99 Rel-4 Rel-5 Rel-6 Rel-7	Rel-6 the follo (GSM F (Releas (Releas (Releas (Releas (Releas (Releas	wing rele Phase 2) te 1996) te 1997) te 1998) te 1999) te 4) te 5) te 6) te 7)	ases:

Reason for change: ೫	Essential Correction. Handling of SS timer T(LCSN) and T(LCSL) for LCS operation are not defined.						
	which may lead to incorrect implementations and errors in operation.						
Summary of change: ೫	Reference to T(LCSN) for Location Notification is added.						
	Description for handling of T(LCSL) added. This makes the failure notification to the user mandatory.						
Consequences if 米 not approved:	Handling of LCS SS timer T(LCSN) and T(LCSL) remains unspecified, which may lead to incorrect interpretations and may result in an inability to reliably use						
	LCS Supplementary Services operation.						
Clauses affected: %	4.1.1, 5.1.1						
	YN						
Other specs ೫	X Other core specifications %						
affected:	X Test specifications X 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 <u>http://www.3gpp.org/specs/CR.htm</u>. Below is a brief summary:

1) Fill out the above form. The symbols above marked **#** contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> 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.

Notwork

4 Network initiated location services operations

4.1 Location Notification

4.1.1 Normal operation

MS

ł

The network invokes a location notification procedure by sending a REGISTER message containing a LCS-LocationNotification invoke component to the MS. This may be sent either to request verification for MT-LR or to notify about already authorized MT-LR.

In case of privacy verification the MS shall respond to the request by sending a RELEASE COMPLETE message containing the mobile subscriber's response in a return result component (figure 4.1).

If the timer $\underline{T(LCSN)}$ expires in the network before any response from the MS (e.g. due to no response from the user), the network shall interpret this by applying the default treatment defined in TS 23.271 (i.e. dissallow location if barred by subscription and allow location if allowed by subscription).

In the case of location notification no response is required from the MS, the MS shall terminate the dialoque by sending a RELEASE COMPLETE message containing a LocationNotification return result.

If the MS is unable to process the request received from the network, it shall return an error indication by sending a RELEASE COMPLETE message containing a return error component. Error values are specified in 3GPP TS 24.080

WIG	REGISTER
Facility	(Invoke = LCS-LocationNotification (notificationType, locationType, lcsClientExternalID, lcsClientName, lcsRequestorID, lcsCodeword, lcsServiceTypeId))
	RELEASE COMPLETE
-	Facility (Return result = LCS-LocationNotification (verificationResponse))
	RELEASE COMPLETE
	Facility (Return error (Error))
	RELEASE COMPLETE
	Facility (Reject (Invoke_problem))
	RELEASE COMPLETE
	Figure 4.1: Location Notification

[Next modified section]

5 Mobile initiated location services operations

5.1 Mobile Originated Location Request (MO-LR)

5.1.1 Normal operation

The MS invokes a MO-LR by sending a REGISTER message to the network containing a LCS-MOLR invoke component. SS Version Indicator value 1 or above shall be used.

The receiving network entity shall initiate the handling of location request in the network. The network shall pass the result of the location procedure to the MS by sending a FACILITY message to the MS containing a LCS-MOLR return result component.

The network shall pass the result of the location procedure to the MS only if the location estimate is given in a format that the MS supports, as indicated by either the presence (and content) or the absence of the parameter supportedGADShapes, which may be sent by the MS in the LCS-MOLR operation.

The MS may terminate the dialogue by sending a RELEASE COMPLETE message in the case of single location request (see figure 5.1). The MS may also initiate another location request operation by sending a FACILITY message to the network containing a LCS-MOLR invoke component (see figure 5.2). After the last location request operation the MS shall terminate the dialogue by sending a RELEASE COMPLETE message.

If the network is unable to successfully fulfil the request received from the MS (e.g. to provide a location estimate or location assistance information), it shall clear the transaction by sending a RELEASE COMPLETE message containing a return error component. Error values are specified in 3GPP TS 24.080. If the network is unable to provide a location estimate due to lack of support in the MS for the type of shape of the location estimate, then it shall use the error Facility Not Supported.

If the network has returned a result to the MS in a FACILITY message but, after some PLMN administered time period has elapsed, has not received either a new location request operation in a FACILITY message or a RELEASE COMPLETE message from the MS, the network may clear the transaction by sending a RELEASE COMPLETE message.

During the MO-LR operation the MS shall run a timer T(LCSL). This timer is started when the operation is sent, and stopped when a response is received from the network. If this timer expires the MS shall assume that the operation has failed, and may terminate the dialogue by sending a RELEASE COMPLETE message, and shall inform the user of the failure.

MS Network REGISTER -----> Facility (Invoke = LCS-MOLR (molr-Type, locationMethod, lcs-QoS, lcsClientExternalID, mlc-Number, gpsAssistanceData, supportedGADShapes, lcsServiceTypeID)) FACILITY FACILII I <-----Facility (Return result = LCS-MOLR (locationEstimate, decipheringKeys, add-LocationEstimate, lcsServiceTypeID)) RELEASE COMPLETE <-----Facility (Return error (Error)) **RELEASE COMPLETE** <-----Facility (Reject (Invoke_problem)) RELEASE COMPLETE ----->

Figure 5.1: Single mobile originated location request

3GPP TSG-CN WG4 Meeting #25 Seoul, KOREA, 15th – 19th November 2004

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				CHAN	GE R	EQ	UE	ST					С	R-Form-v7.1
ж		29.00	<mark>2</mark> CR	748	жľ	ev	1	Ħ	Curren	it vers	ion:	6.7.	0	ж
For <u>HELP</u> or	า นะ	sing this f	form, se	e bottom o	f this pa	ge or	look	at the	e pop-u	p text	over	the X	syn	nbols.
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Title:	Ж	LCS Ca	pability	Handling f	or UE's									
Source:	ж	CN4												
Work item code:	ж	LCS2							Da	<i>te:</i> ೫	15/	11/200)4	
Category:	æ	F Use <u>one</u> (F (c B (a C (fi D (e Detailed e be found	of the foll orrection orrespor- addition o unctional editorial n explanatio in 3GPP	lowing categ) ads to a corr f feature), modification nodification) ons of the a <u>TR 21.900</u> .	gories: rection in a n of featu bove cate	an eai re) egorie:	rlier re s can	elease	Relea Use <u>(</u> Pi e) Rs Rs Rs Rs Rs Rs Rs	se: # one of 2 96 97 98 99 91-4 91-5 91-6 91-7	Rel the fo (GSM (Rele (Rele (Rele (Rele (Rele (Rele (Rele	-6 Ilowing A Phase ase 19 ase 19 ase 19 ase 19 ase 5) ase 5) ase 6) ase 7)	rele e 2) 996) 997) 998)	ases:

Reason for change: अ	LCS support indication in the UE capability and UE classmark 3 information is only applicable for the A and Gb mode and not for lu interfaces. An MSC or SGSN supporting only lu interfaces should not report CS or PS LCS Not Supported by UE.						
Summary of change: ೫	VLR and SGSN should consider access technology supported as well when providing CS and PS LCS Not Supported by UE.						
Consequences if % not approved:	The positioning attempt may unnecessarily fail if an MSC or SGSN supporting lu interface reports LCS Not Supported.						
Clauses affected: %	7.6.11.9, 7.6.11.10						
Other specs % affected:	Y N X Other core specifications # X Test specifications # X O&M Specifications #						
Other comments: #	Behaviour of a combined 2G 3G SGSN supporting both Gb and lu-ps is FFS.						

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

****FIRST MODIFIED SECTION ****

3

7.6.11.10 PS LCS Not Supported by UE

This parameter is used by the SGSN to indicate to the HLR that the UE does not support neither UE Based nor UE Assisted positioning methods for Packet Switched Location Services. SGSN defines the presence of this parameter on the basis of the UE capability information<u>and the access technology supported by the SGSN</u>.

3GPP TSG CN4#25 Seoul, Korea, 15-19 November 2004

		CHANGE	REQ	JEST	1		CR-Form-v7
¥	29.002 C	R <mark>753</mark>	ж rev	<mark>1</mark> ^អ	Current vers	^{ion:} 6.7.0	Ħ
For <u>HELP</u> or	using this form, s	see bottom of this	s page or lo	ook at th	e pop-up text	over the	mbols.
Proposed chang	affects: UIC	C apps ೫	ME	Radio A	ccess Networ	k Core No	etwork X
Title:	Enable NA-E	SRD Provision fro	om a GML	C for E9	11 Location in	North Americ	a
Source:	CN4						
Work item code.	LCS2				<i>Date:</i> ೫	19/11/2004	
Category:	B F Use <u>one</u> of the t F (correcti A (corresp B (addition C (function D (editoria Detailed explana be found in 3GF	following categories ion) bonds to a correction n of feature), nal modification of fe il modification) ations of the above PP <u>TR 21.900</u> .	s: n in an earli eature) categories	er release can	Release: ¥ Use <u>one</u> of 2 9) R96 R97 R98 R99 Rel-4 Rel-5	Rel-6 the following rel (GSM Phase 2) (Release 1996) (Release 1997) (Release 1999) (Release 4) (Release 5)	eases:

Reason for change: ℜ	To support location based routing for emergency calls in North America, an MSC can request an ESRK from the GMLC using the NI-LR procedure defined in 3GPP TS 23.271. If an ESRK is not provided, an MSC would use a default ESRK associated, for example, with the originating cell for the emergency call. Since signaling to a PSAP may have to use an ESRD rather than ESRK, the location based NI-LR procedure needs to be extended to support return of an ESRD from a GMLC instead of an ESRK. With this capability, an MSC does not need to provision, store, and administer NA-ESRDs or send an NA-ESRD to a GMLC. As long an MSC sends a GMLC the cell identity, the GMLC can translate the cell identity to an NA-ESRD.					
Summary of change: ೫	An NA-ESRD parameter is added to the Subscriber Location Report response as a new optional parameter. In the description of the Subscriber Location Report, it is clarified that in response to an ESRK request in a Subscriber Location Report invoke, the Subscriber Location Report response may include an NA-ESRK or NA-ESRD, but not both. Error handling is defined for the case when both parameters are returned.					
Consequences if अ not approved:	It will not be possible to support location based routing to a PSAP with call setup signaling based on an ESRD rather than an ESRK. It will not be possible to simplify the VMSC or MSC server by removing ESRD administration					
Clauses offeeted:						
Clauses anected. #	13A.3.2, 13A.3.3, 17.7.13					
Other specs % affected:	Y N X Other core specifications X Test specifications X O&M Specifications					

Other comments:	Ħ	The proposed change does not affect a PLMN in which only an ESRK but not
		ESRD is provided by GMLC to support location based routing since the GMLC
		can continue to return only an ESRK or nothing in a MAP Subscriber Location
		Report response. In the latter case, the VMSC or MSC server is able to route to
		a PSAP using a default ESRK or ESRD as before.

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

13A.3 MAP-SUBSCRIBER-LOCATION-REPORT Service

13A.3.1 Definition

This service is used by a VMSC or SGSN to provide the location of a target MS to a GMLC when a request for location is either implicitly administered or made at some earlier time. This is a confirmed service using the primitives from table 13A.3/1.

13A.3.2 Service Primitives

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
LCS Event	М	M(=)		
LCS Client ID	М	M(=)		
Network Node Number	М	M(=)		
IMSI	С	C(=)		
MSISDN	С	C(=)		
NA-ESRD	С	C(=)	<u>C</u>	<u>C(=)</u>
NA-ESRK	С	C(=)	С	C(=)
IMEI	U	C(=)		
Location Estimate	С	C(=)		
GERAN Positioning Data	С	C(=)		
UTRAN Positioning Data	С	C(=)		
Age of Location Estimate	С	C(=)		
LMSI	U	C(=)		
GPRS Node Indicator	С	C(=)		
Additional Location Estimate	С	C(=)		
Deferred MT-LR Data	С	C(=)		
LCS-Reference Number	С	C(=)		
NA-ESRK Request	С	C(=)		
Cell Id Or SAI	С	C(=)		
H-GMLC Address	С	C(=)		
LCS Service Type Id	С	C(=)		
User error			С	C(=)
Provider error				0

Table 13A.3/1: Subscriber_Location_Report

13A.3.3 Parameter Definition and Use

All parameters are defined in clause 7.6. The use of these parameters and the requirements for their presence are specified in. 3GPP TS 23.271 [26a].

LCS Event

This parameter indicates the event that triggered the Subscriber Location Report.

LCS Client ID

This parameter provides information related to the identity of the recipient LCS client.

Network Node Number

See definition in clause 7.6.2. This parameter provides the address of the sending node.

IMSI

The IMSI shall be provided if available to the VMSC or SGSN.

MSISDN

The MSISDN shall be provided if available to the VMSC or SGSN.

NA-ESRD

If the target MS has originated an emergency service call in North America, the NA-ESRD shall be provided by the VMSC if available.

If the target MS has originated an emergency service call in North America and NA-ESRK Request is included in Subscriber_Location_Report-Arg, an NA-ESRK or NA-ESRD, but not both, may also be included in the response to the MSC, see 3GPP TS 23.271 [26a].

NA-ESRK

If the target MS has originated an emergency service call in North America, the NA-ESRK shall be provided by the VMSC if assigned.

If the target MS has originated an emergency service call in North America and NA-ESRK Request is included in Subscriber_Location_Report-Arg, an NA-ESRK or NA-ESRD, but not both, may also be included in the response to the MSC, see 3GPP TS 23.271 [26a].

IMEI

The requirements for its presence are specified in 3GPP TS 23.271 [26a].

Location Estimate

This parameter provides the location estimate. The absence of this parameter implies that a location estimate was not available or could not be successfully obtained. If the obtained location estimate is not encoded in one of the supported geographical shapes then this parameter shall consist of one octet, which shall be discarded by the receiving node.

GERAN Positioning Data

This parameter indicates the usage of each positioning method that was attempted to determine the location estimate either successfully or unsuccessfully. If Positioning Data received from the RAN contains no Positioning Methods, Positioning Data is excluded from the MAP message. It may be included in the message only if the access network is GERAN, see 3GPP TS 23.271 [26a].

UTRAN Positioning Data

This parameter indicates the usage of each positioning method that was successfullyattempted to determine the location estimate. If Position Data received from the RAN contains no Positioning Methods, UTRAN Positioning Data is excluded from the MAP message. It may be included in the message only if the access network is UTRAN, see 3GPP TS 23.271 [26a].

Age of Location Estimate

This parameter indicates how long ago the location estimate was obtained.

LMSI

The LMSI may be provided if assigned by the VLR.

GPRS Node Indicator

See definition in clause 7.6.8. This presence of this parameter is mandatory only if the SGSN number is sent in the Network Node Number.

Additional Location Estimate

This parameter provides the location estimate when not provided by the Location Estimate parameter..

Deferred MT-LR Data

See definition in clause 7.6.11.3.

LCS-Reference Number

This parameter shall be included if the Subscriber Location Report is the response to a deferred MT location request.

NA-ESRK Request

If the target MS has originated an emergency service call in North America, NA-ESRK Request may be included to indicate that the MSC is able to accept NA-ESRK in the Response message, see section 7.6.11.19.

Cell Id Or SAI

For GERAN access, this parameter indicates Global Cell Identifier of the cell that the served subscriber is currently attached to. For UTRAN access, this parameter contains the Service Area Identifier for the cell that the subscriber is currently attached to. This parameter is included only for North American Emergency Calls as described in 3GPP TS 23.271 [26a].

H-GMLC address

See definition in clause 7.6.2. The parameter shall be included if the Subscriber Location Report is the response to a deferred MT location request for a UE available event or an area event.

LCS Service Type Id

See definition in clause 7.6.11.15. The requirements for its presence are specified in 3GPP TS 23.271 [26a].

User error

This parameter is sent by the responder when the received message contains an error, cannot be forwarded or stored for an LCS client or cannot be accepted for some other reason and if present, takes one of the following values defined in clause 7.6.1.

- System Failure;
- Data Missing;
- Unexpected Data Value;
- Resource Limitation;
- Unknown Subscriber;
- Unauthorised requesting network;
- Unknown or unreachable LCS Client.

Provider error

These are defined in clause 7.6.1.

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

17.7.13 Location service data types

```
MAP-LCS-DataTypes {
 1
2
3
4
5
       itu-t identified-organization (4) etsi (0) mobileDomain (0)
       gsm-Network (1) modules (3) map-LCS-DataTypes (25) version9 (9)}
    DEFINITIONS
    IMPLICIT TAGS
 6
7
8
9
    ::=
    BEGIN
10
   EXPORTS
11
       RoutingInfoForLCS-Arg,
12
       RoutingInfoForLCS-Res,
13
       ProvideSubscriberLocation-Arg,
14
15
       ProvideSubscriberLocation-Res,
       SubscriberLocationReport-Arg,
16
       SubscriberLocationReport-Res,
17
       LocationType,
\begin{array}{c} 18\\19\\20\\21\\223\\24\\25\\26\\27\\29\\30\\33\\34\\35\\36\\37\\39\\40\\\end{array}
       DeferredLocationEventType,
       LCSClientName,
       LCS-QoS,
       Horizontal-Accuracy,
       ResponseTime,
       Ext-GeographicalInformation,
       SupportedGADShapes,
       Add-GeographicalInformation,
       LCSRequestorID,
       LCS-ReferenceNumber,
       LCSCodeword,
       AreaEventInfo
    IMPORTS
       AddressString,
       ISDN-AddressString,
       IMEI,
       IMSI.
       LMSI,
       SubscriberIdentity,
       AgeOfLocationInformation,
       LCSClientExternalID,
41
       LCSClientInternalID.
42
43
       LCSServiceTypeID,
       CellGlobalIdOrServiceAreaIdOrLAI
44
    FROM MAP-CommonDataTypes {
45
       itu-t identified-organization (4) etsi (0) mobileDomain (0)
46
       gsm-Network (1) modules (3) map-CommonDataTypes (18) version9 (9)}
47
48
       ExtensionContainer
49
    FROM MAP-ExtensionDataTypes {
50
51
52
53
54
55
56
57
58
59
       itu-t identified-organization (4) etsi (0) mobileDomain (0)
       gsm-Network (1) modules (3) map-ExtensionDataTypes (21) version9 (9)}
       USSD-DataCodingScheme,
       USSD-String
    FROM MAP-SS-DataTypes {
       itu-t identified-organization (4) etsi (0) mobileDomain (0) gsm-Network (1) modules (3)
       map-SS-DataTypes (14) version9 (9)}
       APN.
60
       GSN-Address,
61
62
       SupportedLCS-CapabilitySets
    FROM MAP-MS-DataTypes {
63
        itu-t identified-organization (4) etsi (0) mobileDomain (0)
64
       gsm-Network (1) modules (3) map-MS-DataTypes (11) version9 (9)}
65
66
       Additional-Number
67
    FROM MAP-SM-DataTypes {
68
        itu-t identified-organization (4) etsi (0) mobileDomain (0)
69
       gsm-Network (1) modules (3) map-SM-DataTypes (16) version9 (9)}
```

70 71	;			
72				
73	RoutingInfoForLCS-Arg ::= SEQUENCE {			
74	mlcNumber	[0]	ISDN-AddressString,	
75	targetMS extensionContainer	[1]	Subscriberidentity,	
77		[2]	Excensioncontainer	OPTIONAL,
78				
79	RoutingInfoForLCS-Res ::= SEQUENCE {			
80	targetMS	[0]	SubscriberIdentity,	
81	lcsLocationInfo	[1]	LCSLocationInfo,	
82 83	extensionContainer	[2]	ExtensionContainer	OPTIONAL,
84	v-gmlc-Address	[3]	GSN-Address	OPTIONAL.
85	h-gmlc-Address	[4]	GSN-Address	OPTIONAL,
86	ppr-Address	[5]	GSN-Address	OPTIONAL,
87	additional-v-gmlc-Address	[6]	GSN-Address	OPTIONAL }
88				
89 00	LCSLocationInfo ::= SEQUENCE {	TOD	N AdvogaCtring	
91	NetworkNode-number can be either	msc-	number or sasn-number	
<u>92</u>	lmsi	[0]	LMSI	OPTIONAL,
93	extensionContainer	[1]	ExtensionContainer	OPTIONAL,
94	•••• /			
95	gprsNodeIndicator	[2]	NULL	OPTIONAL,
90	gprsNodeIndicator is set only if	the	SGSN number is sent as the Net	ODTIONAL
98	supportedLCS-CapabilitySets	[4]	SupportedLCS-CapabilitySets	OPTIONAL,
<u>99</u>	additional-LCS-CapabilitySets	[5]	SupportedLCS-CapabilitySets	OPTIONAL
100	}			
101				
102	ProvideSubscriberLocation-Arg ::= SEQUEN	CE {		
103	locationType	LOC	ationType, N. AddroggString	
104	lcs-ClientID	[0]	LCS-ClientID	OPTIONAL.
106	privacy0verride	[1]	NULL	OPTIONAL,
107	imsi	[2]	IMSI	OPTIONAL,
108	msisdn	[3]	ISDN-AddressString	OPTIONAL,
109	lmsi	[4]	LMSI	OPTIONAL,
111	1mei las-Priority	[5]	IMEI LCS-Priority	OPTIONAL,
112	lcs-0oS	[7]	LCS-OoS	OPTIONAL,
113	extensionContainer	[8]	ExtensionContainer	OPTIONAL,
114	,			
115	supportedGADShapes	[9]	SupportedGADShapes	OPTIONAL,
110	lcs-ReferenceNumber	[10] LCS-ReferenceNumber	OPTIONAL,
117		[1]] LCSServiceTypeID	OPTIONAL,
119	lcs-PrivacyCheck	[13	LCS-PrivacyCheck	OPTIONAL,
120	areaEventInfo	[14] AreaEventInfo	OPTIONAL,
121	h-gmlc-Address	[15] GSN-Address	OPTIONAL }
122				
123	one of imsi or msisdn is mandaton	ry		
124	II a location estimate type indic	ates abal	activate deferred location or	cancel deferred
126	iocation, a ics-kererence number	Shai	i be included.	
127	LocationType ::= SEQUENCE {			
128	locationEstimateType	[0]	LocationEstimateType,	
129	,			
130	deferredLocationEventType	[1]	DeferredLocationEventType	OPTIONAL }
131				
132	LocationEstimateType ::= ENUMERATED {	(0)		
134	currentOrLastKnownLocation	(1)		
135	initialLocation	(2)	,	
136	····,	,		
137	activateDeferredLocation	(3)	1	
138	cancelDeterredLocation	(4)	}	
139	exception nanaling:	Faini	ng an unrecognized LocationEst	imateType
141	shall be rejected by the receiver wa	ith a	return error cause of unexpect	ted data value
142		0		

1/13	Deferred eachier Event Time :- DIT CTDIN	
143	DeferredLocationEventType= Bil SiRIN	
144	msAvailable	(\mathbf{U}) ,
145	enteringIntoArea	(1),
146	leavingFromArea	(2),
147	beingInsideArea	(3) } (SIZE (116))
148	beingInsideArea is always treated as	as oneTimeEvent regardless of the possible value
149	of occurrenceInfo inside areaEventIr	Info.
150	exception handling:	
151	> ProvideSubscriberLocation-Arg cont	ntaining other walves than listed above in
152	Deferred eastionExection Alg cont	rejected by the receiver with a return error gauge of
152	DererredulocacionEvenciype shari be i	rejected by the receiver with a return error cause of
155	unexpected data value.	
154	-	
155	LCS-ClientID ::= SEQUENCE {	
156	lcsClientType	<pre>[0] LCSClientType,</pre>
157	lcsClientExternalID	[1] LCSClientExternalID OPTIONAL,
158	lcsClientDialedByMS	[2] AddressString OPTIONAL,
159	lcsClientInternalID	[3] LCSClientInternalID OPTIONAL
160	lcsClientName	[4] LCSClientName OPTIONAL
161		
162		
162	ICSAPN	[5] APN OPTIONAL,
105	lcsRequestorID	[6] LCSRequestorID OPTIONAL }
164		
165	LCSClientType ::= ENUMERATED {	
166	emergencyServices	(0),
167	valueAddedServices	(1),
168	plmnOperatorServices	(2),
169	lawfulInterceptServices	(3),
170		· · · ·
171	exception handling.	
172	unregognized velues may be is	anored if the ICS alient uses the privacy override
172	unrecognized varues may be ig.	ghored if the hesteric uses the privacy override
173	Otherwise, an unrecognized va	alle shall be treated as unexpected data by a receiver
174	a return error shall then be	returned II received in a MAP invoke
175		
1/0	LCSClientName ::= SEQUENCE {	
177	dataCodingScheme	[0] USSD-DataCodingScheme,
178	nameString	[2] NameString,
179	· · · · /	
180	lcs-FormatIndicator	[3] LCS-FormatIndicator OPTIONAL }
181		
182	The USSD-DataCodingScheme shall indi	dicate use of the default alphabet through the
183	following encoding	
184	bit 76543210	
185	00001111	
186		
187	NameString ::= USSD-String (SIZE (1ma	maxNameStringLength))
188		
189	maxNameStringLength INTEGER ::= 63	
190		
191	LCSRequestorID :- SECULENCE	
102	dataCodingCahoma	[0] USSD-DataCodingSahome
102		
173	requestoring	[1] Kequestoriustring,
194	,	
193	LCS-Formatingicator	[2] LCS-FORMATINGICATOR OPTIONAL }
196		
197	RequestorIDString ::= USSD-String (SIZE	ZE (1maxRequestorIDStringLength))
198		
199	maxRequestorIDStringLength INTEGER ::=	:= 63
200		
201	LCS-FormatIndicator ::= ENUMERATED {	
202	logicalName	(0),
203	e-mailAddress	(1),
204	msisdn	(2)
205	url	(3)
206	ainIIr]	(Δ)
200) PTDOLT	(= / /
207	•••• }	
200 200		
209	LCS-Priority ::= OCTET STRING (SIZE (1)	1))
210	0 = highest priority	
211	1 = normal priority	
212	all other values treated as 1	

214	LCS-QoS ::= SEQUENCE {		
215	horizontal-accuracy	[0] Horizontal-Accuracy	OPTIONAL,
216	verticalCoordinateRequest	[1] NULL	OPTIONAL,
$\frac{21}{210}$	vertical-accuracy	[2] Vertical-Accuracy	OPTIONAL,
218	responseTime	[3] ResponseTime	OPTIONAL,
219	extensionContainer	[4] ExtensionContainer	OPTIONAL,
220	}		
221		(0.7.6.7. (1.))	
222	Horizontal-Accuracy ::= OCTET STRING	(SIZE (1))	
223	DIC 8 = 0 bits 7.1 - 7 bit Unservision	dede defined in SORD ma 22 022	The heuisentel legetien
224	DILS /-I = / DIL UNCERTAINLY	code delined in 3GPP TS 23.032.	The norizontal location
225	confidence	e error indicated by the uncerta	incy code with 67%
220	com ruence.		
228	Vertical-Accuracy ··= OCTET STRING (STZE (1))	
229	bit $8 = 0$		
230	bits 7-1 = 7 bit Vertical Und	certainty Code defined in 3GPP T	S 23.032.
231	The vertical location error s	should be less than the error in	dicated
232	by the uncertainty code with	67% confidence.	
233			
234	ResponseTime ::= SEQUENCE {		
235	responseTimeCategory	ResponseTimeCategory,	
236	}		
237	note: an expandable SEQUENCE sin	mplifies later addition of a num	eric response time.
238	Г	,	
239	ResponseTimeCategory ::= ENUMERATED	{	
240	Lowdelay (0),		
241 242	delaytolerant (1),		
∠42 2∆2	}		
243	exception nanding:	treated the same as value 1 (del	avtolerant)
244	all ulliecognized value shall be	Lieated the same as value 1 (det	ay coleranc /
246	SupportedGADShapes ::= BIT STRING {		
247	ellipsoidPoint (0).		
248	ellipsoidPointWithUncertaintvCi	ccle (1).	
249	ellipsoidPointWithUncertaintyEl	Lipse (2),	
250	polygon (3),		
251	ellipsoidPointWithAltitude (4),		
252	ellipsoidPointWithAltitudeAndUng	certaintyElipsoid (5),	
253	ellipsoidArc (6) } (SIZE (716	5))	
254	A node shall mark in the BIT STRI.	NG all Shapes defined in 3GPP TS	23.032 it supports.
233	exception handling: bits 7 to 15	shall be ignored if received.	
230		((-))	
231	LCS-ReferenceNumber::= OCTET STRING	(SIZE(1))	
230			
239	LCSCodeword ::= SEQUENCE {	[0] UGOD Detecteding Coheme	
200	lagCodewordString	[0] USSD-DataCodingScheme,	
262	l	[1] Lescodewordstring,	
263	••••		
264	LCSCodewordString ::= USSD-String (S	IZE (1maxLCSCodewordStringLeng	th))
265			
266	maxLCSCodewordStringLength INTEGER	::= 20	1
267		-	
200			
268	LCS-PrivacyCheck ::= SEOUENCE {		
268 269	LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated	[0] PrivacyCheckRelatedActi	lon,
268 269 270	LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi</pre>	.on, .on OPTIONAL,
268 269 270 271	LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated }	[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi	on, on OPTIONAL,
268 269 270 271 272	LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated }	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi</pre>	on, on OPTIONAL,
268 269 270 271 272 273	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {</pre>	on, .on OPTIONAL,
268 269 270 271 272 273 274	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0),</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {</pre>	on, lon OPTIONAL,
268 269 270 271 272 273 274 275	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1),</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {</pre>	on, .on OPTIONAL,
268 269 270 271 272 273 274 275 276	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2),</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {</pre>	on, .on OPTIONAL,
268 269 270 271 272 273 274 275 276 277	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), wetPallowel (4);</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {</pre>	on, lon OPTIONAL,
268 269 270 271 272 273 274 275 276 277 278 278	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), l </pre>	[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {	on, lon Optional,
268 269 270 271 272 273 274 275 276 277 278 279 280	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } </pre>	[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {	on, lon Optional,
268 269 270 271 272 273 274 275 276 277 278 279 280 281	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation_Arg</pre>	[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED {	Lon, Lon OPTIONAL,
268 269 270 271 272 273 274 275 276 277 278 279 280 281 282	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the receiver.</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Privacy with a return error cause of the second se</pre>	on, on OPTIONAL, acyCheckRelatedAction unexpected data value
268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Privacy or with a return error cause of the second sec</pre>	lon, lon OPTIONAL, acyCheckRelatedAction unexpected data value
268 269 270 271 272 273 274 275 276 277 278 277 278 279 280 281 282 283 284	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (2), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received AreaEventInfo ::= SEQUENCE {</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { atten { containing an unrecognized Privacy or with a return error cause of the privacy o</pre>	lon, lon OPTIONAL, acyCheckRelatedAction unexpected data value
268 269 270 271 272 273 274 275 276 277 278 277 278 279 280 281 282 283 284 285	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received AreaEventInfo ::= SEQUENCE { areaDefinition</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Prive or with a return error cause of [0] AreaDefinition.</pre>	lon, lon OPTIONAL, acyCheckRelatedAction unexpected data value
268 2269 2270 271 272 273 274 275 277 277 277 277 277 277 277 277 2276 2277 2278 2281 2282 283 284 2285 286	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received AreaEventInfo ::= SEQUENCE { areaDefinition occurrenceInfo</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Prive or with a return error cause of [0] AreaDefinition, [1] OccurrenceInfo</pre>	on, on OPTIONAL, acyCheckRelatedAction unexpected data value OPTIONAL,
268 269 270 271 272 273 274 275 276 2277 2278 2277 2278 2280 281 282 283 284 285 286 287	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received AreaEventInfo ::= SEQUENCE { areaDefinition occurrenceInfo intervalTime</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Prive er with a return error cause of [0] AreaDefinition, [1] OccurrenceInfo [2] IntervalTime</pre>	OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL, OPTIONAL,
268 269 270 271 272 273 274 275 276 2277 2278 2277 2278 2277 2278 2280 281 282 283 284 285 286 287 288	<pre>LCS-PrivacyCheck ::= SEQUENCE { callSessionUnrelated callSessionRelated } PrivacyCheckRelatedAction ::= ENUMER allowedWithoutNotification (0), allowedWithNotification (1), allowedIfNoResponse (2), restrictedIfNoResponse (3), notAllowed (4), } exception handling: a ProvideSubscriberLocation-Arg shall be rejected by the received AreaEventInfo ::= SEQUENCE { areaDefinition occurrenceInfo intervalTime }</pre>	<pre>[0] PrivacyCheckRelatedActi [1] PrivacyCheckRelatedActi ATED { containing an unrecognized Prive er with a return error cause of [0] AreaDefinition, [1] OccurrenceInfo [2] IntervalTime</pre>	OPTIONAL,

AreaDefinition ::= SEQUENCE {	
areaList	[0] AreaList,
}	
AreaList ::= SEQUENCE SIZE (1maxNumO	DfAreas) OF Area
maxNumOfAreas INTEGER ::= 10	
Area ::= SEQUENCE {	
areaType	[0] AreaType
areaIdentification	[1] AreaIdentification
	[1] Alcalacitilicación,
••••]	
Arearype ENOMERATED ((0)
countrycode	(0),
pimnia	(1),
locationAreald	(2),
routingAreaId	(3),
cellGlobalId	(4),
}	
AreaIdentification ::= OCTET STRING (S	SIZE (27))
The internal structure is defi	ned as follows:
octet 1 bits 4321	Mobile Country Code 1 st digit
bits 8765	Mobile Country Code 2 nd digit
octet 2 bits 4321	Mobile Country Code 3 rd digit
bits 8765	Mobile Network Code 3 rd digit if 3 digit MNC included
	or filler (1111)
octet 3 bits 1321	Mobile Network Code 1 st digit
bita 8765	Mobile Network Code 1 nd digit
DILS 8703	Mobile Network code z digit
Oclels 4 and 5	Location Area Code (LAC)
OCTET 6	Routing Area Code (RAC) for Routing Area 1d
octets 6 and 7	Cell Identity (CI) for Cell Global Id
octets 6 and 7	Cell Identity (CI) for Cell Global Id
octets 6 and 7 OccurrenceInfo ::= ENUMERATED {	Cell Identity (CI) for Cell Global Id
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent	Cell Identity (CI) for Cell Global Id (0),
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent	Cell Identity (CI) for Cell Global Id (0), (1),
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent }	Cell Identity (CI) for Cell Global Id (0), (1),
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent }	Cell Identity (CI) for Cell Global Id (0), (1),
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767)	Cell Identity (CI) for Cell Global Id (0), (1),
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between o	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEOU	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds JENCE {
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between . ProvideSubscriberLocation-Res ::= SEQU locationEstimate	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds JENCE { Ext-GeographicalInformation,
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds JENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL.
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL.
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL,
octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add_LocationEstimate	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL
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octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator georpEngitianizeEste	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds TENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] DegitizeringDataInformation OPTIONAL,
<pre> octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData the provide actionEstimate deferredmt-lrResponseIndicator geranPositioningData the provide actionEstimate deferredmt-lrResponseIndicator geranPositioningData</pre>	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [4] PositioningDataInformation OPTIONAL,
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octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData utranPositioningData cellIdOrSai	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [5] UtranPositioningDataInfo OPTIONAL, [6] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL,
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<pre> octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData utranPositioningData cellIdOrSai sai-Present if deferredmt-lrResponseIndicator</pre>	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds JENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [5] UtranPositioningDataInfo OPTIONAL, [6] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL, [7] NULL OPTIONAL } r is set, locationEstimate is ignored.
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<pre> octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData utranPositioningData cellIdOrSai sai-Present if deferredmt-lrResponseIndicator the add-LocationEstimate parameter geographic shapes supported in the The locationEstimate and the add-lo the supportedGADShapes parameter ha and the shape encoded in locationEst as supported in supportedGADShapes shall be rejected with error Facilia </pre>	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds UENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [5] UtranPositioningDataInfo OPTIONAL, [6] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL, [7] NULL OPTIONAL } r is set, locationEstimate is ignored. shall not be sent to a node that did not indicate the ProvideSubscriberLocation-Arg pocationEstimate parameters shall not be sent if as been received in ProvideSubscriberLocation-Arg timate or add-LocationEstimate is not marked In such a case ProvideSubscriberLocation twotSupported with additional indication
<pre> octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData utranPositioningData cellIdOrSai sai-Present if deferredmt-lrResponseIndicator the add-LocationEstimate parameter geographic shapes supported in the The locationEstimate and the add-lo the supportedGADShapes parameter ha and the shape encoded in locationEss shall be rejected with error Facili shall b</pre>	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds FENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [5] UtranPositioningDataInfo OPTIONAL, [6] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL, [7] NULL OPTIONAL } r is set, locationEstimate is ignored. shall not be sent to a node that did not indicate the ProvideSubscriberLocation-Arg coationEstimate parameters shall not be sent if as been received in ProvideSubscriberLocation-Arg stimate or add-LocationEstimate is not marked In such a case ProvideSubscriberLocation
<pre> octets 6 and 7 OccurrenceInfo ::= ENUMERATED { oneTimeEvent multipleTimeEvent } IntervalTime ::= INTEGER (132767) minimum interval time between of ProvideSubscriberLocation-Res ::= SEQU locationEstimate ageOfLocationEstimate extensionContainer , add-LocationEstimate deferredmt-lrResponseIndicator geranPositioningData utranPositioningData cellIdOrSai sai-Present if deferredmt-lrResponseIndicator the add-LocationEstimate parameter geographic shapes supported in the The locationEstimate and the add-lo the supportedGADShapes parameter ha and the shape encoded in locationEss shall be rejected with error Facili shapeOfLocationEstimate.end the coll sai-Present indicator for the coll the supported for the for the for the coll sai-Present for the coll sai-Present indicator for the coll sai-Present for the coll sai-Present for the coll sai-Present for the coll sai-Present for the coll said Present for the coll said-Present for the coll said-Present</pre>	Cell Identity (CI) for Cell Global Id (0), (1), area reports in seconds FENCE { Ext-GeographicalInformation, [0] AgeOfLocationInformation OPTIONAL, [1] ExtensionContainer OPTIONAL, [1] ExtensionContainer OPTIONAL, [2] Add-GeographicalInformation OPTIONAL, [3] NULL OPTIONAL, [4] PositioningDataInformation OPTIONAL, [5] UtranPositioningDataInfo OPTIONAL, [6] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL, [7] NULL OPTIONAL } r is set, locationEstimate is ignored. shall not be sent to a node that did not indicate the ProvideSubscriberLocation-Arg stimate or add-LocationEstimate is not marked In such a case ProvideSubscriberLocation L'dOrSai parameter contains a Service Area Identity

750			
356	Ext-Geo	graphicalInformation ::= OCTET STRING (SIZE (1maxExt-Geographical]	Information))
357		Refers to geographical Information defined in 3GPP TS 23.032.	
358		This is composed of 1 or more octets with an internal structure acc	ording to
359		3000 75 23 032	5
360		Jeff 15 25.052	
200		Octet 1: Type of shape, only the following shapes in 3GPP TS 23.032	are allowed:
361		(a) Ellipsoid point with uncertainty circle	
362		(b) Ellipsoid point with uncertainty ellipse	
363		(c) Ellipsoid point with altitude and uncertainty ellipsoid	
364		(d) Ellipsoid Arc	
365		(a) Ellipsoid Boint	
366		the provide state 1 shall be tweeted as implied	
200		Any other value in octet i shari be treated as invalid	
307		Octets 2 to 8 for case (a) - Ellipsoid point with uncertainty circl	e
368		Degrees of Latitude	3 octets
369		Degrees of Longitude	3 octets
370		Uncertainty code	1 octet
371		Octets 2 to 11 for case (b) - Ellipsoid point with uncertainty elli	nse:
372		Degrees of Latitude	2 octots
372			
272			3 OCLELS
374		Uncertainty semi-major axis	l octet
3/5		Uncertainty semi-minor axis	1 octet
376		Angle of major axis	1 octet
377		Confidence	1 octet
378		Octets 2 to 14 for case (c) - Ellipsoid point with altitude and unc	ertainty ellipsoid
379		Degrees of Latitude	3 octets
380		Degrees of Longitude	3 octots
201		Degrees or hongreade	
201		AILILUQE	∠ oclets
382		Uncertainty semi-major axis	1 octet
383		Uncertainty semi-minor axis	1 octet
384		Angle of major axis	1 octet
385		Uncertainty altitude	1 octet
386		Confidence	1 octet
387		Octets 2 to 13 for asse (d) - Ellipsoid Arg	1 00000
200		Deres 2 to 15 to tase (u) = Ellipsolu Alc	
200		Degrees of Latitude	3 OCLELS
389		Degrees of Longitude	3 octets
390		Inner radius	2 octets
391		Uncertainty radius	1 octet
392		Offset angle	1 octet
393		Included angle	1 octet
30/		Confidence	1 ogtot
205			I OCLEL
393		Octets 2 to 7 for case (e) - Ellipsoid Point	
390		Degrees of Latitude	3 octets
397		Degrees of Longitude	3 octets
398			
399			
400		An Ext-GeographicalInformation parameter comprising more than one of	octet and
401		containing any other shape or an incorrect number of octets or codi	ng according
402		to 3CDD TC 22,032 shall be treated as invalid data by a receiver	ing according
402		to see is 25.052 shall be treated as invalid data by a receiver.	
403			
404		An Ext-GeographicalInformation parameter comprising one octet shall	be discarded
405		by the receiver if an Add-GeographicalInformation parameter is rece	elved
406		in the same message.	
407			
408		An Ext-GeographicalInformation parameter comprising one octet shall	be treated as
409		invalid data by the receiver if an Add-GeographicalInformation para	ameter is not
410		received in the same message	
411		received in the bane medbage.	
711 410			
412	maxExt-	GeographicalInformation INTEGER ::= 20	
413		the maximum length allows for further shapes in 3GPP TS 23.032 to b	be included in later
414		versions of 3GPP TS 29.002	
415			
416	Positio	ningDataInformation ::= OCTET STRING (SIZE (2 maxPositioningDataInd	formation))
417	1001010	Defers to the Desitioning Data defined in 2CDD TE 40.021	
/18		This is approach of 2 or more actors with on interpol atwature ac	anding to
410		This is composed of 2 of more occets with an incernal schucture acc	Soluting LO
+17 400		JUFF 15 49.031.	
420			
421	maxPosi	tioningDataInformation INTEGER ::= 10	
422			
423	L		
121	TTL	aitioning Data Tato ::- OGRER GREAND (OTRE /)	
+24 195	UCTANPO	SICIONINGDATAINIO ··= OCIET STRING (SIZE (3maxUtranPositioningData	a11110)))
423		Refers to the Position Data defined in 3GPP TS 25.413.	
426		This is composed of the positioningDataDiscriminator and the positi	oningDataSet
427		included in positionData as defined in 3GPP TS 25.413.	
428			
429	maviitra	nPositioningDataInfo INTEGER ::= 11	
120	marutia.	mobilioningpalatino iningen ··- ii	
421			
431			

432 Add-GeographicalInformation ::= OCTET STRING (SIZE (1..maxAdd-GeographicalInformation)) 433 -- Refers to geographical Information defined in 3GPP TS 23.032. 434 -- This is composed of 1 or more octets with an internal structure according to 435 -- 3GPP TS 23.032 436 -- Octet 1: Type of shape, all the shapes defined in 3GPP TS 23.032 are allowed: 437 -- Octets 2 to n (where n is the total number of octets necessary to encode the shape 438 -- according to 3GPP TS 23.032) are used to encode the shape itself in accordance with 439 the 440 -- encoding defined in 3GPP TS 23.032 441 442 -- An Add-GeographicalInformation parameter, whether valid or invalid, received 443 -- together with a valid Ext-GeographicalInformation parameter in the same message 444 -- shall be discarded. 445 _ _ 446 -- An Add-GeographicalInformation parameter containing any shape not defined in 447 -- 3GPP TS 23.032 or an incorrect number of octets or coding according to 448 -- 3GPP TS 23.032 shall be treated as invalid data by a receiver if not received 449 -- together with a valid Ext-GeographicalInformation parameter in the same message 450 451 maxAdd-GeographicalInformation INTEGER ::= 91 452 -- the maximum length allows support for all the shapes currently defined in 3GPP TS 453 23.032 454 455 SubscriberLocationReport-Arg ::= SEQUENCE { 456 LCS-Event lcs-Event 457 458 lcs-ClientID LCS-ClientID. lcsLocationInfo LCSLocationInfo, 459 msisdn [0] ISDN-AddressString OPTIONAL, 460 imsi [1] IMSI OPTIONAL, 461 [2] IMEI imei OPTIONAL. 462 OPTIONAL, na-ESRD [3] ISDN-AddressString 463 na-ESRK [4] ISDN-AddressString OPTIONAL. 464 locationEstimate [5] Ext-GeographicalInformation OPTIONAL, 465 ageOfLocationEstimate [6] AgeOfLocationInformation OPTIONAL, 466 extensionContainer [7] ExtensionContainer OPTIONAL. 467 468 add-LocationEstimate [8] Add-GeographicalInformation OPTIONAL, 469 deferredmt-lrData [9] Deferredmt-lrData OPTIONAL, 470 lcs-ReferenceNumber [10] LCS-ReferenceNumber OPTIONAL, 471 [11] PositioningDataInformation OPTIONAL, geranPositioningData 472 473 OPTIONAL, utranPositioningData [12] UtranPositioningDataInfo na-ESRK-Request [16] NULL OPTIONAL, 474 cellIdOrSai [13] CellGlobalIdOrServiceAreaIdOrLAI OPTIONAL, 475 OPTIONAL, h-qmlc-Address [14] GSN-Address 476 lcsServiceTypeID [15] LCSServiceTypeID OPTIONAL. 477 478 sai-Present [17] NULL OPTIONAL } 479 -- one of msisdn or imsi is mandatory 480 -- a location estimate that is valid for the locationEstimate parameter should 481 -- be transferred in this parameter in preference to the add-LocationEstimate. 482 -- the deferredmt-lrData parameter shall be included if and only if the lcs-Event 483 -- indicates a deferredmt-lrResponse. 484 -- if the lcs-Event indicates a deferredmt-lrResponse then the locationEstimate 485 -- and the add-locationEstimate parameters shall not be sent if the 486 -- supportedGADShapes parameter had been received in ProvideSubscriberLocation-Arg 487 -- and the shape encoded in locationEstimate or add-LocationEstimate was not marked 488 -- as supported in supportedGADShapes. In such a case terminationCause 489 -- in deferredmt-lrData shall be present with value 490 -- shapeOfLocationEstimateNotSupported. 491 -- If a lcs event indicates deferred mt-lr response, the lcs-Reference number shall be 492 -- included. 493 -- sai-Present indicates that the cellIdOrSai parameter contains a Service Area Identity. 494 495 **Deferredmt-lrData** ::= SEQUENCE { 496 deferredLocationEventType DeferredLocationEventType, 497 OPTIONAL, terminationCause [0] TerminationCause 498 lcsLocationInfo [1] LCSLocationInfo OPTIONAL, 499 ...} 500 -- lcsLocationInfo may be included only if a terminationCause is present 501 -- indicating mt-lrRestart. 502

503	LCS-Event := ENUMERATED {			
504	emergencyCallOrigination (0),			
505	emergencyCallRelease (1),			
506	mo-lr (2),			
507	,			
508	deferredmt-lrResponse (3) }			
509	exception handling:			
510	a SubscriberLocationReport-Arg containing an unrecognized LCS-Event			
511	shall be rejected by a receiver with a return error cause of unexpected data value			
512				
513	TerminationCause ::= ENUMERATED {			
514	normal (0),			
515	errorundefined (1),			
516	internalTimeout (2),			
517	congestion (3),			
518	mt-lrRestart (4),			
519	privacyViolation (5),			
520	,			
521	<pre>shapeOfLocationEstimateNotSupported (6) }</pre>			
522	mt-lrRestart shall be used to trigger the GMLC to restart the location procedure,			
523	either because the sending node knows that the terminal has moved under coverage			
524	of another MSC or SGSN (e.g. Send Identification received), or because the subscriber			
525	has been deregistered due to a Cancel Location received from HLR.			
526				
527	exception handling			
528	an unrecognized value shall be treated the same as value 1 (errorundefined)			
529				
530	SubscriberLocationReport-Res ::= SEQUENCE {			
531	extensionContainer ExtensionContainer OPTIONAL,			
532	,			
533	na-ESRK [0] ISDN-AddressString OPTIONAL,			
534	na-ESRD [1] ISDN-AddressString OPTIONAL }			
232				
530	na-ESRK and na-ESRD are mutually exclusive			
520				
330 520	exception handling			
540	receipt of both na-ESKK and na-ESKD shall be treated the same as a return error			
540				
541				
544				