3GPP TSG CN Plenary Meeting #23 10th – 12th March 2004 Phoenix, USA.

Source:	TSG CN WG4
Title:	Corrections on Location services release 98
Agenda item:	7.4
Document for:	APPROVAL

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
09.02	A340	2	N4-040329	R98	Correction to Insert Subscriber Data message for LCS SS	F	7.14.0
29.002	705	2	N4-040330	R99	Correction to Insert Subscriber Data message for LCS SS	A	3.18.0
29.002	706	2	N4-040331	Rel-4	Correction to Insert Subscriber Data message for LCS SS	F	4.13.0
29.002	707	2	N4-040332	Rel-5	Correction to Insert Subscriber Data message for LCS SS	F	5.8.0
29.002	708	2	N4-040333	Rel-6	Correction to Insert Subscriber Data message for LCS SS	F	6.4.0
03.16	A046	2	N4-040334	R98	Correction to SS data for LCS SS	F	7.6.0
23.016	031	2	N4-040335	R99	Correction to SS data for LCS SS	А	3.9.0
23.016	032	2	N4-040336	Rel-4	Correction to SS data for LCS SS	А	4.3.0
23.016	033	2	N4-040337	Rel-5	Correction to SS data for LCS SS	А	5.2.0
23.016	034	2	N4-040338	Rel-6	Correction to SS data for LCS SS	А	6.0.0

CHANGE REQUEST											
¥	03.16 CR A046 #rev 2 [#]	Current vers	^{ion:} 7.6.0 [#]								
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.											
Proposed chang	e affects: UICC apps ೫ ME Radio Ao	ccess Networ	k Core Network X								
Title:	Correction to SS data for LCS SS										
Source:	€ CN4										
Work item code:	f LCS	<i>Date:</i> ೫	14/01/04								
Category:	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21.900</u>. 	Release: ¥ Use <u>one</u> of 2 9) R96 R97 R98 R99 Rel-4 Rel-5 Bol 6	R98 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)								

Reason for change: ೫	Essential Correction
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it.
Summary of change: ℜ	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR to return those codes in the MAP Insert Subscriber Data Res message if the VLR does not support that particular Location Service SS. To accomplish this in the subscriber data management stage 2, the sending entity must be allowed to include LCS SS codes in the SS Data.
Consequences if #	Unpredictable behaviour and in the worst case can lead to a complete loss of
not approved:	service for the subscriber in the visited network.
Clauses affected: ೫	4.5.4

Other specs affected:	Ħ	Y X	N Other core specifications # CR 09.02-A340 X Test specifications X O&M Specifications
Other comments:	ж	S	ome contents of section 8.8.1.3 are not shown to enhance the readbility of this R. Removed text is shown by "".

4 General on handling of subscriber information

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4.5 Handling of supplementary service data with respect to basic service data

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4.5.4 Consistency of supplementary service data

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-Calling Line Identification Presentation (CLIP)
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           -Provisioning State
          -Activation State
Override Category
        -Calling Line Identification Restriction (CLIR)
           -Provisioning State
           -Activation State
Presentation Mode
        -Connected Line identification Presentation (COLP)
           -Provisioning State
           Activation State
Override Category
        -Connected Line identification Restriction (COLR)
           -Provisioning State
Activation State
       -Call Waiting (CW)
            -Provisioning State
            -BSG(1)
               Activation State
             . . . . .
            -BSG(n)
               -Activation State
       -Call Hold (HOLD)
          Provisioning State
Activation State
       -Multi Party (MPTY)

-Provisioning State
          Activation State
       -Advice of Charge Information (AoCI)
           -Provisioning State
Activation State
       -Advice of Charge Charging (AoCC)
          Provisioning State
Activation State
       -Explicit Call Transfer (ECT)
          Provisioning State
Activation State
       -Calling Name Presentation (CNAP)
           -Provisioning State
            -Activation State
           -Override Category
       -enhanced Multi-Level Precedence Pre-Emption (eMLPP)
           -Provisioning State
            -Activation State
           -Maximum Entitled Priority
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L_Default -Completion of Calls to Busy Subscriber (CCBS)- originating NW -Provisioning State -Activation State -Completion of Calls to Busy Subscriber (CCBS)- destination NW Provisioning State -Activation State -LÇS Privacy Exception Class Universal -Provisioning State -Activation State -Registration State -LCS Privacy Exception Class Call Session Related Provisioning State Activation State Registration -Registration State -LCS Privacy Exception Class Call Session Unrelated Provisioning State Activation State Registration -Registration State -LCS Privacy Exception Class PLMN Operator Provisioning State Activation State Registration -Registration State -LÇS Privacy Exception Class Service Type Provisioning State Activation State Registration -Registration State -MO-LR Class Basic Self Location -Provisioning State Activation State -Registration State -MO-LR Class Autonomous Self Location -Provisioning State Activation State -Registration State -MO-LR Class Transfer To Third Party -Provisioning State Activation State -Registration State

NOTE: For detailed information see GSM 03.67, GSM 03.81, GSM 03.83, GSM 03.84, GSM 03.86, GSM 03.91, GSM 03.93, GSM 03.96, and GSM 09.02 and GSM 03.71.

The codes below are used for the single purpose of enabling the visited network to notify the home network whether or not the particular Supplementary Service is supported. These codes are also included in the LCS Information parameter and the visited network shall use the codes in the LCS Information parameter, and only this parameter, to obtain the information needed for the LCS Supplementary Service.

- LCS Privacy Exception Class Universal
- LCS Privacy Exception Class Call Session Related
- LCS Privacy Exception Class Call Session Unrelated
- LCS Privacy Exception Class PLMN Operator
- LCS Privacy Exception Class Service Type
- MO-LR Class Basic Self Location
- MO-LR Class Autonomous Self Location
- MO-LR Class Transfer To Third Party

Figure 6: SS Data

CHANGE REQUEST										
ж	09.02 CR A340 #rev 2 [#]	Current version: 7.14.0	£							
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.										
Proposed change affects: UICC apps# ME Radio Access Network Core Network X										
Title:	Correction to Insert Subscriber Data message for	LCS SS								
Source:	f CN4									
Work item code:	f LCS	Date:								
Category:	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21.900</u>. 	Release: % R98 Use <u>one</u> of the following release 2 (GSM Phase 2) 9 e) R96 (Release 1996) R97 (Release 1997) R98 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) R94 (Release 6)	ses:							

Reason for change: ೫	Essential Correction					
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it.					
Summary of change: ೫	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR to return those codes in the MAP Insert Subscriber Data Res message if the VLR does not support that particular Location Service. To accomplish this in MAP, the receiving entity must not assume that a data overlap has occurred.					
Consequences if 🛛 🕱	Unpredictable behaviour and in the worst case can lead to a complete loss of					
not approved:	service for the subscriber in the visited network.					
Clauses affected: %	8.8.1.3					
Other specs 第 affected:	Y N X Other core specifications # X Test specifications X Q&M Specifications					
Other comments: ೫	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR. Removed text is shown by "".					

8 Mobility services

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8.8 Subscriber management services

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

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8.8.1.2 Service primitives

Table 8.8/1: MAP-INSERT-SUBSCRIBER-DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	С	C(=)		
MSISDN	С	C(=)		
Category	С	C(=)		
Subscriber Status	C	C(=)		
Bearer service List	С	C(=)	С	C(=)
Teleservice List	С	C(=)	С	C(=)
Forwarding information List	C	C(=)		
Call barring information List	С	C(=)		
CUG information List	C	C(=)		
SS-Data List	C	C(=)		
eMLPP Subscription Data	C	C(=)	0	O ()
Operator Determined Barring General data	C	C(=)	C	C(=)
Operator Determined Barring HPLMIN data		C(=)		
Roaming Restriction Due To Unsupported	C	C(=)		
realure Regional Subscription Data	0	$\mathbf{C}(\mathbf{x})$		
Kegional Subscription Data	C	C(=)		
Voice Breadcast Data	C	C(=)		
Voice Group Call Data	C	C(-)		
Network access mode	C	C(-)		
Network access mode	0	0(-)		
GPRS Subscription Data	С	C(=)		
Roaming Restricted In SGSN Due To	С	C(=)		
Unsupported Feature				
North American Equal Access preferred Carrier	U	C(=)		
Id List				
LSA Information	С	C(=)		
SS-Code List			С	C(=)
LMU Identifier	С	C(=)		
LCS Information	С	C(=)		
Regional Subscription Response			C	C(=)
Supported CAMEL Phases			C	C (=)
User error			U	C(=)
Provider error				0

8.8.1.3 Parameter use

Network access mode

This parameter defines if the subscriber has access to MSC/VLR and/or to SGSN. This parameter is used by SGSN and MSC/VLR. In VLR, the parameter is used only as part of Restore Data Procedure and the parameter is not stored in the VLR. This parameter shall always be sent to the SGSN as part of the subscriber data at GPRS location updating. It shall be sent to the SGSN or VLR as appropriate if it is to be changed as a result of administrative action.

All parameters are described in subclause 7.6. The following clarifications are applicable:

<u>IMSI</u>

It is only included if the service is not used in an ongoing transaction (e.g. location updating). This parameter is used by the VLR and the SGSN.

MSISDN

It is included either at location updating or when it is changed. The MSISDN sent shall be the basic MSISDN. This parameter is used by the VLR and the SGSN.

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SS-Data List

A list of Extensible SS-Data parameters (Extensible SS-Data is defined in subclause 7.6). It is sent for any other supplementary service than Call Forwarding, Call Barring, CUG and eMLPP either at location updating or at restoration or when they are changed. Each SS-Data parameter shall be treated independently of all other parameters in the primitive.

The Extensible SS-Data shall include the SS-Code for an individual supplementary service.

The Extensible SS-Data shall contain an Extensible SS-Status parameter and any subscription options that are applicable to the service defined by the SS-Code.

The SS-Data may include a Basic Service Group List. This shall be interpreted according to the rules in subclause 8.8.1.4.

If the VLR receives an Indication containing any supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back). This parameter is used only by the VLR and if the SGSN receives this parameter it shall ignore it.

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LCS Information

This parameter provides the following LCS related information for an MS subscriber:

- list of GMLCs in the HPLMN
- privacy exception list
- MO-LR list

At restoration and location updating, the HLR shall include the complete LCS data of the subscriber.

When there is a change in LCS subscriber data the HLR shall include at least the new and/or modified LCS data. LCS data that is not modified need not be included.

The VLR shall keep any previously stored LCS Information that is not included in an Insert Subscriber Data operation.

If the VLR detects that there is overlapping in the LCS information received within a dialogue, it shall send the error Unexpected Data Value. <u>However, if the VLR receives the LCS code in both the LCS Information and the SS-Data</u> List, then the VLR shall not interpret this as overlapping data.

This parameter is used only by the VLR and shall be ignored if received by an SGSN.

SS-Code List

The list of SS-Code parameters for the services that are provided to a subscriber but are not supported/allocated by the VLR (SS-Code is defined in subclause 7.6). The list can only include individual SS-Codes that were sent in the service request and SS-Codes for the eMLPP and/or CUG services if the above mentioned conditions, as described in eMLPP Subscription Data and/or CUG information List, are met (that is, eMLPP Subscription Data and/or CUG information List are received). This parameter is used only by the VLR.

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CHANGE REQUEST												
x		23.01	<mark>I6</mark> CR	031	жr	ev	2	ж	Current ve	rsion:	3.9.0	ж
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Proposed chang	ye a	affects:	UICC a	pps#	Μ	E	Rad	lio A	ccess Netw	ork	Core Ne	etwork X
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Work item code:	: Ж	LCS							Date:	¥ <u>3/(</u>)2/04	
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		Use <u>one</u>	of the follo	owing catego	ories:				Use <u>one</u>	of the f	ollowing rele	eases:
		F (correction)						2	(GSI	M Phase 2)	
		Α (correspon	ds to a corre	ection in a	n earlie	er re	lease	e) R96	(Rel	ease 1996)	
		Β (addition of	feature),					R97	(Rel	ease 1997)	
		C (functional	modification	of featur	e)			R98	(Rel	ease 1998)	
		D (editorial m	odification)					R99	(Rel	ease 1999)	
		Detailed	explanatio	ons of the ab	ove cate	gories o	can		Rel-4	(Rel	ease 4)	
		be found	l in 3GPP	<u>FR 21.900</u> .					Rel-5	(Rel	ease 5)	
1									Rel-6	(Rel	ease 6)	

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Consequences if # not approved:	Unpredictable behaviour and in the worst case can lead to a complete loss of service for the subscriber in the visited network.
Clauses affected: #	4.5.4

		Y	Ν
Other specs	ж	Χ	Other core specifications # CR 29.002-705
affected:			X Test specifications
			X O&M Specifications
Other comments:	Ж	S	ome contents of section 8.8.1.3 are not shown to enhance the readbility of this
		С	R. Removed text is shown by "".

4 General on handling of subscriber information

- 4.5 Handling of supplementary service data with respect to basic service data
- . . .
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-Calling Line Identification Presentation (CLIP) -Provisioning State -Activation State -Override Category -Calling Line Identification Restriction (CLIR) -Provisioning State -Activation State -Presentation Mode -Connected Line identification Presentation (COLP) -Provisioning State Activation State -Override Category -Connected Line identification Restriction (COLR) Provisioning State -Call Waiting (CW) -Provisioning State -BSG(1) -Activation State -BSĢ(n) -Activation State -Call Hold (HOLD) -Provisioning State Activation State -Multi Party (MPTY) -Provisioning State -Activation State -Advice of Charge Information (AoCI) -Provisioning State -Activation State -Advice of Charge Charging (AoCC) Provisioning State Activation State -Explicit Call Transfer (ECT) Provisioning State -Calling Name Presentation (CNAP) -Provisioning State Activation State -Override Category -enhanced Multi-Level Precedence Pre-Emption (eMLPP) -Provisioning State -Activation State -Maximum Entitled Priority Default -Multicall (MC) Provisioning State —Activation State —Registration State -Subscribed maximum CS bearers User defined maximum CS bearers

-Completion of Calls to Busy Subscriber (CCBS)originating NW Provisioning State Activation State -Completion of Calls to Busy Subscriber (CCBS)destination NW -Provisioning State -Activation State -LCS Privacy Exception Class Universal -Provisioning State -Activation State -Registration State -LCS Privacy Exception Class Call Session Related -Provisioning State -Activation State -Registration State -LCS Privacy Exception Class Call Session Unrelated -Provisioning State -Activation State -Registration State -LÇS Privacy Exception Class PLMN Operator -Provisioning State -Activation State -Registration State -LÇS Privacy Exception Class Service Type -Provisioning State -Activation State -Registration State -MO-LR Class Basic Self Location -Provisioning State -Activation State -Registration State -MO-LR Class Autonomous Self Location -Provisioning State -Activation State LRegistration State -MO-LR Class Transfer To Third Party -Provisioning State -Activation State -Registration State

NOTE: For detailed information see 3GPP TS 23.067, 3GPP TS 23.081, 3GPP TS 23.083, 3GPP TS 23.084, 3GPP TS 23.086, 3GPP TS 23.091, 3GPP TS 23.093, 3GPP TS 23.096, 3GPP TS 23.135, 3GPP TS 29.002 and 3GPP TS 23.071.

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- MO-LR Class Autonomous Self Location

6

• MO-LR Class Transfer To Third Party

CHANGE REQUEST										
æ	23.016 CR 032 #rev	2 [#] Current vers	^{ion:} 4.3.0 [#]							
For <u>HELP</u> or	ising this form, see bottom of this page or	look at the pop-up text	over the X symbols.							
Proposed chang	affects: UICC apps೫ ME	Radio Access Networ	k Core Network X							
		-								
Title	Correction to SS data for LCS SS									
ntie:	Correction to 55 data for LCS 55									
Source:	CN4									
Work item code:	LCS	Date: ೫	3/02/04							
Category:	Α	Release: ೫	Rel-4							
	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 ear	lier release) R96	(Release 1996)							
	B (addition of feature),	R97	(Release 1997)							
	C (functional modification of feature)	K98	(Release 1998)							
	$\boldsymbol{\nu}$ (editorial modification)	R99	(Release 1999)							
	Detailed explanations of the above categories	s can Kel-4	(Release 4)							
	be iouna in 3GPP <u>TR 21.900</u> .	Kel-5	(Release 5)							
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Clauses affected: ೫	4.5.4
Other specs % affected:	X Other core specifications # CR 29.002-706 X Test specifications #

Other specs affected:	ж	X X X	Other core specifications # Test specifications O&M Specifications	CR 29.002-706
Other comments:	ж	Son CR.	ne contents of section 8.8.1.3 are r Removed text is shown by "".	not shown to enhance the readbility of this

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6

• MO-LR Class Transfer To Third Party

CHANGE REQUEST								CR-Form-v7
æ		23.016 CR 033 #	rev 2	я	B	Current versi	on: 5.2	.0 [#]
For <u>MELP</u> or		Sing this form, see bottom of this p		(at	the	pop-up text	over the #	symbols.
Title:	Ж	Correction to SS data for LCS S	S					
Source:	ж	CN4						
Work item code:	ж	LCS				<i>Date:</i> ೫	3/02/04	
Category:	ж	A				Release: ೫	Rel-5	
		Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction i B (addition of feature), C (functional modification of fea D (editorial modification) Detailed explanations of the above ca be found in 3GPP <u>TR 21.900</u> .	in an earlier i hture) ategories car	relea n	ase,	Use <u>one</u> of 1 2) R96 R97 R98 R99 Rel-4 Rel-5 Pol-6	the following (GSM Phas (Release 19 (Release 19 (Release 19 (Release 19 (Release 4) (Release 5) (Release 5)	1 releases: e 2) 196) 197) 198) 199)

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Clauses affected: #	4.5.4

		Y	Ν
Other specs	ж	Х	Other core specifications # CR 29.002-707
affected:			X Test specifications
			X O&M Specifications
Other comments:	ж	S	ome contents of section 8.8.1.3 are not shown to enhance the readbility of this
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- 4.5.4 Consistency of supplementary service data

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-Calling Line Identification Presentation (CLIP) -Provisioning State -Activation State -Override Category -Calling Line Identification Restriction (CLIR) -Provisioning State -Activation State -Presentation Mode -Connected Line identification Presentation (COLP) -Provisioning State Activation State -Override Category -Connected Line identification Restriction (COLR) Provisioning State -Call Waiting (CW) -Provisioning State -BSG(1) -Activation State -BSĢ(n) -Activation State -Call Hold (HOLD) -Provisioning State Activation State -Multi Party (MPTY) -Provisioning State -Activation State -Advice of Charge Information (AoCI) -Provisioning State -Activation State -Advice of Charge Charging (AoCC) Provisioning State Activation State -Explicit Call Transfer (ECT) Provisioning State -Calling Name Presentation (CNAP) -Provisioning State Activation State -Override Category -enhanced Multi-Level Precedence Pre-Emption (eMLPP) -Provisioning State -Activation State -Maximum Entitled Priority Default -Multicall (MC) Provisioning State —Activation State —Registration State -Subscribed maximum CS bearers User defined maximum CS bearers



Figure 7: SS Data

NOTE: For detailed information see 3GPP TS 23.067, 3GPP TS 23.081, 3GPP TS 23.083, 3GPP TS 23.084, 3GPP TS 23.086, 3GPP TS 23.091, 3GPP TS 23.093, 3GPP TS 23.096, 3GPP TS 23.135, and 3GPP TS 29.002 and 3GPP TS 23.071.

The codes below are used for the single purpose of enabling the visited network to notify the home network whether or not the particular Supplementary Service is supported. These codes are also included in the LCS Information parameter and the visited network shall use the codes in the LCS Information parameter, and only this parameter, to obtain the information needed for the LCS Supplementary Service.

- LCS Privacy Exception Class Universal
- LCS Privacy Exception Class Call Session Related
- LCS Privacy Exception Class Call Session Unrelated
- LCS Privacy Exception Class PLMN Operator
- LCS Privacy Exception Class Service Type
- MO-LR Class Basic Self Location

6

- MO-LR Class Autonomous Self Location
- MO-LR Class Transfer To Third Party

Figure 7: SS Data

CHANGE REQUEST							
¥	23.016 CR 034 # rev 2 ^{# Curr}	ent version: 6.0.0 #					
For <u>HELP</u> or	o using this form, see bottom of this page or look at the pop	-up text over the					
Proposed chang	e affects: UICC apps # ME Radio Access	Network Core Network X					
Title:	Correction to SS data for LCS SS						
Source:	策 CN4						
Work item code:	ដ <mark>CS</mark>	Date: ೫ 3/02/04					
Category:	# A Relation Use one of the following categories: Use F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Pase: %Rel-6e oneof the following releases:2(GSM Phase 2)R96(Release 1996)R97(Release 1997)R98(Release 1998)R99(Release 1999)Rel-4(Release 4)Rel-5(Release 5)Rel-6(Release 6)					

Reason for change: ೫	Essential Correction
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it.
Summary of change: ₩	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR to return those codes in the MAP Insert Subscriber Data Res message if the VLR does not support that particular Location Service SS. To accomplish this in the subscriber data management stage 2, the sending entity must be allowed to include LCS SS codes in the SS Data.
Consequences if # not approved:	Unpredictable behaviour and in the worst case can lead to a complete loss of service for the subscriber in the visited network.
Clauses affected: #	4.5.4

		YN			
Other specs	ж	X	Other core specifications #	CR 29.002-708	
affected:		X X	Test specifications O&M Specifications		
			-		
Other comments:	ж	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR. Removed text is shown by "".			

4 General on handling of subscriber information

- 4.5 Handling of supplementary service data with respect to basic service data
- . . .
- 4.5.4 Consistency of supplementary service data

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-Calling Line Identification Presentation (CLIP) -Provisioning State -Activation State -Override Category -Calling Line Identification Restriction (CLIR) -Provisioning State -Activation State -Presentation Mode -Connected Line identification Presentation (COLP) -Provisioning State Activation State -Override Category -Connected Line identification Restriction (COLR) Provisioning State -Call Waiting (CW) -Provisioning State -BSG(1) -Activation State -BSĢ(n) -Activation State -Call Hold (HOLD) -Provisioning State Activation State -Multi Party (MPTY) -Provisioning State -Activation State -Advice of Charge Information (AoCI) -Provisioning State -Activation State -Advice of Charge Charging (AoCC) Provisioning State Activation State -Explicit Call Transfer (ECT) Provisioning State -Calling Name Presentation (CNAP) -Provisioning State Activation State -Override Category -enhanced Multi-Level Precedence Pre-Emption (eMLPP) -Provisioning State -Activation State -Maximum Entitled Priority Default -Multicall (MC) Provisioning State —Activation State —Registration State -Subscribed maximum CS bearers User defined maximum CS bearers



Figure 7: SS Data

NOTE: For detailed information see 3GPP TS 23.067, 3GPP TS 23.081, 3GPP TS 23.083, 3GPP TS 23.084, 3GPP TS 23.086, 3GPP TS 23.091, 3GPP TS 23.093, 3GPP TS 23.096, 3GPP TS 23.135, and 3GPP TS 29.002 and 3GPP TS 23.071.

The codes below are used for the single purpose of enabling the visited network to notify the home network whether or not the particular Supplementary Service is supported. These codes are also included in the LCS Information parameter and the visited network shall use the codes in the LCS Information parameter, and only this parameter, to obtain the information needed for the LCS Supplementary Service.

- LCS Privacy Exception Class Universal
- LCS Privacy Exception Class Call Session Related
- LCS Privacy Exception Class Call Session Unrelated
- LCS Privacy Exception Class PLMN Operator
- LCS Privacy Exception Class Service Type
- MO-LR Class Basic Self Location

6

- MO-LR Class Autonomous Self Location
- MO-LR Class Transfer To Third Party

Figure 7: SS Data

CHANGE REQUEST							
æ	29.002 CR 705 #rev 2 [#]	Current vers	^{ion:} <mark>3.18.0</mark> [≇]				
For <u>HELP</u> of	using this form, see bottom of this page or look at the	pop-up text	over the X symbols.				
Proposed chang	e affects: UICC apps₩ ME Radio Ac	cess Networ	k Core Network X				
Title:	Correction to Insert Subscriber Data message for	LCS SS					
Source:	策 CN4						
Work item code.	# LCS	Date: ೫	2/02/04				
Category:	 A Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21.900</u>. 	Release: # Use <u>one</u> of 2) R96 R97 R98 R99 Rel-4 Rel-5 Bal C	R99 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)				

Reason for change: ೫	Essential Correction			
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it.			
Summary of change: ೫	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR to return those codes in the MAP Insert Subscriber Data Res message if the VLR does not support that particular Location Service. To accomplish this in MAP, the receiving entity must not assume that a data overlap has occurred.			
Consequences if 🛛 🕱	Unpredictable behaviour and in the worst case can lead to a complete loss of			
not approved:	service for the subscriber in the visited network.			
Clauses affected: %	8.8.1.3			
Other specs ж	Y N X Other core specifications # CR 23.016-031			
affected:	X Test specifications X O&M Specifications			
Other comments: ж	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR. Removed text is shown by "".			

8 Mobility services

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8.8 Subscriber management services

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

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8.8.1.2 Service primitives

Table 8.8/1: MAP-INSERT-SUBSCRIBER-DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	С	C(=)		
MSISDN	С	C(=)		
Category	С	C(=)		
Subscriber Status	С	C(=)		
Bearer service List	С	C(=)	С	C(=)
Teleservice List	С	C(=)	С	C(=)
Forwarding information List	С	C(=)		
Call barring information List	С	C(=)		
CUG information List	С	C(=)		
SS-Data List	С	C(=)		
eMLPP Subscription Data	С	C(=)		
MC-Subscription Data	С	C(=)		
Operator Determined Barring General data	С	C(=)	С	C(=)
Operator Determined Barring HPLMN data	С	C(=)		
Roaming Restriction Due To Unsupported	С	C(=)		
Feature				
Regional Subscription Data	С	C(=)		
VLR CAMEL Subscription Info	С	C(=)		
Voice Broadcast Data	С	C(=)		
Voice Group Call Data	С	C(=)		
Network access mode	С	C(=)		
GPRS Subscription Data	С	C(=)		
Roaming Restricted In SGSN Due To	С	C(=)		
Unsupported Feature				
North American Equal Access preferred Carrier	U	C(=)		
Id List				
SGSN Camel Subscription Info	С	C(=)		
LSA Information	С	C(=)		
IST Alert Timer	С	C(=)		
SS-Code List			С	C(=)
LMU Identifier	С	C(=)		
LCS Information	С	C(=)		
CS Allocation/Retention priority	С	C(=)		
Super-Charger Supported In HLR	С	C(=)		
Regional Subscription Response			С	C(=)
Supported CAMEL Phases			С	C (=)
User error			U	C(=)
Provider error				0

8.8.1.3 Parameter use

All parameters are described in clause 7.6. The following clarifications are applicable:

Network access mode

This parameter defines if the subscriber has access to MSC/VLR and/or to SGSN. This parameter is used by SGSN and MSC/VLR. In VLR, the parameter is used only as part of Restore Data Procedure and the parameter is not stored in the VLR. This parameter shall always be sent to the SGSN as part of the GPRS subscriber data at GPRS location updating. It shall be sent to the SGSN if it is changed as a result of administrative action.

<u>IMSI</u>

It is only included if the service is not used in an ongoing transaction (e.g. location updating). This parameter is used by the VLR and the SGSN.

<u>MSISDN</u>

It is included either at location updating or when it is changed. The MSISDN sent shall be the basic MSISDN. This parameter is used by the VLR and the SGSN.

. . .

SS-Data List

A list of Extensible SS-Data parameters (Extensible SS-Data is defined in clause 7.6). It is sent for any other supplementary service than Call Forwarding, Call Barring, CUG and eMLPP either at location updating or at restoration or when they are changed. Each SS-Data parameter shall be treated independently of all other parameters in the primitive.

The Extensible SS-Data shall include the SS-Code for an individual supplementary service.

The Extensible SS-Data shall contain an Extensible SS-Status parameter and any subscription options that are applicable to the service defined by the SS-Code.

The SS-Data may include a Basic Service Group List. This shall be interpreted according to the rules in clause 8.8.1.4.

If the VLR receives an Indication containing any supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back). This parameter is used only by the VLR and if the SGSN receives this parameter it shall ignore it.

. . .

LCS Information

This parameter provides the following LCS related information for an MS subscriber:

- list of GMLCs in the HPLMN;
- privacy exception list;
- MO-LR list.

At restoration and location updating, the HLR shall include the complete LCS data of the subscriber.

When there is a change in LCS subscriber data the HLR shall include at least the new and/or modified LCS data. LCS data that is not modified need not be included.

The VLR shall keep any previously stored LCS Information that is not included in an Insert Subscriber Data operation.

If the VLR detects that there is overlapping in the LCS information received within a dialogue, it shall send the error Unexpected Data Value. <u>However, if the VLR receives the LCS code in both the LCS Information and the SS-Data List, then the VLR shall not interpret this as overlapping data.</u>

This parameter is used only by the VLR and shall be ignored if received by an SGSN.

Super-Charger Supported In HLR

This parameter is used by the HLR to indicate support for the Super-Charger functionality. If this parameter is present it shall include an indication of the age of the subscription data stored in the HLR.

If this parameter is absent then the HLR does not support the Super-Charger functionality.

SS-Code List

The list of SS-Code parameters for the services that are provided to a subscriber but are not supported/allocated by the VLR (SS-Code is defined in clause 7.6). The list can only include individual SS-Codes that were sent in the service request and SS-Codes for the eMLPP and/or CUG services if the above mentioned conditions, as described in eMLPP Subscription Data and/or CUG information List, are met (that is, eMLPP Subscription Data and/or CUG information List are received). This parameter is used only by the VLR.

¥	29.002 CR 706 #rev 2 [#]	Current version: 4.13.0 [#]					
For <u>HELP</u> or	using this form, see bottom of this page or look at th	he pop-up text over the X symbols.]				
Proposed chang	e affects: UICC apps# ME Radio A	Access Network Core Network	X				
Title:	Correction to Insert Subscriber Data message for	or LCS SS					
Source:	f CN4						
Work item code:	f LCS	<i>Date:</i> ೫ <mark>2/02/04</mark>					
Category:	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier releas B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21,900</u>. 	Release: # Rel-4 Use <u>one</u> of the following releases: 2 (GSM Phase 2) se) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)					

Reason for change: #	Essential Correction						
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it. From Rel-4 onwards, the SGSN supports the LCS SS, so the same mechanics for the VLR need to be applied to the SGSN.						
Summary of change: Ж	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR/SGSN to return those codes in the MAP Insert Subscriber Data Res message if the VLR/SGSN does not support that particular Location Service. To accomplish this in MAP, the receiving entity must not assume that a data overlap has occurred.						
Consequences if % not approved:	Unpredictable behaviour and in the worst case can lead to a complete loss of service for the subscriber in the visited network.						
0							
Other specs #	8.8.1.3 Y N X Other core specifications # CR 23.016-032 X Test specifications # O&M Specifications X O&M Specifications # O&M Specifications						
Other comments: ೫	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR Removed text is shown by "						

The last paragraph in SS-Data List is re-worded to accommodate the changes in the reason for change section. The exact wording from Rel-5 and onwards has been re-used here (seems Rel-4 was previously forgotten to be updated).

8 Mobility services

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8.8 Subscriber management services

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

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8.8.1.2 Service primitives

Table 8.8/1: MAP-INSERT-SUBSCRIBER-DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	С	C(=)		
MSISDN	С	C(=)		
Category	С	C(=)		
Subscriber Status	С	C(=)		
Bearer service List	С	C(=)	С	C(=)
Teleservice List	С	C(=)	С	C(=)
Forwarding information List	С	C(=)		
Call barring information List	С	C(=)		
CUG information List	С	C(=)		
SS-Data List	С	C(=)		
eMLPP Subscription Data	С	C(=)		
MC-Subscription Data	С	C(=)		
Operator Determined Barring General data	С	C(=)	С	C(=)
Operator Determined Barring HPLMN data	С	C(=)		
Roaming Restriction Due To Unsupported	С	C(=)		
Feature	_			
Regional Subscription Data	С	C(=)		
VLR CAMEL Subscription Info	С	C(=)		
Voice Broadcast Data	С	C(=)		
Voice Group Call Data	С	C(=)		
Network access mode	С	C(=)		
GPRS Subscription Data	C	C(=)		
Roaming Restricted In SGSN Due To	C	C(=)		
Unsupported Feature	Ũ	0(-)		
North American Equal Access preferred Carrier	U	C(=)		
Id List	C	•()		
SGSN Camel Subscription Info	С	C(=)		
LSA Information	С	C(=)		
IST Alert Timer	С	C(=)		
SS-Code List			С	C(=)
LMU Identifier	С	C(=)		
LCS Information	С	C(=)		
CS Allocation/Retention priority	С	C(=)		
Super-Charger Supported In HLR	С	C(=)		
Regional Subscription Response			С	C(=)
Supported CAMEL Phases			С	C (=)
User error			U	C(=)
Provider error				0

8.8.1.3 Parameter use

All parameters are described in clause 7.6. The following clarifications are applicable:

Network access mode

This parameter defines if the subscriber has access to MSC/VLR and/or to SGSN. This parameter is used by SGSN and MSC/VLR. In VLR, the parameter is used only as part of Restore Data Procedure and the parameter is not stored in the VLR. This parameter shall always be sent to the SGSN as part of the GPRS subscriber data at GPRS location updating. It shall be sent to the SGSN if it is changed as a result of administrative action.

IMSI

It is only included if the service is not used in an ongoing transaction (e.g. location updating). This parameter is used by the VLR and the SGSN.

<u>MSISDN</u>

It is included either at location updating or when it is changed. The MSISDN sent shall be the basic MSISDN. This parameter is used by the VLR and the SGSN.

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SS-Data List

A list of Extensible SS-Data parameters (Extensible SS-Data is defined in clause 7.6). It is sent for any other supplementary service than Call Forwarding, Call Barring, CUG and eMLPP either at location updating or at restoration or when they are changed. Each SS-Data parameter shall be treated independently of all other parameters in the primitive.

The Extensible SS-Data shall include the SS-Code for an individual supplementary service.

The Extensible SS-Data shall contain an Extensible SS-Status parameter and any subscription options that are applicable to the service defined by the SS-Code.

The SS-Data may include a Basic Service Group List. This shall be interpreted according to the rules in clause 8.8.1.4.

If the VLR receives an Indication containing any supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back).

This parameter is used by the SGSN only for LCS. If the SGSN receives an Indication containing any LCS related supplementary service codes (either LCS related or not) which it does not support/allocate then it discards them returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back). SS-codes not related to the supported LCS capability set shall be discarded.

. . .

LCS Information

This parameter provides the following LCS related information for an MS subscriber:

- list of GMLCs in the HPLMN;
- privacy exception list;
- MO-LR list.

At restoration and location updating, the HLR shall include the complete LCS data of the subscriber.

When there is a change in LCS subscriber data the HLR shall include at least the new and/or modified LCS data. LCS data that is not modified need not be included.

The VLR/SGSN shall keep any previously stored LCS Information that is not included in an Insert Subscriber Data operation.

If the VLR/SGSN detects that there is overlapping in the LCS information received within a dialogue, it shall send the error Unexpected Data Value. <u>However</u>, if the VLR receives the LCS code in both the LCS Information and the <u>SS-Data List</u>, then the VLR shall not interpret this as overlapping data.

Super-Charger Supported In HLR

This parameter is used by the HLR to indicate support for the Super-Charger functionality. If this parameter is present it shall include an indication of the age of the subscription data stored in the HLR.

If this parameter is absent then the HLR does not support the Super-Charger functionality.

SS-Code List

The list of SS-Code parameters for the services that are provided to a subscriber but are not supported/allocated by the VLR (SS-Code is defined in clause 7.6). The list can only include individual SS-Codes that were sent in the service request_andFor the VLR, this list can also include SS-Codes for the eMLPP and/or CUG services if the above mentioned conditions, as described in eMLPP Subscription Data and/or CUG information List, are met (that is, eMLPP Subscription Data and/or CUG information List are received). This parameter is used only by-only the VLR.

CHANGE REQUEST								
¥		29.002 CR 707 #re	ev <mark>2</mark>	Ħ	Current vers	^{ion:} 5.8.0	H	
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.								
Proposed change affects: UICC apps# ME Radio Access Network Core Network X								
Title:	ж	Correction to Insert Subscriber Data	a messag	<mark>e for</mark>	LCS SS			
Source:	ж	CN4						
Work item code:	: H	LCS			<i>Date:</i> ೫	2/02/04		
Category:	ж	 F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories be found in 3GPP <u>TR 21.900</u>. 	n earlier re e) Jories can	eleas	Release: ¥ Use <u>one</u> of 2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	Rel-5 the following rel (GSM Phase 2, (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)	leases:)))	

Reason for change: ೫	Essential Correction					
	Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support it. From Rel-4 onwards, the SGSN supports the LCS SS, so the same mechanics for the VLR need to be applied to the SGSN.					
Summary of change: # Allow the LCS SS codes to be transported both in the SS-data list IE and in LCS Information IE in the MAP Insert Subscriber Data Arg message, which turn, enables the pre-R98 VLR/SGSN to return those codes in the MAP Insert Subscriber Data Res message if the VLR/SGSN does not support that part Location Service. To accomplish this in MAP, the receiving entity must not assume that a data overlap has occurred.						
Concorrigences if 9	Unpredictable behaviour and in the warst appear and load to a complete load of					
not approved:	service for the subscriber in the visited network					
Clauses affected: #	8.8.1.3					
Other specs ℜ affected:	Y N X Other core specifications # CR 23.016-033 X Test specifications # O&M Specifications X O&M Specifications # O&M Specifications					
Other comments: ೫	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR. Removed text is shown by "".					

8 Mobility services

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8.8 Subscriber management services

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

. . .

8.8.1.2 Service primitives

Table 8.8/1: MAP-INSERT-SUBSCRIBER-DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	С	C(=)		
MSISDN	С	C(=)		
Category	С	C(=)		
Subscriber Status	С	C(=)		
Bearer service List	С	C(=)	С	C(=)
Teleservice List	С	C(=)	С	C(=)
Forwarding information List	С	C(=)		
Call barring information List	С	C(=)		
CUG information List	С	C(=)		
SS-Data List	С	C(=)		
eMLPP Subscription Data	С	C(=)		
MC-Subscription Data	С	C(=)		
Operator Determined Barring General data	С	C(=)	С	C(=)
Operator Determined Barring HPLMN data	С	C(=)		
Roaming Restriction Due To Unsupported	С	C(=)		
Feature				
Regional Subscription Data	С	C(=)		
VLR CAMEL Subscription Info	С	C(=)		
Voice Broadcast Data	С	C(=)		
Voice Group Call Data	С	C(=)		
Network access mode	С	C(=)		
GPRS Subscription Data	С	C(=)		
Roaming Restricted In SGSN Due To	С	C(=)		
Unsupported Feature				
North American Equal Access preferred Carrier	U	C(=)		
Id List				
SGSN CAMEL Subscription Info	С	C(=)		
LSA Information	С	C(=)		
IST Alert Timer	С	C(=)		
SS-Code List			С	C(=)
LMU Identifier	С	C(=)		
LCS Information	С	C(=)		
CS Allocation/Retention priority	С	C(=)		
Super-Charger Supported In HLR	С	C(=)		
Regional Subscription Response			C	C(=)
Supported CAMEL Phases			С	C (=)
Offered CAMEL 4 CSIs			C	C (=)
User error			U	C(=)
Provider error				0

8.8.1.3 Parameter use

All parameters are described in clause 7.6. The following clarifications are applicable:

Network access mode

This parameter defines if the subscriber has access to MSC/VLR and/or to SGSN. This parameter is used by SGSN and MSC/VLR. In VLR, the parameter is used only as part of Restore Data Procedure and the parameter is not stored in the VLR. This parameter shall always be sent to the SGSN as part of the GPRS subscriber data at GPRS location updating. It shall be sent to the SGSN if it is changed as a result of administrative action.

IMSI

It is only included if the service is not used in an ongoing transaction (e.g. location updating). This parameter is used by the VLR and the SGSN.

<u>MSISDN</u>

It is included either at location updating or when it is changed. The MSISDN sent shall be the basic MSISDN. This parameter is used by the VLR and the SGSN.

. . .

SS-Data List

A list of Extensible SS-Data parameters (Extensible SS-Data is defined in clause 7.6). It is sent for any other supplementary service than Call Forwarding, Call Barring, CUG and eMLPP either at location updating or at restoration or when they are changed. Each SS-Data parameter shall be treated independently of all other parameters in the primitive.

The Extensible SS-Data shall include the SS-Code for an individual supplementary service.

The Extensible SS-Data shall contain an Extensible SS-Status parameter and any subscription options that are applicable to the service defined by the SS-Code.

The SS-Data may include a Basic Service Group List. This shall be interpreted according to the rules in clause 8.8.1.4.

If the VLR receives an Indication containing any supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back).

This parameter is used by the SGSN only for LCS. If the SGSN receives an Indication containing any LCS related supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back). SS-codes not related to the supported LCS capability set shall be discarded.

. . .

LCS Information

This parameter provides the following LCS related information for an MS subscriber:

- list of GMLCs in the HPLMN;
- privacy exception list;
- MO-LR list.

At restoration and location updating, the HLR shall include the complete LCS data of the subscriber.

When there is a change in LCS subscriber data the HLR shall include at least the new and/or modified LCS data. LCS data that is not modified need not be included.

The VLR/SGSN shall keep any previously stored LCS Information that is not included in an Insert Subscriber Data operation.

If the VLR/SGSN detects that there is overlapping in the LCS information received within a dialogue, it shall send the error Unexpected Data Value. <u>However</u>, if the VLR receives the LCS code in both the LCS Information and the <u>SS-Data List</u>, then the VLR shall not interpret this as overlapping data.

Super-Charger Supported In HLR

This parameter is used by the HLR to indicate support for the Super-Charger functionality. If this parameter is present it shall include an indication of the age of the subscription data stored in the HLR.

If this parameter is absent then the HLR does not support the Super-Charger functionality.

SS-Code List

The list of SS-Code parameters for the services that are provided to a subscriber but are not supported/allocated by the VLR (SS-Code is defined in clause 7.6). The list can only include individual SS-Codes that were sent in the service request_andFor the VLR, this list can also include SS-Codes for the eMLPP and/or CUG services if the above mentioned conditions, as described in eMLPP Subscription Data and/or CUG information List, are met (that is, eMLPP Subscription Data and/or CUG information List are received). This parameter is used only by only the VLR.

CHANGE REQUEST							CR-Form-v7			
¥		<mark>29.002</mark> CR	708	жrev	2	ж	Current vers	ion: 6.4	I.0	ж
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.									nbols.	
Proposed change affects: UICC apps# ME Radio Access Network Core Network X										
Title:	Ж	Correction to I	nsert Subscribe	r Data n	lessag	e for	LCS SS			
Source:	ж	CN4								
Work item code:	ж	LCS					Date: ೫	2/02/04		
Category:	۲ ۲ ۲	F Use <u>one</u> of the fo F (correction A (correspo B (addition C (functiona D (editorial Detailed explanat	llowing categories n) nds to a correctic of feature), al modification of the modification) tions of the above 2 <u>TR 21.900</u> .	s: on in an e feature) e categori	a <i>rlier re</i> es can	elease	Release: ¥ Use <u>one</u> of 2 9) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	Rel-6 the followin (GSM Phas (Release 1 (Release 1 (Release 1 (Release 4 (Release 5 (Release 6	g rele se 2) 996) 997) 998) 999) () ()	ases:

Reason for change: ¥	Essential Correction						
Currently the mechanism by which the VLR can notify the HLR that the VLR does not support Location Services (LCS) is not clearly standardized. Due to current Supplementary Services (SS) procedures, if the HLR does not get informed that an SS is not supported, it assumes that the VLR does support From Rel-4 onwards, the SGSN supports the LCS SS, so the same mechanism of the VLR have to be applied to the SGSN.							
Summary of change: Ж	Allow the LCS SS codes to be transported both in the SS-data list IE and in the LCS Information IE in the MAP Insert Subscriber Data Arg message, which in turn, enables the pre-R98 VLR/SGSN to return those codes in the MAP Insert Subscriber Data Res message if the VLR/SGSN does not support that particular Location Service. To accomplish this in MAP, the receiving entity must not assume that a data overlap has occurred.						
• • • •							
Consequences if #	Unpredictable behaviour and in the worst case can lead to a complete loss of						
not approved:	service for the subscriber in the visited network.						
Clauses offented:	0.04.0						
Clauses affected: ж	0.0.1.3						
Other specs भ affected:	Y N X Other core specifications # X Test specifications # X O&M Specifications #						
Other comments: ೫	Some contents of section 8.8.1.3 are not shown to enhance the readbility of this CR. Removed text is shown by "".						

8 Mobility services

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8.8 Subscriber management services

8.8.1 MAP-INSERT-SUBSCRIBER-DATA service

. . .

8.8.1.2 Service primitives

Table 8.8/1: MAP-INSERT-SUBSCRIBER-DATA

Parameter name	Request	Indication	Response	Confirm
Invoke Id	М	M(=)	M(=)	M(=)
IMSI	С	C(=)		
MSISDN	С	C(=)		
Category	С	C(=)		
Subscriber Status	С	C(=)		
Bearer service List	С	C(=)	С	C(=)
Teleservice List	С	C(=)	С	C(=)
Forwarding information List	C	C(=)		
Call barring information List	С	C(=)		
CUG information List	С	C(=)		
SS-Data List	С	C(=)		
eMLPP Subscription Data	С	C(=)		
MC-Subscription Data	С	C(=)		- / >
Operator Determined Barring General data	C	C(=)	С	C(=)
Operator Determined Barring HPLMN data	C	C(=)		
Roaming Restriction Due To Unsupported	С	C(=)		
Feature	<u> </u>	e ()		
Regional Subscription Data	C	C(=)		
VLR CAMEL Subscription Info	C	C(=)		
Voice Broadcast Data	C	C(=)		
Voice Group Call Data	C	C(=)		
Network access mode	С	C(=)		
	6			
GPRS Subscription Data	C	C(=)		
Roaming Restricted In SGSN Due To	C	C(=)		
Unsupported Feature		$\mathbf{O}(\mathbf{x})$		
North American Equal Access preferred Carrier	U	C(=)		
IO LIST	0	$\mathbf{C}(\mathbf{x})$		
		C(=)		
LSA Iniomation	C	C(=)		
SS Code List	C	C(=)	C	C(-)
SS-Code List	C	C(-)	C	0(=)
	C	C(=)		
CS Allocation/Potentian priority	C	C(=)		
Super Charger Supported In HI P	C	C(=)		
Regional Subscription Response	C	0(=)	C	C(-)
Supported CAMEL Deases			C	C(=)
Offered CAMEL / CSIC			C	C (=)
Lisor arror			U U	C(=)
Provider error			0	0
				0

8.8.1.3 Parameter use

All parameters are described in clause 7.6. The following clarifications are applicable:

Network access mode

This parameter defines if the subscriber has access to MSC/VLR and/or to SGSN. This parameter is used by SGSN and MSC/VLR. In VLR, the parameter is used only as part of Restore Data Procedure and the parameter is not stored in the VLR. This parameter shall always be sent to the SGSN as part of the GPRS subscriber data at GPRS location updating. It shall be sent to the SGSN if it is changed as a result of administrative action.

IMSI

It is only included if the service is not used in an ongoing transaction (e.g. location updating). This parameter is used by the VLR and the SGSN.

<u>MSISDN</u>

It is included either at location updating or when it is changed. The MSISDN sent shall be the basic MSISDN. This parameter is used by the VLR and the SGSN.

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SS-Data List

A list of Extensible SS-Data parameters (Extensible SS-Data is defined in clause 7.6). It is sent for any other supplementary service than Call Forwarding, Call Barring, CUG and eMLPP either at location updating or at restoration or when they are changed. Each SS-Data parameter shall be treated independently of all other parameters in the primitive.

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The Extensible SS-Data shall contain an Extensible SS-Status parameter and any subscription options that are applicable to the service defined by the SS-Code.

The SS-Data may include a Basic Service Group List. This shall be interpreted according to the rules in clause 8.8.1.4.

If the VLR receives an Indication containing any supplementary service codes which it does not support/allocate it returns them to the HLR in the parameter SS-Code List and therefore discards the unsupported service codes received (no error is sent back).

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. . .

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