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

Source: TSG CN WG4

Title: CRs on R99 TEI

Agenda item: 7.22

Document for: APPROVAL

Introduction:

This document contains 8 CRs on R99 Work Item "TEI", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #15 for approval.

Spec	CR	Re	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.018	101	1	N4-020261	R99	MSISDN in Provide Roaming Number in case of MSP	F	3.10.0
23.018	092	2	N4-020262	Rel-4	MSISDN in Provide Roaming Number in case of MSP	Α	4.5.0
23.018	093	1	N4-020232	Rel-5	MSISDN in Provide Roaming Number in case of MSP	Α	5.2.0
23.016	022	2	N4-020252	R99	Clarification on overlapping data	F	3.7.0
23.016	023	2	N4-020253	Rel-4	Clarification on overlapping data	Α	4.0.0
23.018	086	2	N4-020233	R99	Handling of CUG calls in non-supporting networks	F	3.10.0
23.018	087	2	N4-020234	Rel-4	Handling of CUG calls in non-supporting networks	Α	4.5.0
23.018	880	2	N4-020235	Rel-5	Handling of CUG calls in non-supporting networks	Α	5.2.0

3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

		CHAN	GE REQ	UEST		C	R-Form-v6.1
*	23.016	CR 022	жrev	2 *	Current vers	ion: 3.7.0	¥
For <u>HELP</u> on u	ising this for	m, see bottom o	of this page or	look at the	pop-up text	over the # syn	nbols.
Proposed change	affects:	(U)SIM	ME/UE	Radio Aco	cess Network	Core Ne	twork X
Title: 第	Clarification	on on overlappi	ng data				
Source: #	CN4						
Work item code: ₩	TEI				Date: ♯	2002-01-30	
Category:	Use <u>one</u> of F (corn A (corn B (add C (fun D (edit Detailed exp	the following cate	rection in an ear on of feature)) above categories		2) R96 R97 R98 R99 REL-4	R99 the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	ases:
Reason for change	which The	se of features no may overlap wourrent text of T	vith data previo S 23.016 state	ously sent i	in the same or rlapping shou	dialogue. uld be avoided.	
Summary of chang	ye:	tion of text to ind	dicate that in s	ome cases	s overlapping	cannot be avo	ided.
Consequences if not approved:	₩ Poss	ible interworkin	g problems.				
Clauses affected:	₩ <mark>§ 4.3</mark>	.2					
Other specs affected:	Te	ther core specification M Specification	S				
Other comments:	ж						

How to create CRs using this form:

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

4.3.2 Order of information received by the VLR or the SGSN

Normally, the order of information sent and received shall be identical. However, if subscriber data are sent distributed over several messages within a dialogue in exceptional cases the order of these messages may change during transmission.

If the order of information received violates the rules given above, the VLR or the SGSN has the following options:

- the VLR or the SGSN rejects all messages which cannot be processed due to violation of these rules. In this case, checking of missing mandatory parameters is done for each message;
- the VLR or the SGSN processes and accepts all received messages although rules are violated. In this case, checking of missing mandatory parameters is done after the last message i.e. after termination of the dialogue.

Both options may be used in a single implementation. Missing parameters may be detected during the dialogue. For other parameters, the checking is done after termination of the dialogue between the HLR and the VLR or the SGSN.

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3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, FRANCE, 28th Jan. - 1st Feb. 2002

CHANGE REQUEST										CR-Form-v5
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	23	.010	CR 101	ж	rev	1	00	ourrent versi	3.10.	U "
For <u>HELP</u> on us	sing	this form	, see botto	m of this pa	age or	look a	at the	e pop-up text	over the % s	symbols.
Proposed change a	affec	ts: ¥	(U)SIM	ME/U	E	Radi	o Ac	cess Network	Core	Network X
Title: #	MS	ISDN in	Provide R	oaming Nu	mber ir	case	e of N	MSP		
Source: #	CN	4								
Work item code: ₩	TE							Date: ₩	29-01-2002	2
Category:	Deta	one of the F (correct A (correct B (additi C (functi D (editor iled expla	sponds to a on of featur onal modific ial modifica	categories: correction ir e), cation of feat tion) he above ca	ure)		lease	2 R96 R97 R98 R99 REL-4	REL-99 he following r (GSM Phase (Release 199 (Release 199 (Release 199 (Release 199 (Release 4) (Release 5)	2) 6) 7) 8)
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		service subscrik The VLI terminal basic or in Prov Thus in	described per received should call, be correspide Roami	in 3GPP TS s an MT ca contact the g ut the VLR conding to the ng Number	S 23.09 all gsmSC does n ne defa only if	F usiot have the second of the	ng th ve th ofile, s to b	e has VT-CSI see MSISDN dialis MSISDN are since the MS ee stored in the vice, the VLR	alled for this alled for this and can only SISDN may be CDR.	VLR. The use the pe present
Summary of chang	re: ₩	Add so Numbe		conditions f	or the p	orese	nce	of MSISDN in	Provide Ro	aming
Consequences if not approved:	¥	informa	ation for th	e default pr	ofile fo	r a sı	ibsci	II, the gsmSC riber having the ss valuable for	ne MSP serv	
Clauses affected:	ж	8.3.1								
Other specs affected:	ж	Tes	er core spe t specificat M Specifica		ж					
Other comments:	¥									

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**** FIRST MODIFIED SECTION ****

8.3.1 Provide Roaming Number

The following information elements are required:

Information element name	Required	Description
IMSI	М	IMSI of the B subscriber (see 3GPP TS 23.003 [5]).
MSC number	М	E.164 number which identifies VMSCB (see 3GPP TS 23.003 [5]).
MSISDN	0 <u>C</u>	E.164 number which identifies the B subscriber.
		It shall be present if the following 3 conditions are all satisfied:
		the MSISDN is different from the basic MSISDN
		the subscriber has VT-CSI stored in HLR
		3. the VLR has indicated support for CAMEL Phase 3 or later
		It Mmay be present if the HLR requires it to be included in the call
		data record.
LMSI	С	Local Mobile Subscriber Identity. Shall be present if the LMSI was
COM because a made life.	0	sent to HLRB at location updating.
GSM bearer capability	С	Information to define the GSM bearer capability required for the
		call. For alternate speech/fax, alternate speech/data or speech followed by data calls this information element shall contain two
		GSM bearer capabilities, as specified in 3GPP TS 24.008. May be
		present if the HLR can determine the required GSM bearer
		capability from ISDN compatibility information received in the Send
		Routeing Info message, or from the MSISDN if a multi-numbering
		scheme is used; otherwise shall be absent. If the ISDN BC and
		ISDN LLC IEs are present, the GSM bearer capability IE shall be
		absent.
ISDN BC	С	ISDN bearer capability. May be present if the HLR received it in
		the Send Routeing Info message, otherwise shall be absent. If the
		GSM bearer capability IE is present, the ISDN BC IE shall be
		absent.
ISDN LLC	С	ISDN lower layer compatibility. May be present if the HLR received
		it in the Send Routeing Info message, otherwise shall be absent. If
		the GSM bearer capability IE is present, the ISDN LLC IE shall be
100011110		absent.
ISDN HLC	С	ISDN higher layer compatibility. Shall be present if the HLR
		received it in the Send Routeing Info message, otherwise shall be
Alamtia a Datta ma		absent.
Alerting Pattern	С	Shall be present if the HLR has determined an alerting category or an alerting level for the MT call configuration; otherwise shall be
		absent.
Pre-paging supported	С	Shall be present if the HLR has determined that pre-paging is
l re-paging supported		supported in the GMSC and the HLR, otherwise shall be absent.
1	1	purported in the divide and the right, otherwise shall be absent.

****	END OF MODIFICATIONS	****

3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

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			Cr	TANG	EKE	QU	E31				
*	23	.018	CR 0	93	ж re	٧ '	1 *	Current ver	rsion:	5.2.0	*
For HELP on us	sing t	his forr	n, see bo	ottom of th	his page	or lo	ok at th	ne pop-up tex	kt over	the # sy	mbols.
Proposed change a	affec	ts: #	(U)SIN	M N	/IE/UE	R	adio A	ccess Netwo	ork	Core No	etwork X
Title: #	MS	ISDN ii	n Provide	Roamin	g Numbe	r in c	ase of	MSP			
Source: #	CN	4									
Work item code: ₩	TEI	4						Date:	£ 29-	01-2002	
Category:	Use Deta	F (corre A (corre B (addi C (fund D (edite	ection) esponds t ition of fea ctional modi orial modi	dification of fication) of the above	tion in an			2	of the fo (GSN (Rele (Rele (Rele (Rele	L-5 Ilowing rel 1 Phase 2) ase 1996) ase 1998) ase 1999) ase 4) ase 5)	
Reason for change	: X	Suppo	se that a	subscribe	er is pro	/ided	with th	ne Multiple S	ubscrib	er Profile	(MSP)
		service subscr The VI termina basic of in Pro	e describer received. A should atting call one correction order to order t	ed in 3GF sives an M d contact , but the \ esponding uming Nur	The gsm the gsm VLR doe to the d mber onl	SCF s not efault	and husing thave to has to	the MSISDN his MSISDN e, since the Notes to	dialled and ca //SISDI the CE	for this an only us N may be DR.	LR. The se the present
Summary of chang	ıe: ₩	Add s		re condition	ons for t	ne pre	esence	of MSISDN	in Pro	vide Roar	ming
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Clauses affected:	ж	8.3.1									
Other specs affected:	*	Te	st specifi	specificat cations fications	tions	*					
Other comments:	ж										

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GSM bearer capability	С	Information to define the GSM bearer capability required for the call. For alternate speech/fax, alternate speech/data or speech followed by data calls this information element shall contain two GSM bearer capabilities, as specified in 3GPP TS 24.008. May be present if the HLR can determine the required GSM bearer capability from ISDN compatibility information received in the Send Routeing Info message, or from the MSISDN if a multi-numbering scheme is used; otherwise shall be absent. If the ISDN BC and ISDN LLC IEs are present, the GSM bearer capability IE shall be absent.
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ISDN HLC	С	ISDN higher layer compatibility. Shall be present if the HLR received it in the Send Routeing Info message, otherwise shall be absent.
Alerting Pattern	С	Shall be present if the HLR has determined an alerting category or an alerting level for the MT call configuration; otherwise shall be absent.
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**** END OF MODIFICATION	ONS ****
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3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

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For <u>HELP</u> on u	sing t	this forr	n, see bo	ottom of t	this page	or lo	ook at	the	pop-up tex	t over	the ₩ s	ymbo	ls.
Proposed change a	affec	ts: ૠ	(U)SIN	/ <u> </u>	ME/UE	F	Radio	Acc	cess Netwo	rk	Core I	Netwo	ork X
Title:	MS	ISDN ir	n Provide	e Roamin	ng Numb	er in	case	of M	1SP				
Source: #	CN	4											
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		service subscr The VL termina basic of in Proof	e describer received. R shoult atting call one correction order to order t	ed in 3G eives an I d contact , but the esponding aming Nu	PP TS 2 MT call t the gsm VLR doe g to the c mber on	3.097 nSCF es no defau ly if it	7, and using t have tlt prof thas t	the left the state of the state	has VT-CS e MSISDN s MSISDN since the M e stored in vice, the VL	dialled and ca ISISDI	ed in the for this an only t N may b DR.	VLR. use th e pre	The e sent
Summary of chang	ıe: ₩	Add s Numb		re condit	ions for t	the p	resen	ce o	of MSISDN	in Pro	vide Ro	aming	ı
Consequences if not approved:	¥	inform	nation fo	r the defa	ault profil	le for	a sub	scri	, the gsmS ber having s valuable f	the M	SP serv		n
Clauses affected:	¥	8.3.1											
Other specs affected:	*	Te	st specifi	specifica cations fications		X							
Other comments:	ж												

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3GPP TSG CN WG4 Meeting #12 Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

		CHAN	GE REQ	UEST		CF	R-Form-v6.1
*	23.016	CR 023	≋ rev	2 # C	urrent versi	on: 4.0.0	ж
For <u>HELP</u> on u	sing this for	m, see bottom o	of this page or	look at the p	oop-up text o	over the % sym	bols.
Proposed change	affects: ♯	(U)SIM	ME/UE	Radio Acce	ess Network	Core Net	work X
Title: 第	Clarification	on on overlappii	ng data				
Source: #	CN4						
Work item code: ₩	TEI4				Date: 第	2002-01-30	
Category: 第	F (con A (con B (add C (fun D (edi Detailed exp	the following cate rection) responds to a cor lition of feature), ctional modification of the a corial modification of the corial modificati	rection in an ear on of feature)) above categories	lier release)	2 (R96 (R97 (R98 (R99 (REL-4 (Rel-4 he following relea (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	ases:
Reason for change	whic	se of features no may overlap wourrent text of T	vith data previo	usly sent in	the same d	ialogue.	data,
Summary of chang	ye:	tion of text to ind	dicate that in s	ome cases o	overlapping	cannot be avoi	ded.
Consequences if not approved:	₩ Poss	ible interworking	g problems.				
Clauses affected:	ж <mark>§4.3</mark>	.2					
Other specs affected:	Te	ther core specification M Specification	S				
Other comments:	¥						

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3GPP TSG-CN4 Meeting #12 Sophia Antipolis, France, 28th Januray – 1st February 2002

CHANGE REQUEST						
*	23.018 CR 086 # rev 2 # Current version: 3.10.0 #					
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.						
Proposed change affects: (U)SIM						
Title: 第	Handling of CUG calls in non-supporting networks					
Source: #	CN4					
Work item code: ₩	TEI Date: 第 31/1/02					
Category: #	F Essential correction Release: # R99					
Reason for change	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Refease 1999) Cetailed explanations of the above categories can curious for feature of found in 3GPP TR 21.900. TS 23.085 subclause 1.1.4.1 requires that if a GSM switching entity receives a curious form of the above categories can curious form of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) TS 23.085 subclause 1.1.4.1 requires that if a GSM switching entity receives a curious form of the following form of the followin					
Summary of chang	Added a new macro in the GMSC to check CUG support and if the call can go ahead (i.e. if CUG info is present and the Outgoing Access indicator is set, the call can go ahead, otherwise it can not).					
Consequences if not approved:	₩ Possible incorrect handling of CUG calls.					
Clauses affected:	光 7.2.1, 8.2.1					
Other specs affected:	# Other core specifications # Test specifications O&M Specifications					
Other comments:	%					

**** First Modified Section ****

7 Functional requirements of network entities

7.2 Retrieval of routeing information for MT call

7.2.1 Functional requirements of GMSC

. .

7.2.1.8 Process MT_CF_MSC

Sheet 1: the procedure CAMEL_CF_MSC_INIT is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 1, sheet 4: the procedure CAMEL_CF_Dialled_Services is specific to CAMEL phase 3 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 3 or later, processing continues from the "Pass" exit of the test "Result?".

Sheet 1, sheet 3, sheet 4: the procedure CAMEL_OCH_MSC1 is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 2 or later, processing continues from the "Yes" exit of the test "Result=Reconnect?".

Sheet 1: the procedure MOBILE_NUMBER_PORTABILITY_IN_OQoD is specific to Mobile Number Portability; it is specified in 3GPP TS 23.066 [10].

Sheet 1: the procedure CAMEL_Store_Destination_Address is specific to CAMEL phase 3 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC3 is specific to CAMEL phase 1; it is specified in 3GPP TS 23.078 [12].

Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC4 is specific to CAMEL Phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 2: the procedures CAMEL_Start_TNRy and CAMEL_Stop TNRy are specific to CAMEL phase 2 or later; they are specified in 3GPP TS 23.078 [12].

Sheet 2: the procedure CAMEL_CF_MSC_ANSWER is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 2: the procedure UUS MSC Clear UUS is specific to UUS; it is specified in 3GPP TS 23.087 [20].

Sheet 3: the procedure CAMEL_Stop_TNRy is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 3: the processing in the branch beginning with the Int_O_Release input will occur only if the MSC supports CAMEL.

Sheet 4: the input signal TNRy expired and all the subsequent processing are specific to CAMEL phase 2 or later, and will occur only if the GMSC supports CAMEL phase 2 or later. The procedure CAMEL_OCH_MSC2 is specified in 3GPP TS 23.078 [12].

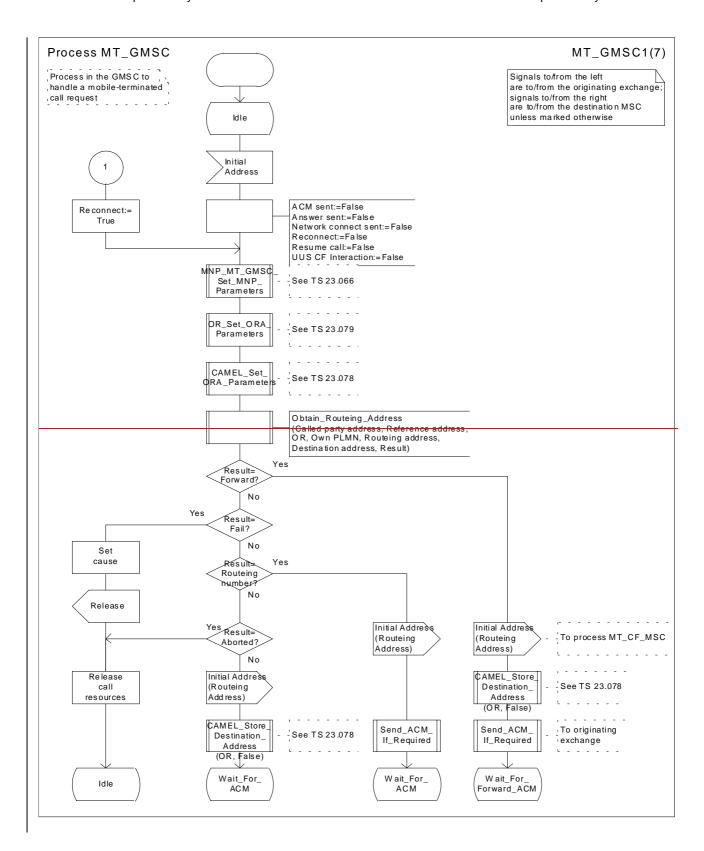
Sheet 5: the procedure CAMEL_OCH_MSC_DISC1 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=CAMEL handling?".

Sheet 5: the procedure CAMEL_OCH_MSC_DISC2 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=Reconnect?" .

Sheet 5: the processing in the branch beginning with the Int_O_Release input will occur only if the MSC supports CAMEL.

Sheet 5: after the process MT_CF_MSC has sent an IAM to the forwarded-to exchange, it acts as a relay for messages received from the parent process and the forwarded-to exchange. Any message other than Address Complete, Connect, Answer or Release causes no change of state in the process MT_GMSC

7.2.1.9 Macro CUG_Support_Check_GMSC



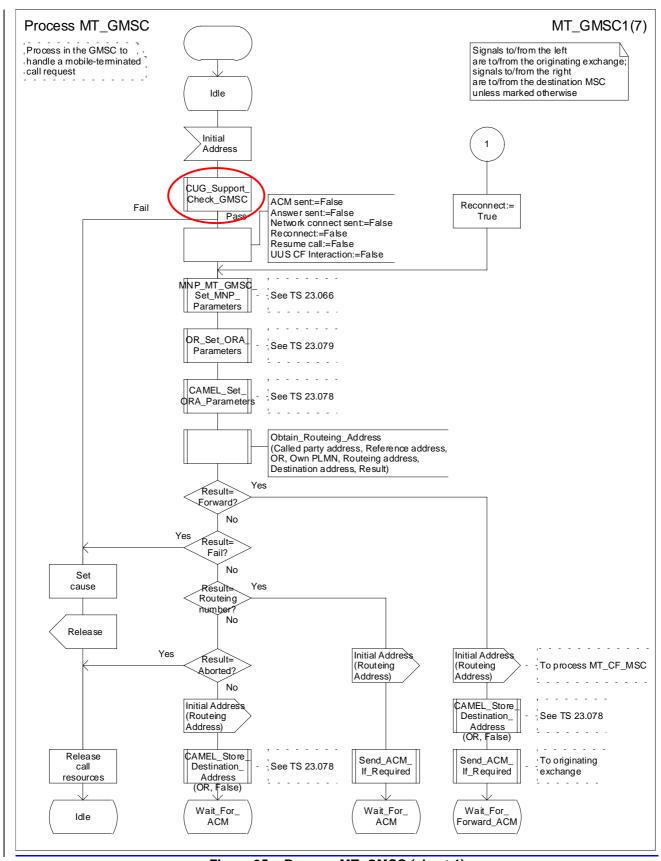


Figure 35a: Process MT_GMSC (sheet 1)

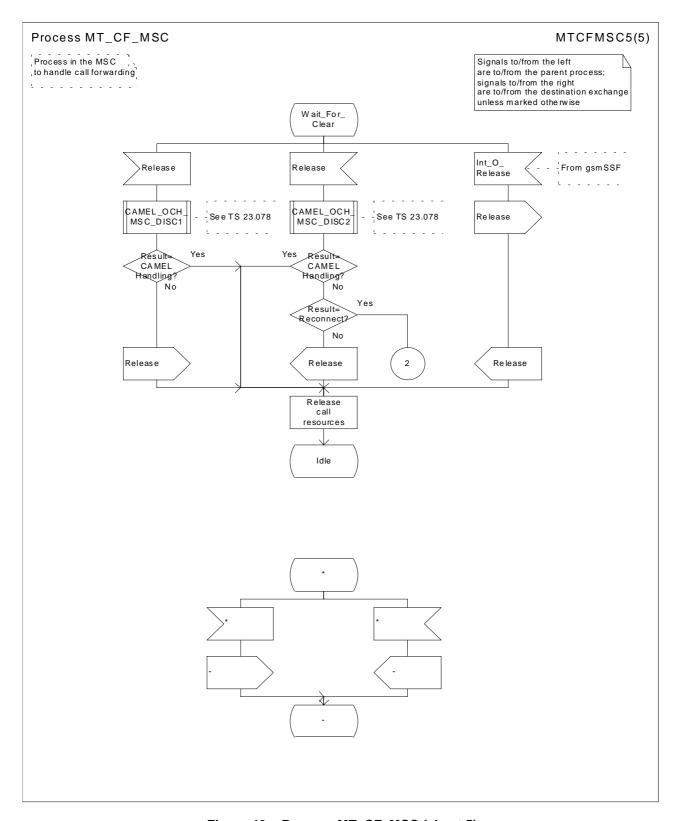


Figure 42e: Process MT_CF_MSC (sheet 5)

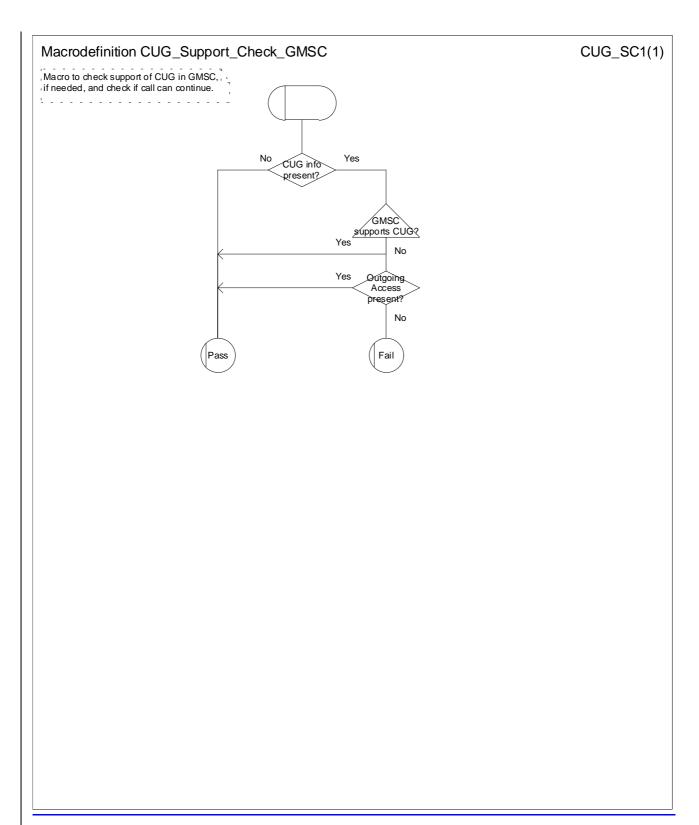


Figure X: Macro CUG Support Check GMSC

**** Next Modified Section ****

7.2.2 Functional requirements of HLR

. . .

7.2.2.3 Procedure Subscription_Check_HLR

It is an implementation option to carry out the check for operator determined barring of incoming calls before the check on provisioning of the requested basic service.

The negative response "Call barred" indicates whether the reason is operator determined barring or supplementary service barring, according to the result returned by the procedure Check_IC_Barring.

The procedure IC_CUG_Check is specific to CUG. If the HLR does not support GUG, processing continues from the "Yes" exit of the test "Result=Call allowed?".

The negative response "CUG reject" indicates whether the reason is:

- Incoming calls barred within CUG;
- Requested basic service violates CUG constraints;
- Subscriber not member of CUG;

according to the cause returned by the procedure IC_CUG_Check.

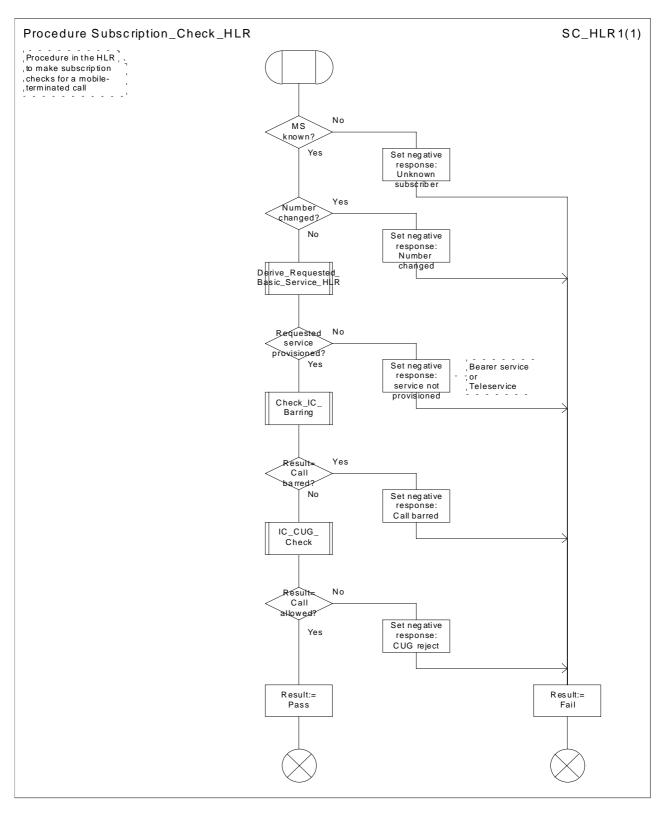
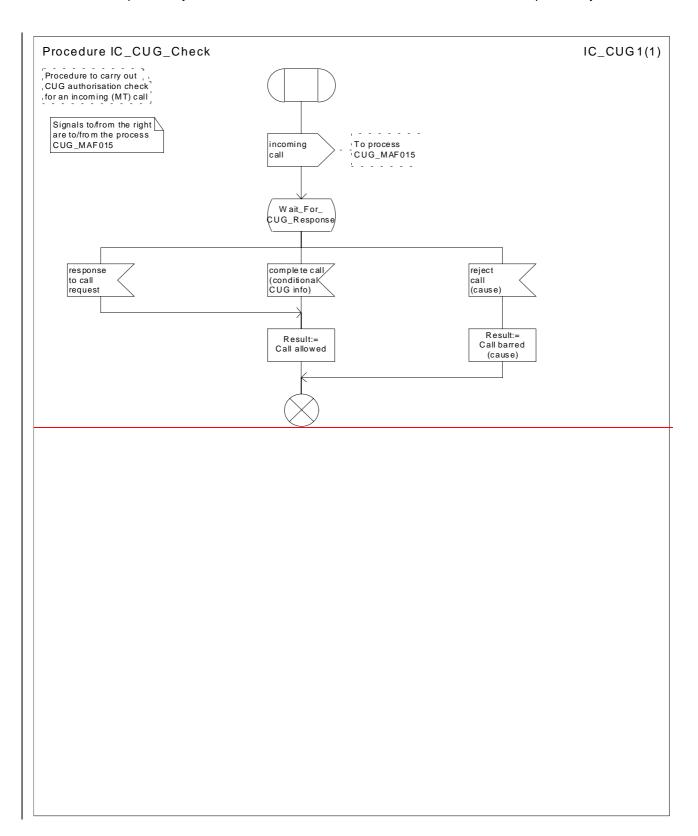


Figure 45: Procedure Subscription_Check_HLR



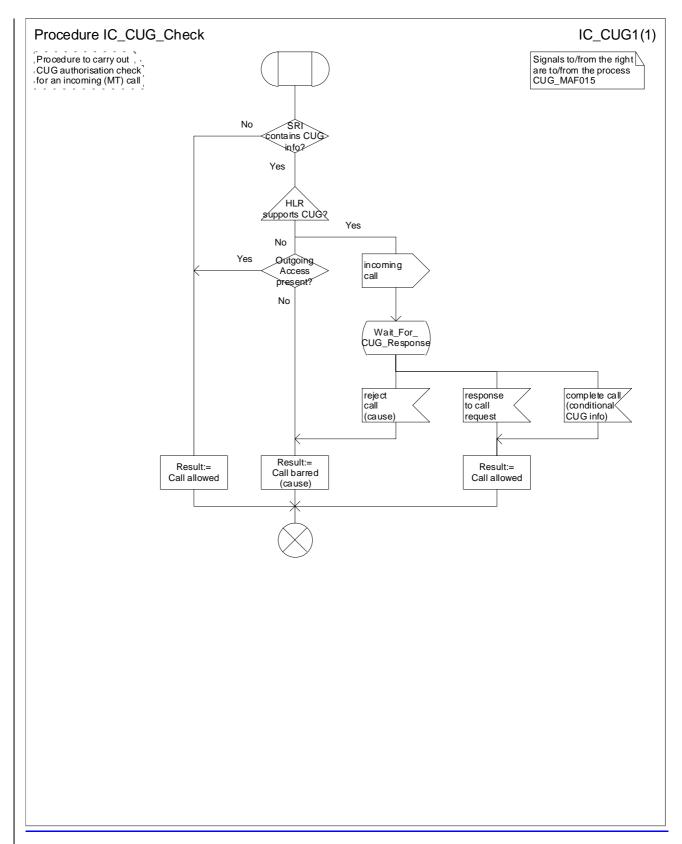


Figure 51: Procedure IC_CUG_Check

**** Last Modified Section ****

8 Contents of messages

8.2 Messages on the C interface (MSC-HLR)

8.2.1 Send Routeing Info

The following information elements are required:

Information element name	Required	Description
MSISDN	М	MSISDN of the B subscriber (see 3GPP TS 23.003 [5]).
Alerting Pattern	С	Shall be present if received in a Connect operation from the gsmSCF; otherwise shall be absent.
CUG interlock	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the HPLMN supports CUG, otherwise shall be absent.
CUG outgoing access	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the HPLMN supports CUG, otherwise shall be absent.
Number of forwarding	С	Number of times the incoming call has already been forwarded. Shall be present if it was received in the IAM; otherwise shall be absent.
ISDN BC	С	ISDN bearer capability. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN LLC	С	ISDN lower layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN HLC	С	ISDN higher layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
Pre-paging supported	С	Shall be present if the GMSC supports pre-paging, otherwise shall be absent.

3GPP TSG-CN4 Meeting #12 Sophia Antipolis, France, 28th Januray – 1st February 2002

CHANGE REQUEST						
*	23.018 CR 087					
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the \$\mathbb{K}\$ symbols.						
Proposed change affects: # (U)SIM ME/UE Radio Access Network Core Network						
Title: 第	Handling of CUG calls in non-supporting networks					
Source: #	CN4					
Work item code: ₩	TEI Date: 31/1/02					
Category: 第	A Release: REL-4					
	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) C (Editorial modification) R (Edease 1998) R (Release 1999) R (Release 1999) R (Elease 5) C (Editorial modification) R (Elease 4) R (Elease 5) C (Editorial modification) R (Elease 5) C (Editorial modification) R (Elease 1999) R (Elease 1998) R (Elease 198) R (Elease 1998) R (Elease 198) R (Elease 198) R (Elease 198) R (Elease	s a ne sived CUG, he				
Summary of change	Added a new macro in the GMSC to check CUG support and if the call can ahead (i.e. if CUG info is present and the Outgoing Access indicator is set, to call can go ahead, otherwise it can not).					
Consequences if not approved:	★ Possible incorrect handling of CUG calls.					
Clauses affected:	% 7.2.1, 8.2.1					
Other specs affected:	# Other core specifications # Test specifications O&M Specifications					
Other comments:	X					

**** First Modified Section ****

7 Functional requirements of network entities

7.2 Retrieval of routeing information for MT call

7.2.1 Functional requirements of GMSC

. .

7.2.1.8 Process MT_CF_MSC

Sheet 1: the procedure CAMEL_CF_MSC_INIT is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 1, sheet 4: the procedure CAMEL_CF_Dialled_Services is specific to CAMEL phase 3 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 3 or later, processing continues from the "Pass" exit of the test "Result?".

Sheet 1, sheet 3, sheet 4: the procedure CAMEL_OCH_MSC1 is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 2 or later, processing continues from the "Yes" exit of the test "Result=Reconnect?".

Sheet 1: the procedure MOBILE_NUMBER_PORTABILITY_IN_OQoD is specific to Mobile Number Portability; it is specified in 3GPP TS 23.066 [10].

Sheet 1: the procedure CAMEL_Store_Destination_Address is specific to CAMEL phase 3 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC3 is specific to CAMEL phase 1; it is specified in 3GPP TS 23.078 [12].

Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC4 is specific to CAMEL Phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 2: the procedures CAMEL_Start_TNRy and CAMEL_Stop TNRy are specific to CAMEL phase 2 or later; they are specified in 3GPP TS 23.078 [12].

Sheet 2: the procedure CAMEL_CF_MSC_ANSWER is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 2: the procedure UUS MSC Clear UUS is specific to UUS; it is specified in 3GPP TS 23.087 [20].

Sheet 3: the procedure CAMEL_Stop_TNRy is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 3: the processing in the branch beginning with the Int_O_Release input will occur only if the MSC supports CAMEL.

Sheet 4: the input signal TNRy expired and all the subsequent processing are specific to CAMEL phase 2 or later, and will occur only if the GMSC supports CAMEL phase 2 or later. The procedure CAMEL_OCH_MSC2 is specified in 3GPP TS 23.078 [12].

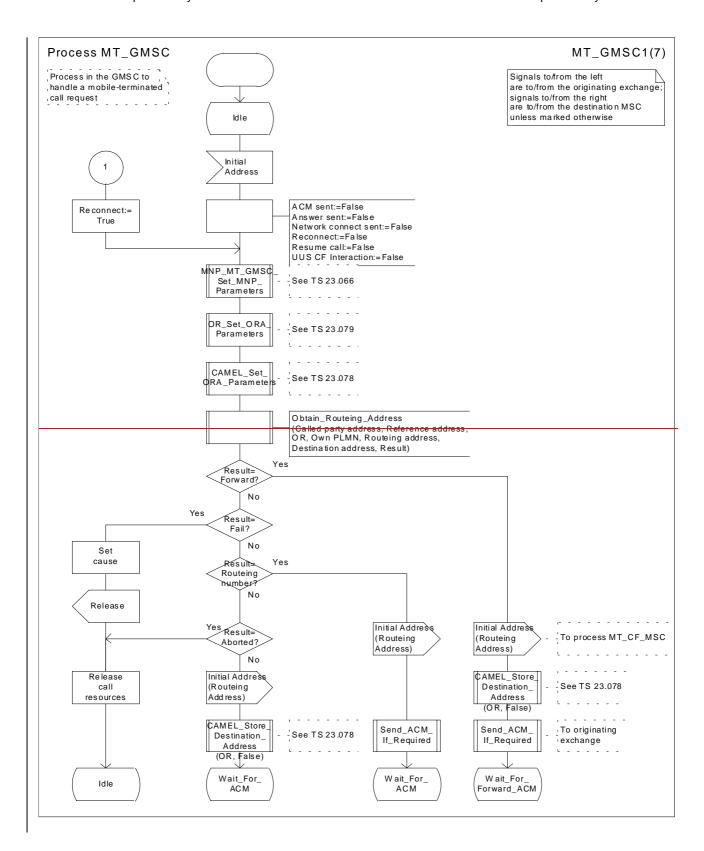
Sheet 5: the procedure CAMEL_OCH_MSC_DISC1 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=CAMEL handling?".

Sheet 5: the procedure CAMEL_OCH_MSC_DISC2 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=Reconnect?" .

Sheet 5: the processing in the branch beginning with the Int_O_Release input will occur only if the MSC supports CAMEL.

Sheet 5: after the process MT_CF_MSC has sent an IAM to the forwarded-to exchange, it acts as a relay for messages received from the parent process and the forwarded-to exchange. Any message other than Address Complete, Connect, Answer or Release causes no change of state in the process MT_GMSC.

7.2.1.9 Macro CUG_Support_Check_GMSC



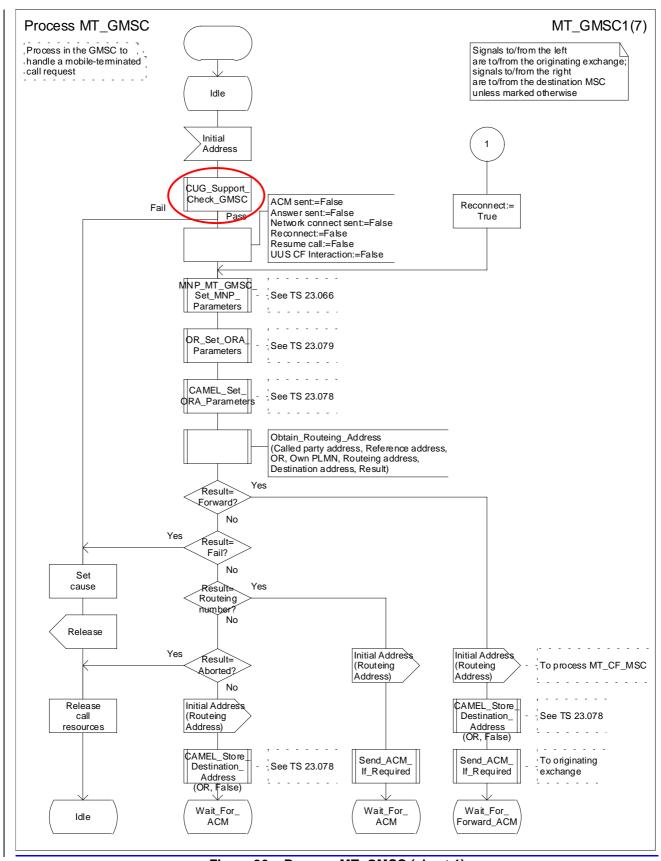


Figure 36a: Process MT_GMSC (sheet 1)

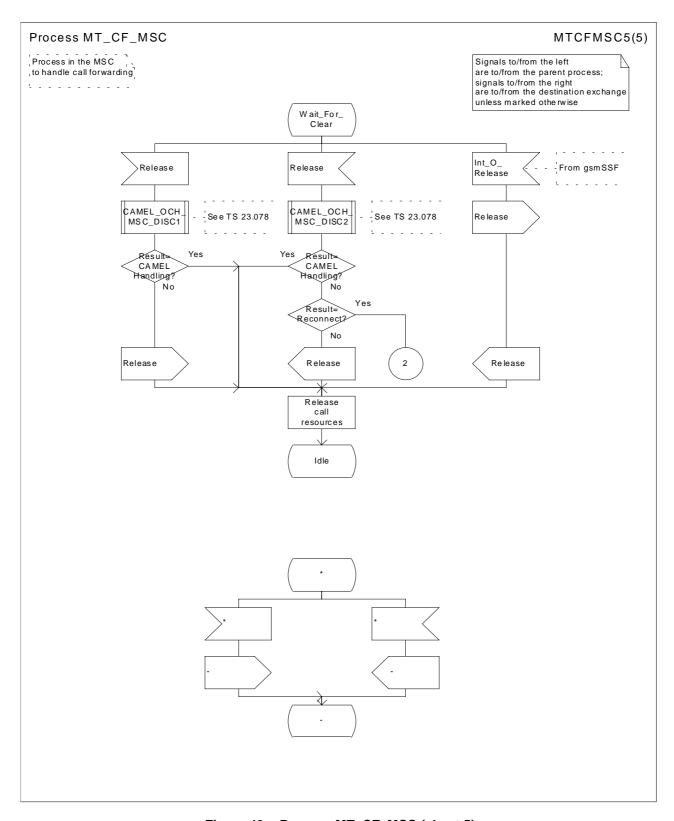


Figure 43e: Process MT_CF_MSC (sheet 5)

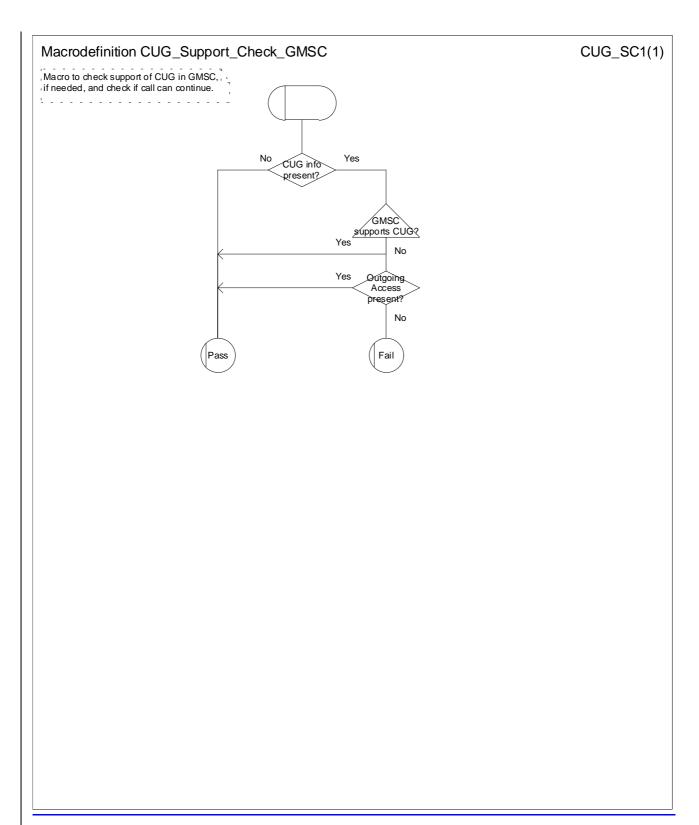


Figure X: Macro CUG Support Check GMSC

**** Next Modified Section ****

7.2.2 Functional requirements of HLR

. . .

7.2.2.3 Procedure Subscription_Check_HLR

It is an implementation option to carry out the check for operator determined barring of incoming calls before the check on provisioning of the requested basic service.

The negative response "Call barred" indicates whether the reason is operator determined barring or supplementary service barring, according to the result returned by the procedure Check_IC_Barring.

The procedure IC_CUG_Check is specific to CUG. If the HLR does not support GUG, processing continues from the "Yes" exit of the test "Result=Call allowed?".

The negative response "CUG reject" indicates whether the reason is:

- Incoming calls barred within CUG;
- Requested basic service violates CUG constraints;
- Subscriber not member of CUG;

according to the cause returned by the procedure IC_CUG_Check.

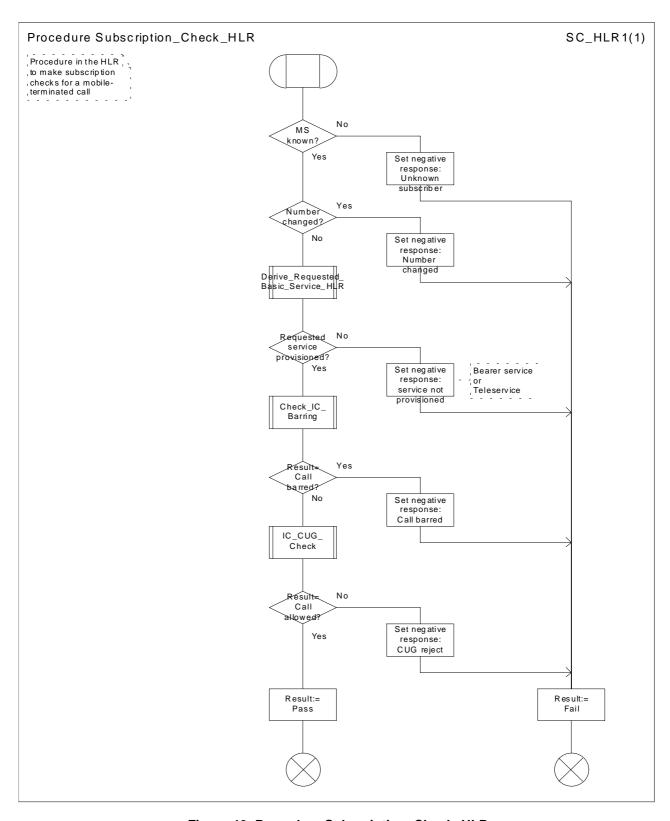
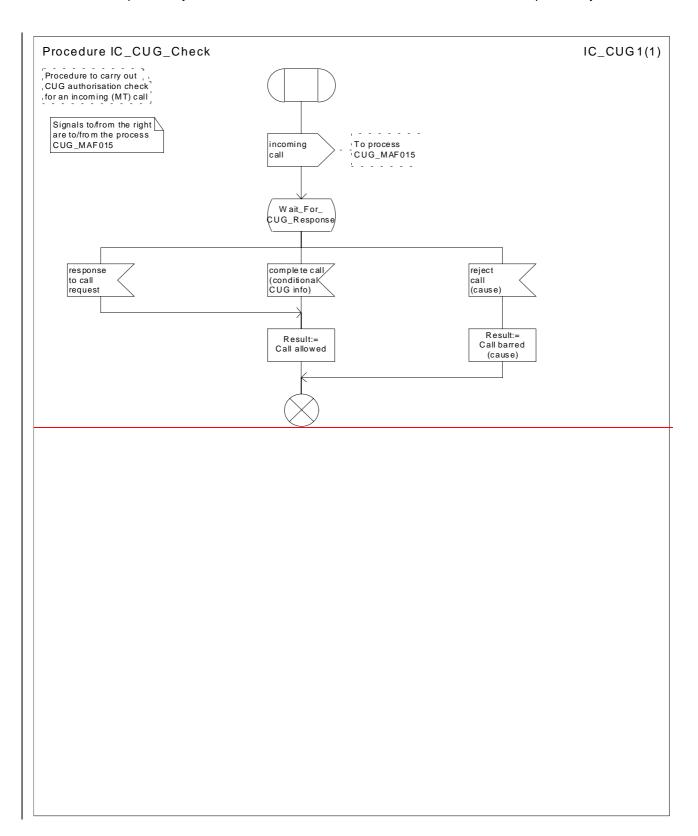


Figure 46: Procedure Subscription_Check_HLR



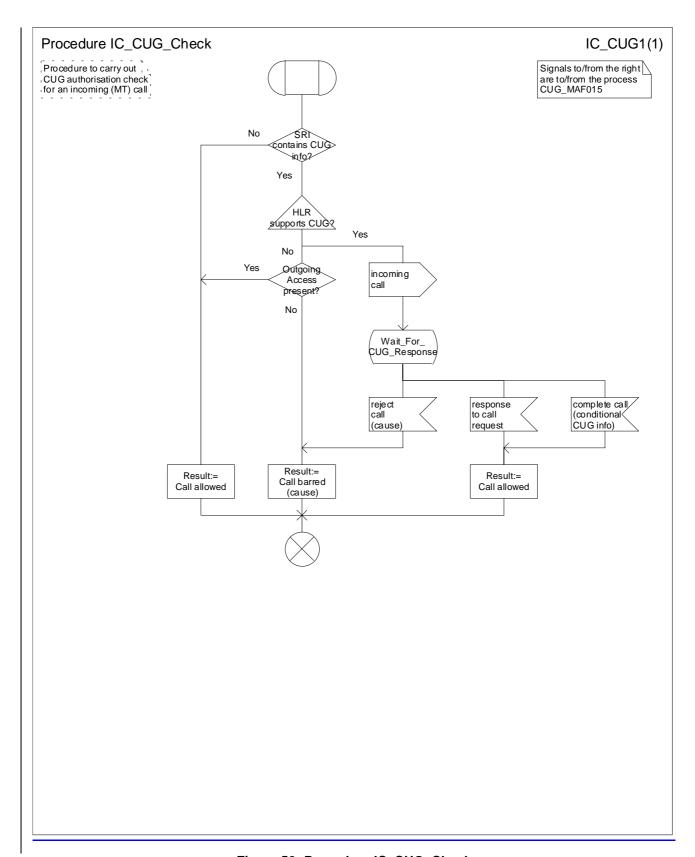


Figure 52: Procedure IC_CUG_Check

**** Last Modified Section ****

8 Contents of messages

8.2 Messages on the C interface (MSC-HLR)

8.2.1 Send Routeing Info

The following information elements are required:

Information element name	Required	Description
MSISDN	M	MSISDN of the B subscriber (see 3GPP TS 23.003 [5]).
Alerting Pattern	С	Shall be present if received in a Connect operation from the gsmSCF; otherwise shall be absent.
CUG interlock	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the GMSC supports CUG, otherwise shall be absent.
CUG outgoing access	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the GMSC supports CUG, otherwise shall be absent.
Number of forwarding	С	Number of times the incoming call has already been forwarded. Shall be present if it was received in the IAM; otherwise shall be absent.
ISDN BC	С	ISDN bearer capability. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN LLC	С	ISDN lower layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN HLC	С	ISDN higher layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
Pre-paging supported	С	Shall be present if the GMSC supports pre-paging, otherwise shall be absent.

3GPP TSG-CN4 Meeting #12 Sophia Antipolis, France, 28th Januray – 1st February 2002

CHANGE REQUEST									
*	23.	018 CR 088	₩ re	2 2	¥ Current ve	rsion:	5.2.0	ж	
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the ℜ symbols.									
Proposed change affects: # (U)SIM									
Title: #	Har	ndling of CUG calls in	non-suppor	ting netw	orks				
Source: #	CN4	4							
Work item code: 第	TEI				Date: 8	光 31/	1/02		
Category: Ж	Α				Release:	₩ RE	L-5		
	Detai	one of the following cate F (correction) A (corresponds to a cor B (Addition of feature), C (Functional modification I (Editorial modification) I (Editorial modification)	rrection in an inition of feature, n) above catego)	2	(GSN (Rele (Rele (Rele (Rele	llowing rele 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)	eases:	
Reason for change	e: #	TS 23.085 subclaus	e 1.1.4.1 red	uires tha	t if a GSM swit	china e	entity rece	ives a	
		CUG Interlock code CUG service, it shal Destination. Howeve the call shall continu- information. The current handling the call will proceed service logic to route Vodafone believe th specified in TS 23.00 Due to Basic Optima HPLMNB, therefore handling.	in a call estall abort the call abort the call abort the call at the call as if no CUC as if no CUC as if no CUC at the call at it is essential Routeing is logic in the logic	ablishmer all, reaso ock and (blished a 18 shows 3 informang call). Itial to ma mplement	nt message but n for rejection: Outgoing Access a normal call that if the HLR ation was presentation, the GMS so required for	t does Incompss indice with n I does ent. (The grity of SC mig correce	not suppo patible cator are re o CUG not suppo e HLR rur CUG hand tht not be t CUG sup	rt the eceived rt CUG, as the dling as in opport	
Summary of chang	ge: ₩	Added a new macro in the GMSC and enhanced procedure IC_CUG_Check in the HLR to check CUG support and if the call can go ahead (i.e. if CUG info is present and the Outgoing Access indicator is set, the call can go ahead, otherwise it can not).							
Consequences if not approved:	ж	Possible incorrect ha	andling of C	JG calls.					
пос аррготоа.									
Clauses affected:	\mathfrak{H}	7.2.1, 7.2.2, 8.2.1							
Other specs affected:	#	Other core specification O&M Specification	IS	*					
Other comments:	ж								

**** First Modified Section ****

7 Functional requirements of network entities

7.2 Retrieval of routeing information for MT call

7.2.1 Functional requirements of GMSC

. .

7.2.1.8 Process MT_CF_MSC

Sheet 1: the procedure CAMEL_CF_MSC_INIT is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 1, sheet 4: the procedure CAMEL_CF_Dialled_Services is specific to CAMEL phase 3 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 3 or later, processing continues from the "Pass" exit of the test "Result?".

Sheet 1, sheet 3, sheet 4: the procedure CAMEL_OCH_MSC1 is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL phase 2 or later, processing continues from the "Yes" exit of the test "Result=Reconnect?".

Sheet 1: the procedure MOBILE_NUMBER_PORTABILITY_IN_OQoD is specific to Mobile Number Portability; it is specified in 3GPP TS 23.066 [10].

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Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC3 is specific to CAMEL phase 1; it is specified in 3GPP TS 23.078 [12].

Sheet 1, sheet 3: the procedure CAMEL_OCH_MSC_DISC4 is specific to CAMEL Phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 2: the procedures CAMEL_Start_TNRy and CAMEL_Stop TNRy are specific to CAMEL phase 2 or later; they are specified in 3GPP TS 23.078 [12].

Sheet 2: the procedure CAMEL_CF_MSC_ANSWER is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 2: the procedure UUS MSC Clear UUS is specific to UUS; it is specified in 3GPP TS 23.087 [20].

Sheet 3: the procedure CAMEL_Stop_TNRy is specific to CAMEL phase 2 or later; it is specified in 3GPP TS 23.078 [12].

Sheet 3: the processing in the branch beginning with the Int_O_Release input will occur only if the MSC supports CAMEL.

Sheet 4: the input signal TNRy expired and all the subsequent processing are specific to CAMEL phase 2 or later, and will occur only if the GMSC supports CAMEL phase 2 or later. The procedure CAMEL_OCH_MSC2 is specified in 3GPP TS 23.078 [12].

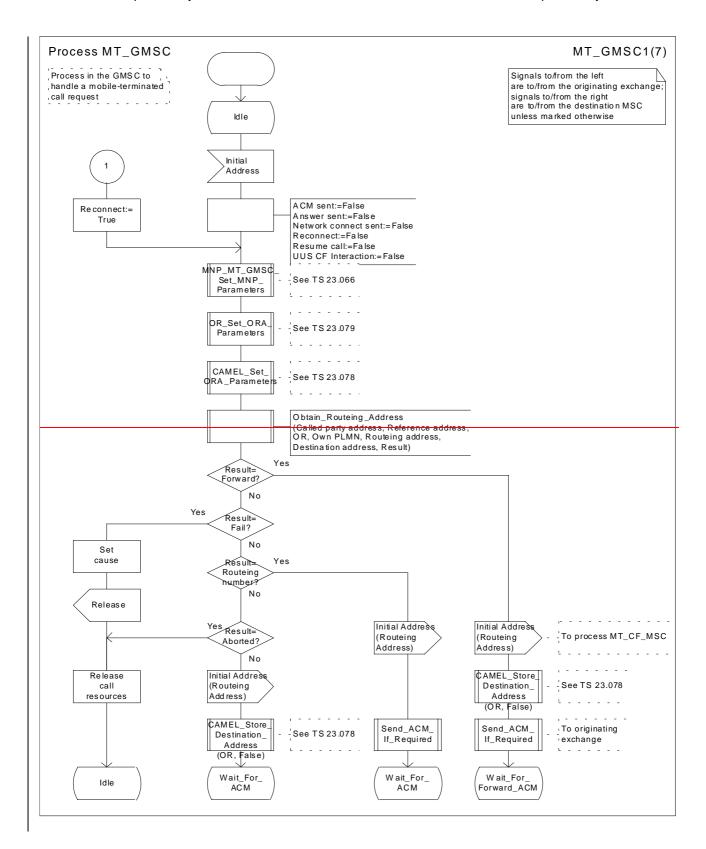
Sheet 5: the procedure CAMEL_OCH_MSC_DISC1 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=CAMEL handling?".

Sheet 5: the procedure CAMEL_OCH_MSC_DISC2 is specific to CAMEL; it is specified in 3GPP TS 23.078 [12]. If the MSC does not support CAMEL, processing continues from the "No" exit of the test "Result=Reconnect?" .

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Sheet 5: after the process MT_CF_MSC has sent an IAM to the forwarded-to exchange, it acts as a relay for messages received from the parent process and the forwarded-to exchange. Any message other than Address Complete, Connect, Answer or Release causes no change of state in the process MT_GMSC.

7.2.1.9 Macro CUG_Support_Check_GMSC



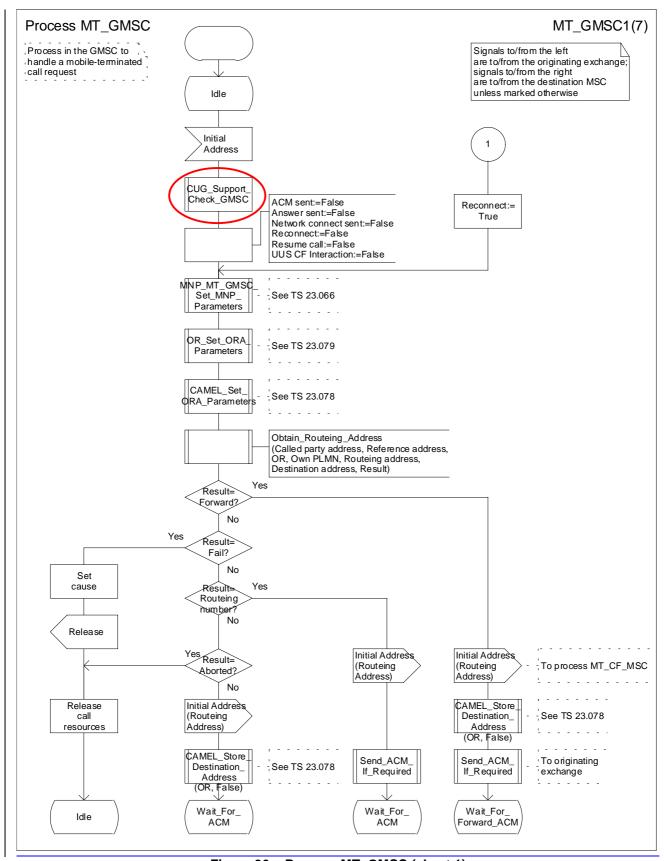


Figure 36a: Process MT_GMSC (sheet 1)

. . .

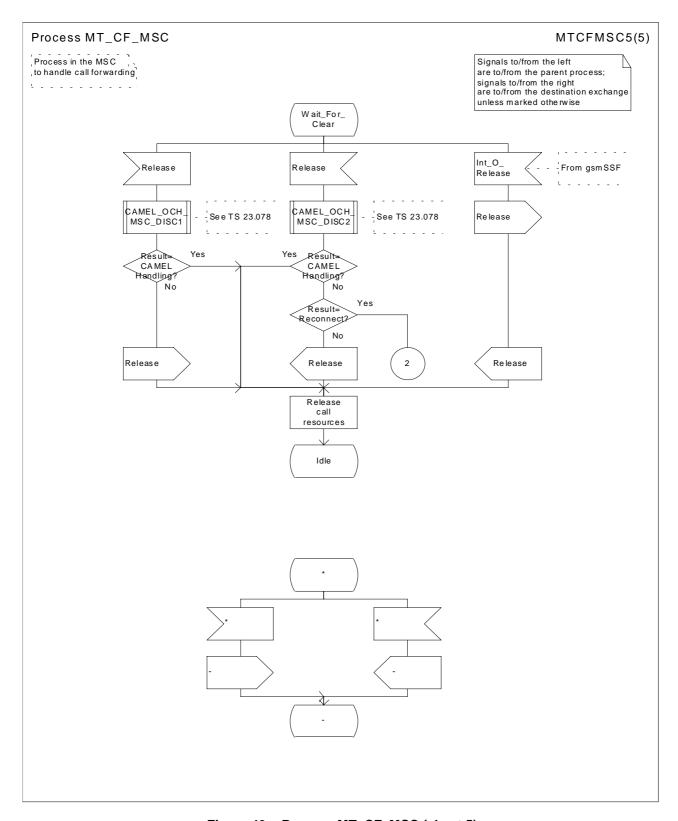


Figure 43e: Process MT_CF_MSC (sheet 5)

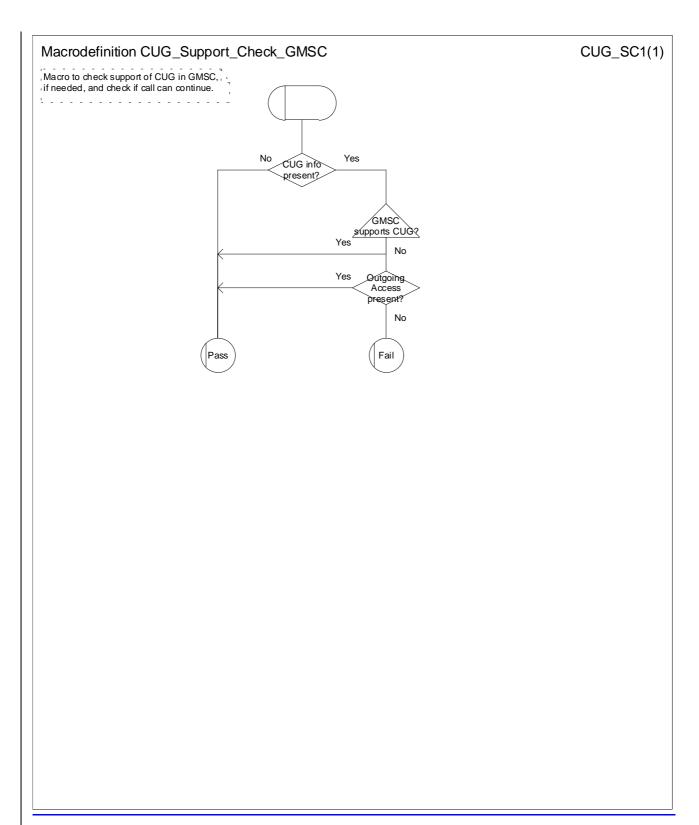


Figure X: Macro CUG Support Check GMSC

**** Next Modified Section ****

7.2.2 Functional requirements of HLR

. . .

7.2.2.3 Procedure Subscription_Check_HLR

It is an implementation option to carry out the check for operator determined barring of incoming calls before the check on provisioning of the requested basic service.

The negative response "Call barred" indicates whether the reason is operator determined barring or supplementary service barring, according to the result returned by the procedure Check_IC_Barring.

The procedure IC_CUG_Check is specific to CUG. If the HLR does not support GUG, processing continues from the "Yes" exit of the test "Result=Call allowed?".

The negative response "CUG reject" indicates whether the reason is:

- Incoming calls barred within CUG;
- Requested basic service violates CUG constraints;
- Subscriber not member of CUG;

according to the cause returned by the procedure IC_CUG_Check.

. . .

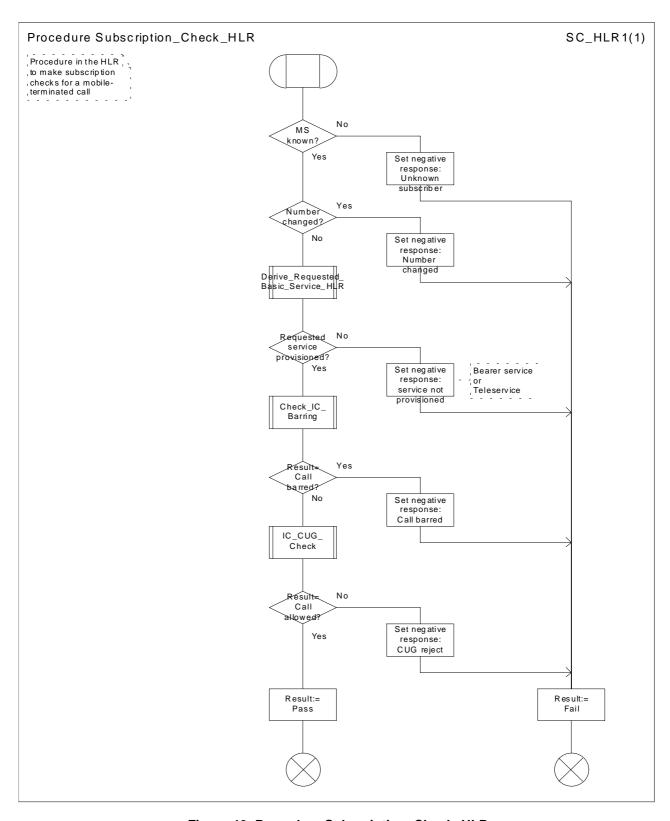
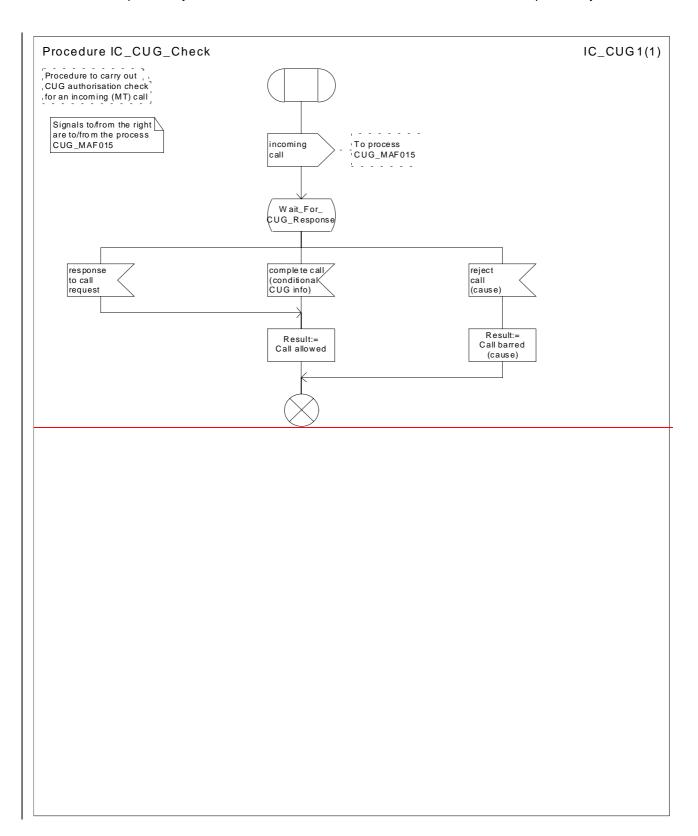


Figure 46: Procedure Subscription_Check_HLR

. . .



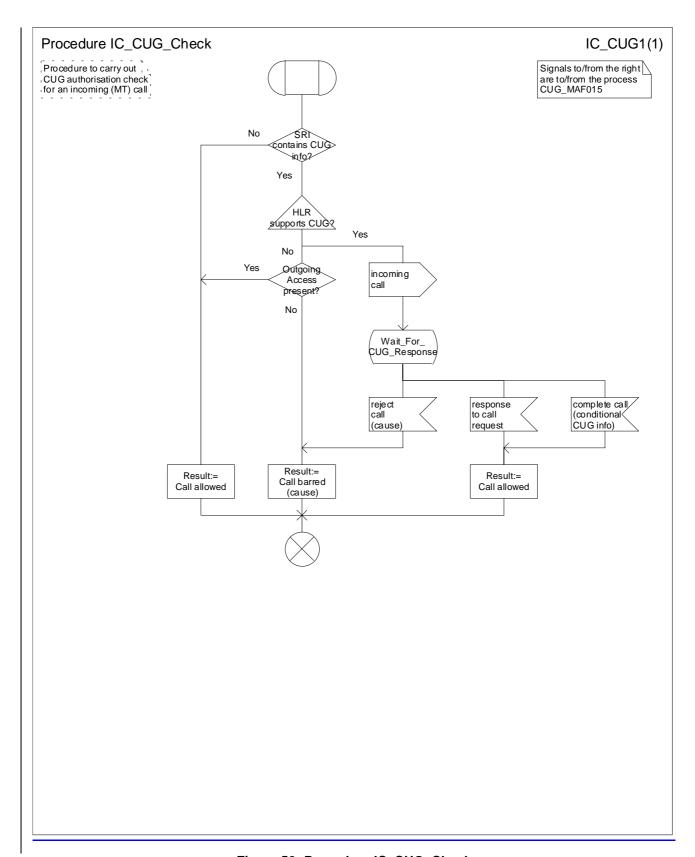


Figure 52: Procedure IC_CUG_Check

**** Last Modified Section ****

8 Contents of messages

8.2 Messages on the C interface (MSC-HLR)

8.2.1 Send Routeing Info

The following information elements are required:

Information element name	Required	Description
MSISDN	М	MSISDN of the B subscriber (see 3GPP TS 23.003 [5]).
Alerting Pattern	С	Shall be present if received in a Connect operation from the gsmSCF; otherwise shall be absent.
CUG interlock	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the GMSC supports CUG, otherwise shall be absent.
CUG outgoing access	С	For the definition of this IE, see 3GPP TS 23.085 [18]. Shall be present if the GMSC received it in the IAM and the GMSC supports CUG, otherwise shall be absent.
Number of forwarding	С	Number of times the incoming call has already been forwarded. Shall be present if it was received in the IAM; otherwise shall be absent.
ISDN BC	С	ISDN bearer capability. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN LLC	С	ISDN lower layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
ISDN HLC	С	ISDN higher layer compatibility. Shall be present if the GMSC received it in the IAM, otherwise shall be absent.
Pre-paging supported	С	Shall be present if the GMSC supports pre-paging, otherwise shall be absent.