Nice, France

13th – 15th December 1999

Agenda item:

Source: TSG_N WG2

Title: CRs to GSM 09.02, 09.60, 3G TS 29.002 (Work Item GPRS)

Introduction:

This document contains 8 CRs on **Work Item GPRS** agreed by **TSG_N WG2** and forwarded to **TSG_N Plenary** meeting #6 for approval.

TDoc	Spec	CR	Rev	Ph.	Cat	Old v.	New v.	Subject
N2-99G48	09.02	A278		R97	F	6.5.0	6.6.0	Addition of GGSN number for the SRIforGPRS
N2-99K08	09.02	A276	1	R97	F	6.5.0	6.6.0	Use of SSN for GPRS
N2-99G49	09.02	A279		R98	А	7.2.0	7.3.0	Addition of GGSN number for the SRIforGPRS
N2-99K10	09.02	A280		R98	А	7.2.0	7.3.0	Use of SSN for GPRS
N2-99K16	09.60	A078	1	R97	D	6.4.0	6.5.0	Clarification of GSN Address field
N2-99K18	09.60	A079	1	R98	D	7.2.0	7.3.0	Clarification of GSN Address field
N2-99G50	29.002	070		R99	А	3.2.0	3.3.0	Addition of GGSN number for the SRIforGPRS
N2-99K12	29.002	077		R99	А	3.2.0	3.3.0	Use of SSN for GPRS

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Tdoc 3GPP N2-99G48

	CHANGE REQUEST No: A278 Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.								
Technical	Specification GSM / UMTS: 09.02 Version: 6.5.0								
Submitted to CN #06 for approval X without presentation ("non-strategic") X With presentation ("strategic") X With presentation ("strat									
	PT SMG CR cover form. Filename: crf26_3.doc								
	Proposed change affects: SIM ME Network X (at least one should be marked with an X)								
Work item:	GPRS								
Source:	TSG N2 <u>Date:</u> 27-11-1999								
Subject:	Addition of GGSN number for the SRIforGPRS								
Category: (one category and one release only shall be marked with an X)	F Correction A Corresponds to a correction in an earlier release B Addition of feature C Functional modification of feature D Editorial modification X Release: Release 96 Release 97 X Release 98 Release 99 UMTS								
Reason for change:	The processing described in 03.60 specifies the use of the GGSN Number parameter in the processing of the SRIforGPRS at the HLR. The 03.60 chapter 9.2.2.2.1 says: "The GGSN may send a Send Routeing Information for GPRS (IMSI) message to the HLR. If the HLR determines that the request can be served, it returns a Send Routeing Information for GPRS Ack (IMSI, SGSN Address, Mobile Station Not Reachable Reason) message to the GGSN. The Mobile Station Not Reachable Reason parameter is Included if the MNRG flag is set in the HLR. The Mobile Station Not Reachable Reason parameter indicates the reason for the setting of the MNRG flag as stored in the MNRR record (see GSM 03.40). If the MNRR record indicates a reason other than 'No Paging Response', the HLR shall include the GGSN number in the GGSN-list of the subscriber."								
Clauses affec	ted: 13,17								
Other specs affected:	Other releases of same spec Other core specifications MS test specifications / TBRs BSS test specifications O&M specifications → List of CRs:								
Other comments:									

13 Network-Requested PDP Context Activation services

13.1 MAP_SEND_ROUTING_INFO_FOR_GPRS service

13.1.1 Definition

This service is used by the GGSN to request GPRS routing information from the HLR.

13.1.2 Service primitives

Table 13.1/1: MAP_SEND_ROUTING_INFO_FOR_GPRS

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
IMSI	М	M(=)		
GGSN address	С	C(=)		
GGSN number	<u>M</u>	<u>M(=)</u>		
SGSN address			С	C(=)
Mobile Not Reachable			С	C(=)
Reason				
User error			С	C(=)
Provider error	•			0

13.1.3 Parameter definition and use

Invoke Id

See definition in subclause 7.6.1.

IMSI

See definition in subclause 7.6.2.

GGSN address

This parameter shall be present if the protocol-converting GSN is used between the GGSN and the HLR.

GGSN number

See definition in subclause 7.6.2.

SGSN address

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive.

Mobile Not Reachable Reason

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive and the MNRG flag in the HLR is set. See definition in subclause 7.6.3.51.

User error

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

- Absent Subscriber;
- System Failure;
- Data Missing;

- Unexpected Data Value;
- UnknownSubscriber.

The diagnostic in the Unknown Subscriber may indicate "Imsi Unknown" or "Gprs Subscription Unknown".

Provider error

These are defined in subclause 7.6.1.

**** NEXT MODIFIED SECTION ****

-- gprs location information retrieval types

SendRoutingInfoForGprsArg ::= SEQUENCE {		
imsi	[0] IMSI,	
ggsn-Address	[1] GSN-Address	OPTIONAL,
ggsn-Number	<pre>[2] ISDN-AddressString</pre>	
extensionContainer	[3 2] ExtensionContainer	OPTIONAL,
}		

SendRoutingInfoForGprsRes ::= SEQUENCE {		
sgsn-Address	[0] GSN-Address,	
ggsn-Address	[1] GSN-Address	OPTIONAL,
mobileNotReachableReason	[2] AbsentSubscriberDi	iagnosticSM OPTIONAL,
extensionContainer	[3] ExtensionContainer	OPTIONAL,
}	[3] Excells folicolicatile:	or rrown,

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Document N2-99K08

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.							
		09.02	CR	A27	76r1	Current Ver	rsion: 6.5.0
GSM (AA.BB) or 30	G (AA.BBB) specific	ation number↑		1	CR number a	as allocated by MC	CC support team
For submission	nl meeting # here ↑	for info	pproval rmation	X		non-stra	
Proposed chan (at least one should be	ge affects:	(U)SIM	ME	t version of t	UTRAN		op.org/Information/CR-Form-v2.doc
Source:	TSG N2					Date	18 Nov 1999
Subject:	Use of SSN	I for GPRS					
Work item:	GPRS						
(only one category shall be marked	B Addition of	modification of fea		rlier rele	ease	Release	Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00
Reason for change:	To clarify o	n the SSN to be u	sed in th	ne callin	ng party ad	ddress.	
Clauses affecte	ed: 6.1.2						
Other specs affected:	Other 3G co Other GSM of specifica MS test spec BSS test spec O&M specific	tions offications ocifications	-		of CRs: of CRs: of CRs:		
Other comments:	be used by t	event inter-operal ne SGSN in the ca hat this CR falls int	alling par	rty addr	ess.		ify which SSN is to
help.doc							

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

6.1.2 Sub-System Number (SSN)

The Application Entities (AEs) defined for MAP consist of several Application Service Elements (ASEs) and are addressed by sub-system numbers (SSNs). The SSN for MAP are specified in GSM 03.03 [17]. When the SGSN emulates MSC behavior for processing messages (MAP-MO-FORWARD-SHORT-MESSAGE, MAP_CHECK_IMEI) towards entities which do not support interworking to SGSNs, it shall use the MSC SSN in the calling party address instead of the SGSN SSN.

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Tdoc 3GPP N2-99G49

	CHANGE REQUEST No: A279 Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly	y.						
Technical	Specification GSM / UMTS: 09.02 Version: 7.2.0							
Submitted to CN #06 for approval X without presentation ("non-strategic") X With presentation ("strategic") PT SMG CR cover form. Filename: crf26_3.doc								
Proposed change affects: SIM ME Network X (at least one should be marked with an X)								
Work item:	GPRS							
Source:	TSG N2 <u>Date:</u> 27-11-1999							
Subject:	Addition of GGSN number for the SRIforGPRS							
Category: (one category and one release only shall be marked with an X)	F Correction A Corresponds to a correction in an earlier release B Addition of feature C Functional modification of feature D Editorial modification Release 96 Release 97 Release 98 Release 99 UMTS	X						
Reason for change:	The processing described in 03.60 specifies the use of the GGSN Number parameter in the processing of the SRIforGPRS at the HLR. The 03.60 chapter 9.2.2.2.1 says: "The GGSN may send a Send Routeing Information for GPRS (IMSI) message to the HLR. If the HLR determines that the request can be served, it returns a Send Routeing Information for GPRS Ack (IMSI, SGSN Address, Mobile Station Not Reachable Reason) message to the GGSN. The Mobile Station Not Reachable Reason parameter is Included if the MNRG flag is set in the HLR. The Mobile Station Not Reachable Reason parameter indicates the reason for the setting of the MNRG flag as stored in the MNRR record (see GSM 03.40). If the MNRR record indicates a reason other than 'No Paging Response', the HLR shall include the GGSN number in the GGSN-list of the subscriber."							
Clauses affec	<u>eted:</u> 13,17							
Other specs affected:	Other releases of same spec Other core specifications MS test specifications / TBRs BSS test specifications O&M specifications O&M specifications → List of CRs:							
Other comments:								

13 Network-Requested PDP Context Activation services

13.1 MAP_SEND_ROUTING_INFO_FOR_GPRS service

13.1.1 Definition

This service is used by the GGSN to request GPRS routing information from the HLR.

13.1.2 Service primitives

Table 13.1/1: MAP_SEND_ROUTING_INFO_FOR_GPRS

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
IMSI	М	M(=)		
GGSN address	С	C(=)		
GGSN number	<u>M</u>	<u>M(=)</u>		
SGSN address			С	C(=)
Mobile Not Reachable			С	C(=)
Reason				
User error			С	C(=)
Provider error	•			0

13.1.3 Parameter definition and use

Invoke Id

See definition in subclause 7.6.1.

IMSI

See definition in subclause 7.6.2.

GGSN address

This parameter shall be present if the protocol-converting GSN is used between the GGSN and the HLR.

GGSN number

See definition in subclause 7.6.2.

SGSN address

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive.

Mobile Not Reachable Reason

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive and the MNRG flag in the HLR is set. See definition in subclause 7.6.3.51.

User error

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

- Absent Subscriber;
- System Failure;
- Data Missing;

- Unexpected Data Value;
- UnknownSubscriber.

The diagnostic in the Unknown Subscriber may indicate "Imsi Unknown" or "Gprs Subscription Unknown".

Provider error

These are defined in subclause 7.6.1.

**** NEXT MODIFIED SECTION ****

-- gprs location information retrieval types

SendRoutingInfoF	orGprsArg ::= SEQUENCE {			
imsi		[0]	IMSI,	
ggsn-Addres	S	[1]	GSN-Address	OPTIONAL,
ggsn-Number		[2]	ISDN-AddressString	
extensionCo	ntainer	[3 2] ExtensionContainer	OPTIONAL,
}				

SendRoutingInfoForGprsRes ::= SEQUENCE {				
sgsn-Address	[0]	GSN-Address,		
ggsn-Address	[1]	GSN-Address	OPTIO	NAL,
mobileNotReachableReason	[2]	AbsentSubscriberDiagno	sticSM	OPTIONAL,
extensionContainer		ExtensionContainer	OPTIO	NAL,

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Document **N2-99K10**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.								
		09.02	CR	A28	0	Current Versi	on: 7.2.0	
GSM (AA.BB) or 30	G (AA.BBB) specific	ation number↑		↑ <i>C</i>	CR number as	allocated by MCC	support team	
For submission list expected approva	al meeting # here ↑	for info	pproval rmation	X		strate non-strate	egic X use only)	
Proposed chan	Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc Proposed change affects: (at least one should be marked with an X) The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc UTRAN / Radio Core Network X							
Source:	TSG N2					Date:	18 Nov 1999	
Subject:	Use of SSN	I for GPRS						
Work item:	GPRS							
(only one category shall be marked	B Addition of	modification of fe		rlier relea	ase X	Release:	Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00	
Reason for change:	To clarify o	n the SSN to be u	sed in th	ne calling	party ad	dress.		
Clauses affecte	ed: 6.1.2							
Other specs affected:	Other 3G cor Other GSM of specificat MS test spec BSS test spec O&M specific	ions ifications cifications	-	→ List of → List of → List of → List of → List of	CRs:			
Other comments:	be used by the	event inter-operal ne SGSN in the ca hat this CR falls int	alling par	rty addre	SS.	·	which SSN is to	
help.doc								

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

6.1.2 Sub-System Number (SSN)

use the MSC SSN in the calling party address instead of the SGSN SSN.

The Application Entities (AEs) defined for MAP consist of several Application Service Elements (ASEs) and are addressed by sub-system numbers (SSNs). The SSN for MAP are specified in GSM 03.03 [17]. When the SGSN emulates MSC behavior for processing messages (MAP-MO-FORWARD-SHORT-MESSAGE, MAP_CHECK_IMEI) towards entities which do not support interworking to SGSNs, it shall

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e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

	CI	HANGE	REQI	JEST		see embedded help i r instructions on how		
		09.60	CR	A078r	1	Current Versi	on: 6.4.0	
GSM (AA.BB) or 30	G (AA.BBB) specification	number ↑		↑ CR n	number a	as allocated by MCC	support team	
For submission to: TSG CN#06 for approval						only)		
Proposed chan	Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc Proposed change affects: (at least one should be marked with an X) The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc U)SIM ME UTRAN / Radio Core Network X							
Source:	TSG N2					<u>Date:</u>	1.11.99	
Subject:	Clarification of	GSN Address	field					
Work item:	GPRS							
(only one category shall be marked (F Correction A Corresponds to B Addition of fea C Functional modifi D Editorial modifi	ture dification of fea		rlier release	X	Release:	Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00	X
Reason for change:	The field 7.9.25 Type and Addr Address in 09.6	ess length field						SS
Clauses affecte	ed:							
Other specs affected:	Other 3G core sp Other GSM core MS test specifica BSS test specific O&M specification	specifications ations ations		→ List of C	Rs: Rs: Rs:			
Other comments:								

7.9.25 GSN Address

The GSN Address information element contains the address of a GSN as defined in GSM 03.03. The Address Type and Address Length fields from 03.03 are not included in the GSN Address field.

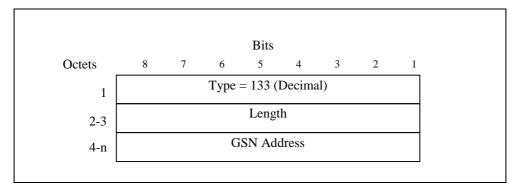


Figure 35: GSN Address information element

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e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

	CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
	09.60 CR A079r1 Current Version: 7.2.0
GSM (AA.BB) or 3	G (AA.BBB) specification number ↑
For submission	(ior sing
Proposed char (at least one should be	
Source:	TSG N2 <u>Date:</u> 1.11.99
Subject:	Clarification of GSN Address field
Work item:	GPRS
(only one category	F Correction A Corresponds to a correction in an earlier release B Addition of feature C Functional modification of feature D Editorial modification Release 96 Release 97 Release 98 X Release 99 Release 00
Reason for change:	The field 7.9.25 GSN Address field needs clarification related to 03.03. The Address Type and Address length field specified in 03.03 is not to be included in the GSN Address in 09.60.
Clauses affecte	ed:
Other specs affected:	Other 3G core specifications Other GSM core specifications MS test specifications BSS test specifications O&M specifications O&M specifications O → List of CRs: → List of CRs: → List of CRs: → List of CRs:
Other comments:	

7.9.25 GSN Address

The GSN Address information element contains the address of a GSN as defined in GSM 03.03. The Address Type and Address Length fields from 03.03 are not included in the GSN Address field..

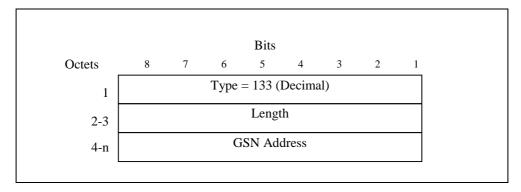


Figure 35: GSN Address information element

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Tdoc 3GPP N2-99G50

	CHANGE REQUEST No: O70 Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.					
Technical Specification UMTS: 29.002 Version: 3.2.0						
Submitted to CN #06 for approval X without presentation ("non-strategic") X Iist SMG plenary meeting no. here ↑ for information With presentation ("strategic") PT SMG CR cover form. Filename: cr/26_3.doc						
	Proposed change affects: SIM ME Network X (at least one should be marked with an X)					
Work item:	Work item: GPRS					
Source:	TSG N2 <u>Date:</u> 27-11-1999					
Subject:	Addition of GGSN number for the SRIforGPRS					
Category: (one category and one release only shall be marked with an X)	F Correction A Corresponds to a correction in an earlier release B Addition of feature C Functional modification of feature D Editorial modification Release: Phase 2 Release 96 Release 97 Release 98 Release 99 UMTS X					
Reason for change:	4					
Clauses affec	<u>sted:</u> 13 , 17					
Other specs	Other releases of same spec → List of CRs: A278 (Release '97), A279 (Release '98)					
affected:	Other core specifications MS test specifications / TBRs BSS test specifications O&M specifications → List of CRs:					
Other comments:						

13 Network-Requested PDP Context Activation services

13.1 MAP_SEND_ROUTING_INFO_FOR_GPRS service

13.1.1 Definition

This service is used by the GGSN to request GPRS routing information from the HLR.

13.1.2 Service primitives

Table 13.1/1: MAP_SEND_ROUTING_INFO_FOR_GPRS

Parameter name	Request	Indication	Response	Confirm
Invoke id	М	M(=)	M(=)	M(=)
IMSI	М	M(=)		
GGSN address	С	C(=)		
GGSN number	M	<u>M(=)</u>		
SGSN address			С	C(=)
Mobile Not Reachable			С	C(=)
Reason				
User error			С	C(=)
Provider error				0

13.1.3 Parameter definition and use

Invoke Id

See definition in subclause 7.6.1.

IMSI

See definition in subclause 7.6.2.

GGSN address

This parameter shall be present if the protocol-converting GSN is used between the GGSN and the HLR.

GGSN number

See definition in subclause 7.6.2.

SGSN address

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive.

Mobile Not Reachable Reason

This parameter shall be present if the outcome of the Send Routing Info For GPRS request to the GPRS application process in the HLR is positive and the MNRG flag in the HLR is set. See definition in subclause 7.6.3.51.

User error

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

- Absent Subscriber;
- System Failure;
- Data Missing;

- Unexpected Data Value;
- UnknownSubscriber.

The diagnostic in the Unknown Subscriber may indicate "Imsi Unknown" or "Gprs Subscription Unknown".

Provider error

These are defined in subclause 7.6.1.

**** NEXT MODIFIED SECTION ****

-- gprs location information retrieval types

	SendRoutingInfoForGprsArg ::= SEQUENCE {		
	imsi	[0] IMSI,	
	ggsn-Address	[1] GSN-Address	OPTIONAL,
ggsn-Number		<pre>[2] ISDN-AddressString</pre>	
extensionContainer		[3 2] ExtensionContainer	OPTIONAL,
	}		

SendRoutingInfoForGprsRes ::= SEQUENCE {		
sgsn-Address	<pre>[0] GSN-Address,</pre>	
ggsn-Address	[1] GSN-Address	OPTIONAL,
mobileNotReachableReason	[2] AbsentSubscribe	rDiagnosticSM OPTIONAL,
extensionContainer	[3] ExtensionContain	ner OPTIONAL,
}	[5] Execusioneonean	of flower,

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Document N2-99K12

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

		CHANGE I	REQI	JEST			o file at the bottom of this ow to fill in this form correctly.
		29.002	CR	077		Current Vers	sion: 3.2.0
GSM (AA.BB) or 3	G (AA.BBB) specific	eation number↑		1	CR number a	s allocated by MC	C support team
For submission	al meeting # here ↑	for info		X		non-strat	
Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc Proposed change affects: (at least one should be marked with an X) The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc UTRAN / Radio Core Network X							
Source:	TSG N2					<u>Date</u>	: 18 Nov 1999
Subject:	Use of SSI	N for GPRS					
Work item:	GPRS						
(only one category	B Addition of	ds to a correction feature modification of feature		rlier rele	ease X	Release:	Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00
Reason for change:	To clarify o	n the SSN to be u	sed in th	ne callin	g party ad	ldress.	
Clauses affecte	ed: 6.1.2						
Other specs affected:	Other 3G co Other GSM of specifica MS test specifica BSS test specifications	tions cifications ecifications	-	→ List o	of CRs: of CRs: of CRs:		
Other comments:	be used by t	revent inter-operal he SGSN in the ca that this CR falls int	alling par	rty addr	ess.		fy which SSN is to
help.doc							

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

6.1.2 Sub-System Number (SSN)

The Application Entities (AEs) defined for MAP consist of several Application Service Elements (ASEs) and are addressed by sub-system numbers (SSNs). The SSN for MAP are specified in GSM 03.03 [17]. When the SGSN emulates MSC behavior for processing messages (MAP-MO-FORWARD-SHORT-MESSAGE, MAP_CHECK_IMEI) towards entities which do not support interworking to SGSNs, it shall

use the MSC SSN in the calling party address instead of the SGSN SSN.