3GPP TSG_CN
Plenary Meeting #9, Oahu, Hawaii
20th – 22nd September 2000.

Source: TSG_N

Title: **CRs to R99 Work Item Gateway Location Register (GLR)**

Agenda item:

Document for: **APPROVAL**

Introduction:

This document contains 1 CR on R99 Work Item GLR, that has been agreed by TSG_N WG4, and is forwarded to TSG_N Plenary meeting #9 for approval.

SM	TDoc	SPEC	CR	REV	PHAS	VERS	SUBJECT	CAT
CN9	N4-000498	29.120	001	1	R99	3.0.0	Changes to support Authentication Failure Report for GLR	F

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

29.120 CR **001R1**   Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   *↑ CR number as allocated by MCC support team*

For submission to:	CN#09	for approval	X		strategic		*(for SMG*
list expected approval meeting # here ↑		for information			non-strategic	X	*use only)*

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: (U)SIM [ ]   ME [ ]   UTRAN / Radio [ ]   Core Network [X]
(at least one should be marked with an X)

Source:	CN		**Date:**	14.07.00

Subject: Changes to support Authentication Failure Report for GLR

Work item: GLR

Category: F Correction   [X]   **Release:**   Phase 2   [ ]
        A Corresponds to a correction in an earlier release   [ ]   Release 96   [ ]
(only one category   B Addition of feature   [ ]   Release 97   [ ]
shall be marked   C Functional modification of feature   [ ]   Release 98   [ ]
with an X)   D Editorial modification   [ ]   Release 99   [X]
                                                                        Release 00   [ ]

Reason for change: This CR introduces the changes required for the Authentication Failure Report to GLR.

Clauses affected: 8.3, 17.2, 17.3, 25.3

Other specs affected:
Other 3G core specifications	[ ]	→ List of CRs:	
Other GSM core specifications	[ ]	→ List of CRs:	
MS test specifications	[ ]	→ List of CRs:	
BSS test specifications	[ ]	→ List of CRs:	
O&M specifications	[ ]	→ List of CRs:	

Other comments:

help.doc

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

8 Mobility services

8.3 Authentication Management services

Services	Interval for adoption
MAP_SEND_AUTHENTICATION_INFO	VLR – GLR
	SGSN – GLR
	GLR – HLR
MAP_AUTHENTICATION_FAILURE_REPORT	VLR – GLR
	SGSN – GLR
	GLR – HLR

Figure 8.3/1

**** Next modified section ****

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17 Abstract syntax of the MAP protocol

17.1 General

Refer to the corresponding section in 3G TS 29.002 except Packages specifications and Application contexts.

Regarding the operations which are initiated by the VLR or SGSN toward HLR via GLR, the timer value used in the operations should be configured enough long to guarantee the GLR specific fallback mechanism.

17.2 Packages specifications

Regarding Packages specifications, only the supplier and consumer definition shall be considered for the GLR introduction. The supplier and consumer definition for the GLR specification are derived Table 17.2/1. For the other definitions of the package specifications are as in 3G TS 29.002.

Table 17.2/1: supplier and consumer definition

Operation Package	supplier	consumer
LocationUpdatingPackage-v3	HLR	GLR
	GLR	VLR
LocationCancellationPackage-v3	VLR or SGSN	GLR
	GLR	HLR
RoamingNumberEnquiryPackage-v3	VLR	GLR
	GLR	HLR
InfoRetrievalPackage-v2	HLR	GLR
	GLR	VLR
	GLR	SGSN
InfoRetrievalPackage-v1	HLR	GLR
	GLR	VLR
	GLR	SGSN
IMSIRetrievalPackage-v2	HLR	GLR
	GLR	VLR
SubscriberDataMngtStandAlonePackage-v3	VLR or SGSN	GLR
	GLR	HLR
SubscriberDataMngtPackage-v3	VLR or SGSN	GLR

Operation Package	supplier	consumer
	GLR	HLR
ResetPackage-v2	VLR or SGSN	GLR
	GLR	HLR
FunctionalSsPackage-v2	HLR	GLR
	GLR	HLR
BindingPackage-v1	HLR	GLR
	GLR	VLR
UnstructuredSsPackage-v2	HLR	GLR
	GLR	VLR
UnstructuredSsPackage-v1	HLR	GLR
	GLR	VLR
MTShortMsgRelayPackage-v3	IM-MSC or GLR	GMSC
	MSC	IM-MSC
	SGSN	GLR
MwdMngtPackage-v3	HLR	GLR
	GLR	SGSN
	GLR	VLR
MwdMngtPackage-v1	HLR	GLR
	GLR	VLR
DataRestorationPackage-v3	GLR	VLR
PurgingPackage-v3	HLR	GLR
	GLR	VLR
	GLR	SGSN
SubscriberInformationEnquiryPackage-v3	VLR	GLR
	GLR	HLR
GprsLocationUpdatingPackage-v3	HLR	GLR
	GLR	SGSN
FailureReportingPackage-v3	GLR	IM-GSN
SetReportingStatePackage-v3	VLR	GLR
	GLR	HLR
StatusReportPackage-v3	HLR	GLR
	GLR	VLR
RemoteUserFreePackage-v3	VLR	GLR
	GLR	HLR
CallCompletionPackage-v3	HLR	GLR
	GLR	VLR
AuthenticationFailureReportPackage-v3	HLR	GLR
	GLR	VLR
	GLR	SGSN

17.3   Application contexts

Regarding Application contexts specifications, only the responder and initiator definition shall be considered for the GLR introduction. The responder and initiator definition for the GLR specification are derived Table 17.3/1. For the other definitions of the package specifications are as in 3G TS 29.002.

Table 17.3/1: supplier and consumer definition

Application Context	Version	Initiator	Responder
locationCancellationContext	v3	HLR	GLR
		GLR	VLR or SGSN
imsiRetrievalContext	v2	VLR	GLR
		GLR	HLR
infoRetrievalContext	v2	VLR or SGSN	GLR
		GLR	HLR
mwdMngtContext	v3	VLR or SGSN	GLR
		GLR	HLR
msPurgingContext	v3	VLR or SGSN	GLR
		GLR	HLR
resetContext	v2	HLR	GLR
		GLR	VLR or SGSN
networkUnstructuredSsContext	v2	VLR	GLR
		GLR	HLR
		HLR	GLR
		GLR	VLR
networkFunctionalSsContext	v2	VLR	GLR
		GLR	HLR
shortMsgMT-RelayContext	v3	MSC	IM-MSC or GLR
		IM-MSC	MSC
		GLR	SGSN
networkLocUpContext	v3	VLR	GLR
		GLR	HLR
gprsLocationUpdateContext	v3	SGSN	GLR
		GLR	HLR
subscriberDataMngtContext	v3	HLR	GLR
		GLR	VLR or SGSN
roamingNumberEnquiryContext	v3	HLR	GLR
		GLR	VLR
gprsLocationInfoRetrievalContext	v3	IM-GSN	GLR
failureReportContext	v3	IM-GSN	GLR
subscriberInfoEnquiryContext	v3	HLR	GLR
		GLR	VLR
reportingContext	v3	VLR	GLR
		GLR	HLR
		HLR	GLR
		GLR	VLR
callCompletionComtext	v3	VLR	GLR
		GLR	HLR
authenticationFailureReportContext	v3	VLR or SGSN	GLR
		GLR	HLR

**** Next modified section ****

25.3 Authentication processes

25.3.2 Process Authentication_Failure_Report_GLR

This process is initiated by the GLR to notify a subscriber's HLR about the occurrence of an authentication failure in the VLR or SGSN. The process is described in figure 25.3/2.

Figure 25.3.2/1: The Process to notify authetication
failure report from the VLR/SGSN to the HLR via the GLR
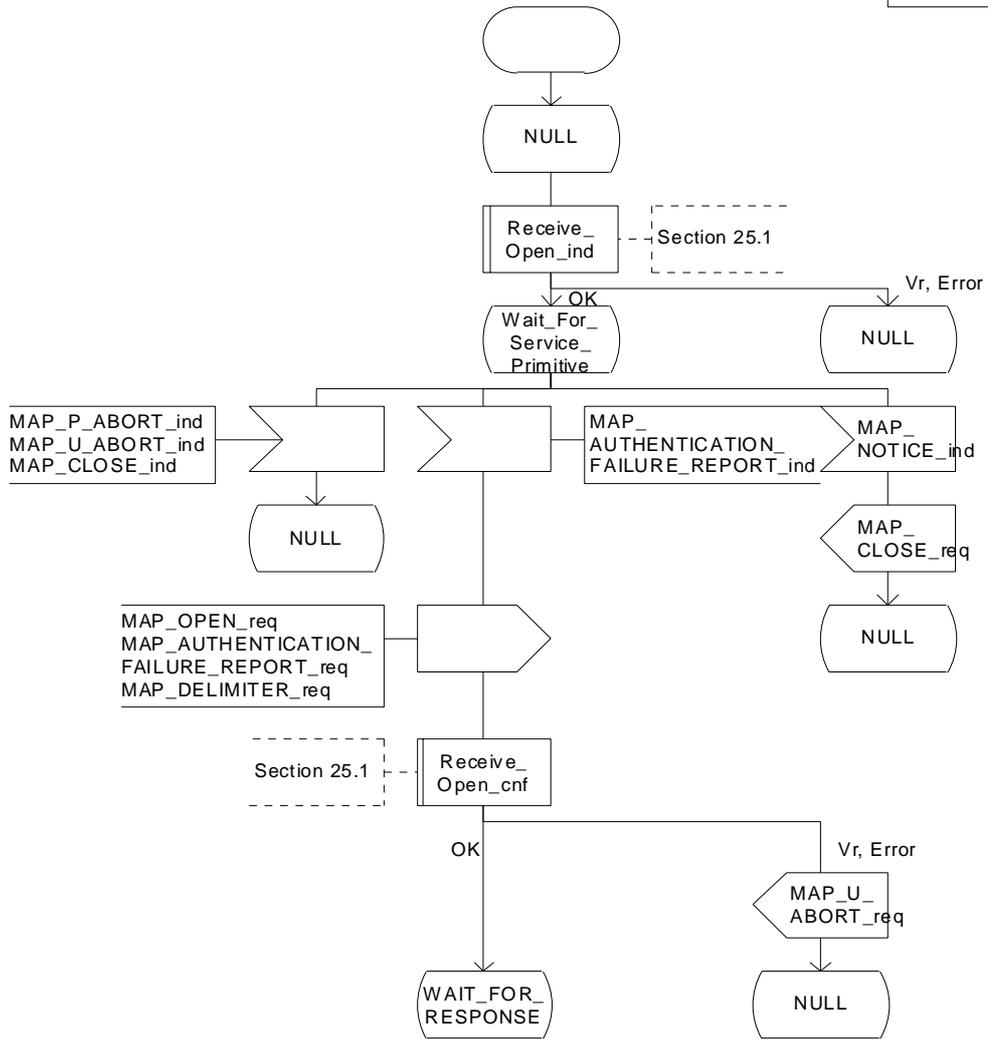
Left from/to VLR or SGSN
Right from/to HLR

NULL

Receive_
Open_ind — Section 25.1

OK

Wait_For_
Service_
Primitive

Vr, Error

NULL

MAP_P_ABORT_ind
MAP_U_ABORT_ind
MAP_CLOSE_ind

MAP_
AUTHENTICATION_
FAILURE_REPORT_ind

MAP_
NOTICE_ind

NULL

MAP_
CLOSE_req

NULL

MAP_OPEN_req
MAP_AUTHENTICATION_
FAILURE_REPORT_req
MAP_DELIMITER_req

Section 25.1 — Receive_
Open_cnf

OK

Vr, Error

MAP_U_
ABORT_req

WAIT_FOR_
RESPONSE

NULL

Figure 25.3.2/1 (sheet 1 of 2): Process Authentication_Failure_Report_GLR

Figure 25.3.2/1: The Process to notify authetication
failure report from the VLR/SGSN to the HLR via the GLR
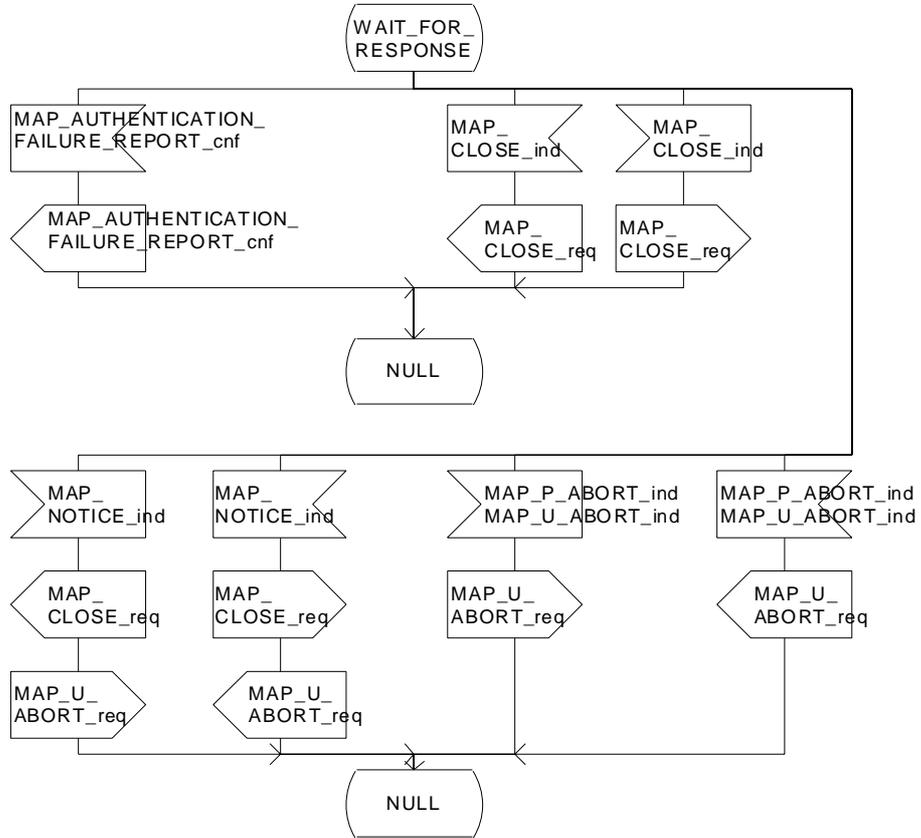
Left from/to VLR or SGSN
Right from/to HLR

Figure 25.3.2/2 (sheet 2 of 2): Process Authentication_ Failure_Report _GLR