

3GPP TSG CN Plenary Meeting #16
5th – 7th June 2002 Marco Island, USA.

NP-020268

Source: TSG CN WG4
Title: CR 29.002-397r3 on Check of NAM and Requesting Node Type on receipt of SendAuthenticationInfo
Agenda item: 7.11
Document for: APPROVAL

Introduction:

This document contains a CR on Rel-4 Work Item "TEI4", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #16 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.002	397	3	N4-020528	Rel-4	Check of NAM and Requesting Node Type on receipt of SendAuthenticationInfo	C	4.7.0

CHANGE REQUEST

⌘ **29.002 CR 397** ⌘ rev **3** ⌘ Current version: **4.7.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Check of NAM and Requesting Node Type on receipt of SendAuthenticationInfo		
Source:	⌘ CN4		
Work item code:	⌘ TEI4	Date:	⌘ 2002-03-18
Category:	⌘ C	Release:	⌘ 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 earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)
			REL-5 (Release 5)

Reason for change:	⌘ Requesting Node Type parameter has been introduced in the Send Authentication Info invoke operation. To save signalling load, it would be beneficial to check that received Requesting Node Type with regard to the subscriber's Network Access Mode ('gprs-only', 'non-gprs only', 'both') in order to deny the mobile access already at authentication info request. Currently this check is done later on at receipt of the update location request.
Summary of change:	⌘ In MAP process Obtain_Auth_Sets_HLR, the SendAuthenticationInfo request is refused if the requesting node is a VLR (resp. SGSN) and the involved subscriber is 'gprs only' (resp. 'non-gprs only').
Consequences if not approved:	⌘ Un-necessary signalling load in case of authentication information request from VLR or SGSN for 'gprs only' or 'non-gprs only' subscribers.

Clauses affected:	⌘ § 25.5.5		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ 29.010	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments:	⌘ Note: The attached SDL-file contains only the second page of the process.		

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

25.5.5 Process Obtain_Auth_Sets_HLR

Opening of the dialogue is described in the macro Receive_Open_Ind in clause 25.1, with outcomes:

- reversion to version one or two procedure;
- procedure termination; or
- dialogue acceptance, with proceeding as below.

This process is used by the HLR to obtain authentication vectors from the AuC, upon request from the VLR or from the SGSN. The process acts as follows:

- a MAP_SEND_AUTHENTICATION_INFO indication is received by the HLR;
- ~~the HLR checks the service indication for errors. If any, they are reported to the VLR or to the SGSN in the MAP_SEND_AUTHENTICATION_INFO response.~~
- If Network Access Mode is set to “non-GPRS only” and if the Requesting Node Type is present and indicates ‘SGSN’, the HLR may return error Unknown Subscriber (with diagnostic value set to “Gprs Subscription Unknown”) is returned in the response and terminate the process.
- If Network Access Mode is set to “GPRS only” and if the Requesting Node Type is present and indicates ‘VLR’, the HLR may return error Unknown Subscriber is returned in the response and terminate the process.
- If no errors are detected, authentication vectors are fetched from the AuC. Further details are found in 3GPP TS 43.020 [24];
- if errors are detected they are reported to the VLR or to the SGSN in the MAP_SEND_AUTHENTICATION_INFO response. Otherwise the authentication vectors are returned.
- if segmentation of the response message is required and allowed, a MAP_SEND_AUTHENTICATION_INFO_response, containing at least one authentication vector, followed by a MAP_DELIMITER_request is returned to the VLR or SGSN, the remaining authentication vectors are stored and the HLR waits for a new service indication from the VLR or SGSN.

The process is described in figure 25.5/5.

NEXT MODIFICATION

Process Obtain_Auth_Sets_HLR

1(2)

Figure 25.5/5: Process in the HLR to obtain authentication sets from the AuC and relay them to the VLR

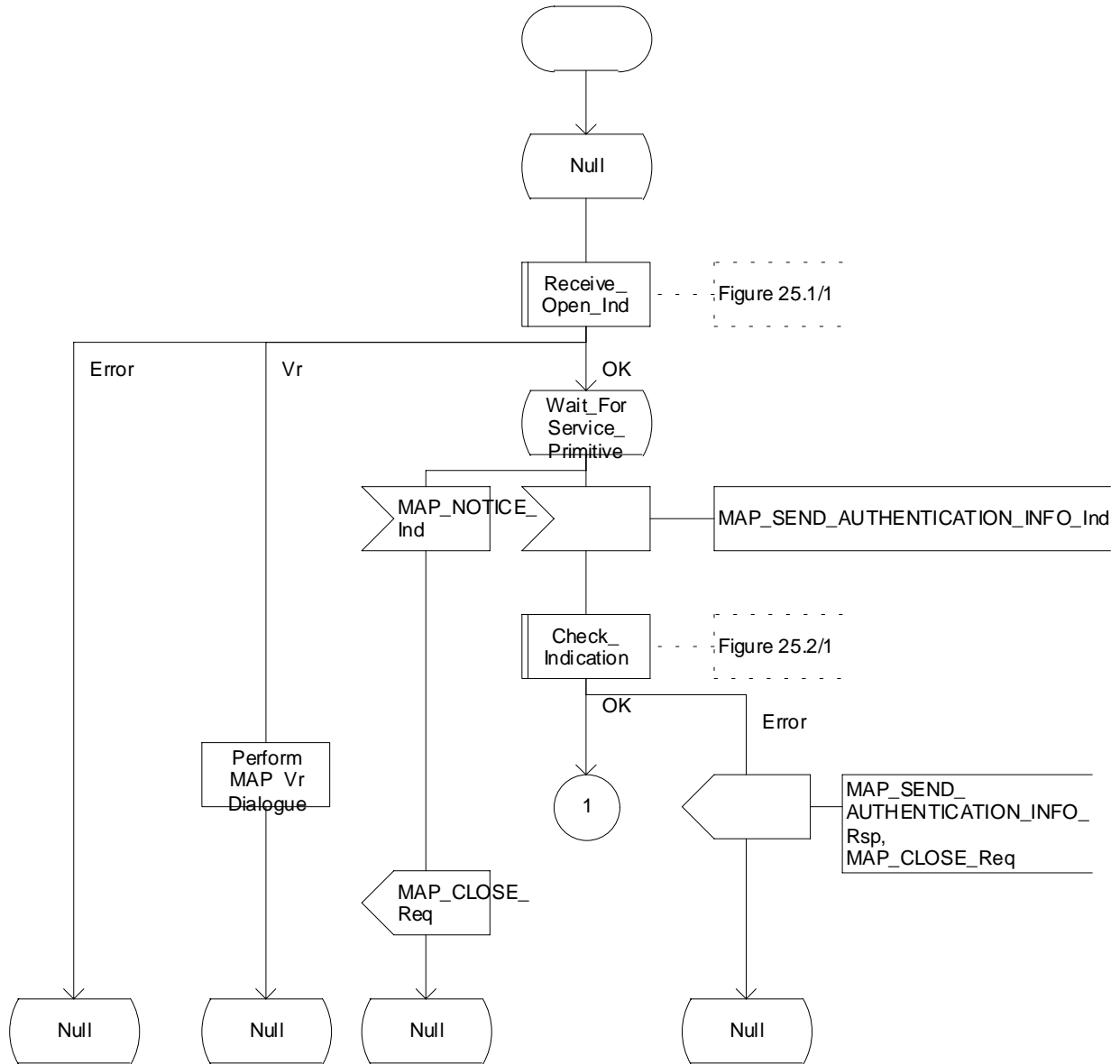
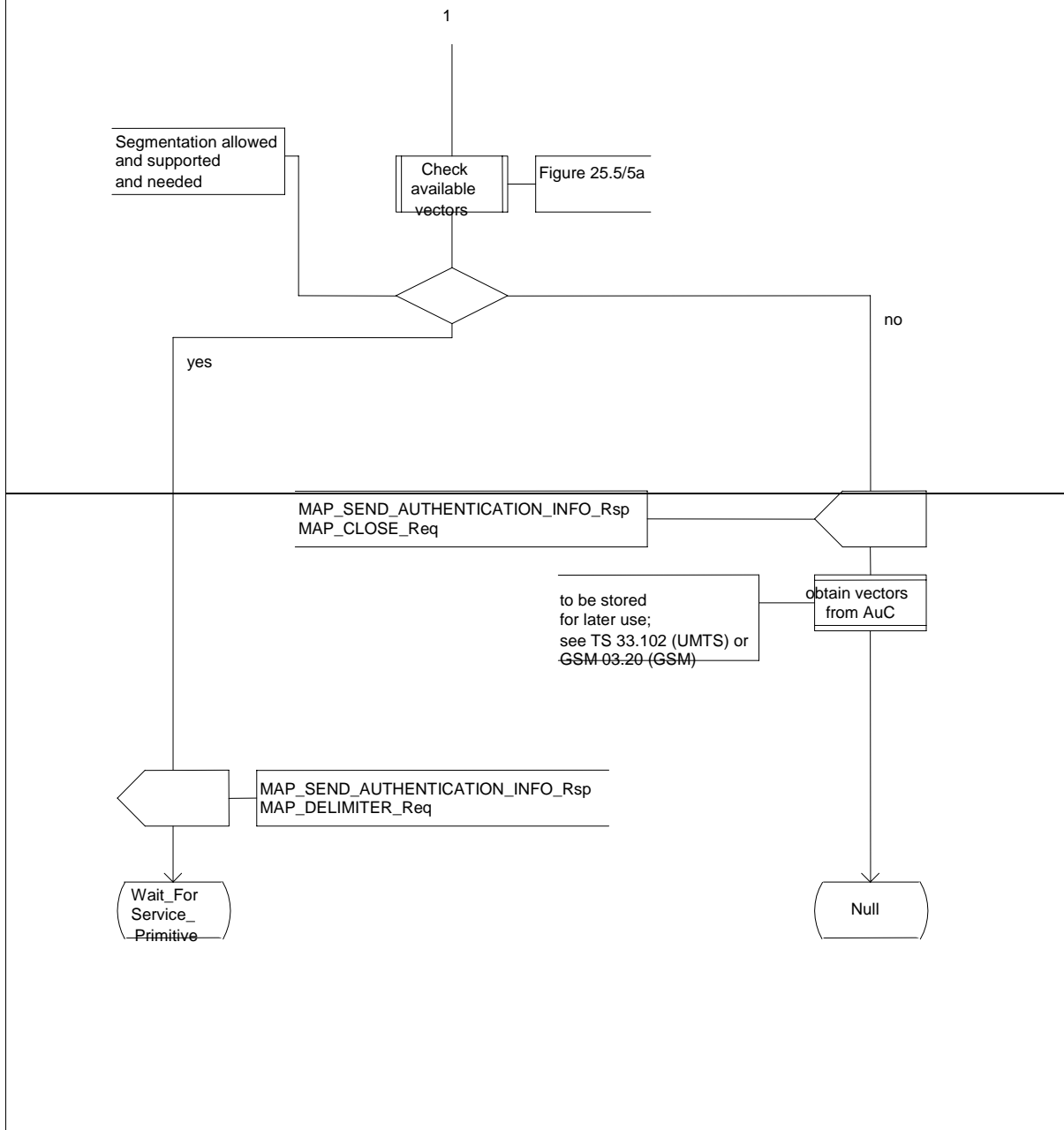


Figure 25.5/5 (sheet 1 of 2): Process Obtain_Auth_Sets_HLR

Process

2(2)

Figure 25.5/5: Process in the HLR to obtain authentication sets from the AuC and relay them to the VLR



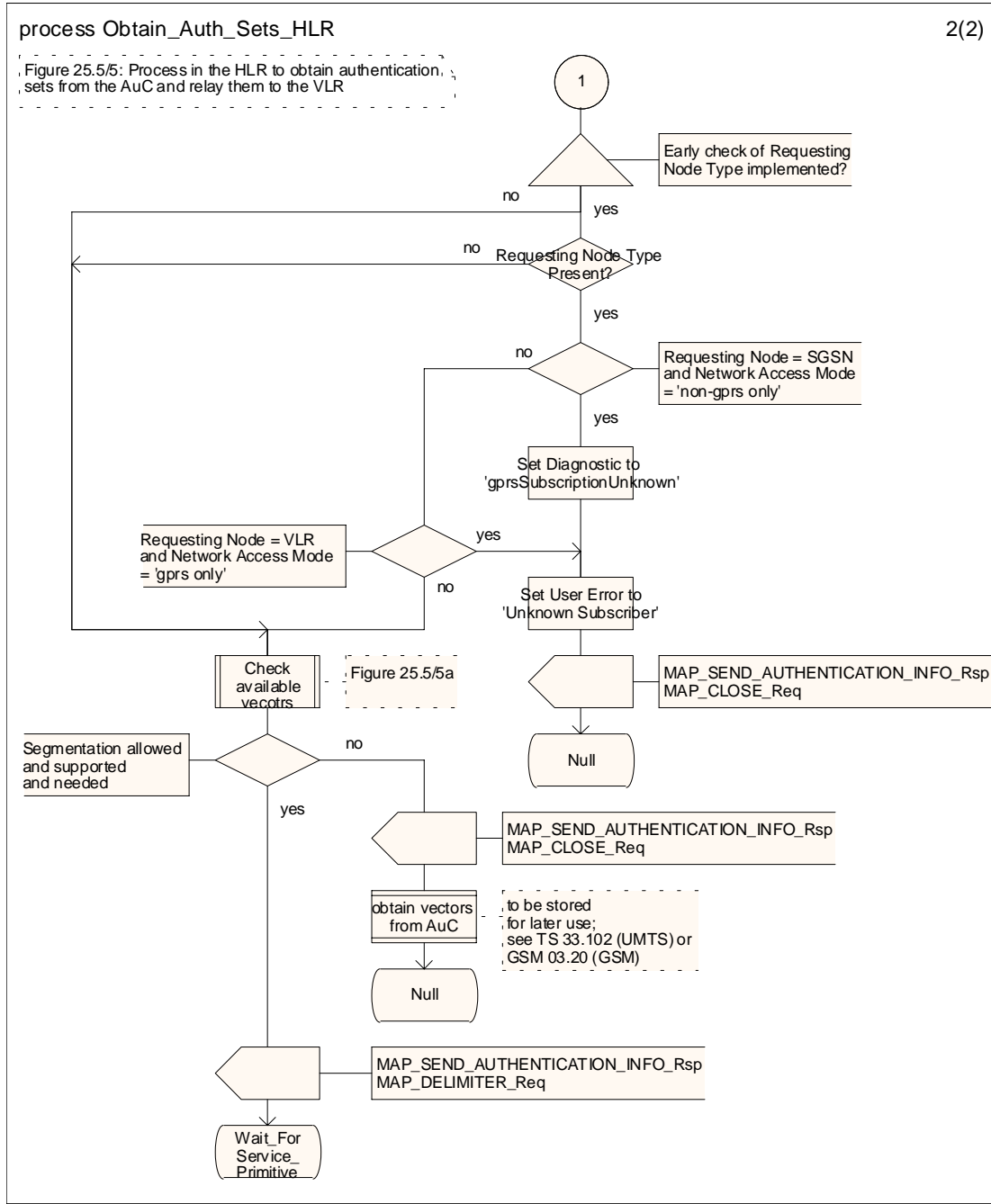


Figure 25.5/5 (sheet 2 of 2): Process Obtain_Auth_Sets_HLR