

CHANGE REQUEST

⌘ **23.012 CR 015** ⌘ rev **4** ⌘ Current version: **5.2.0** ⌘

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

Title:	⌘ Addition of ADD feature		
Source:	⌘ Ericsson L.M., Siemens, Telefonica, T-mobile		
Work item code:	⌘ TEI6	Date:	⌘ 11/03/2004
Category:	⌘ B	Release:	⌘ Rel-6
	<i>Use one of the following categories:</i> 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 .		<i>Use one of the following releases:</i> 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:	⌘ Location Management procedures need to be defined for the ADD feature, which is in SA requirement specification 22.101 v6.6.0, including updating of the HLR with the Subscriber's IMEISV if it changes.
Summary of change:	⌘ Procedures defined for VLR to check if subscriber's IMEISV has changed during location update/IMSI attach and if so send the IMEISV in an Update Location message to the HLR
Consequences if not approved:	⌘ ADD feature not complete

Clauses affected:	⌘ 1.2, 4.1.2.1, 4.1.2.1a, 4.1.3.1										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X	⌘	29.002 CR 718, 23.008 CR 130, 23.060 CR 488, 29.060 CR 488, 29.018 CR 041
Y	N										
X											
	X										
	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.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.

First modification

1.2 Abbreviations

Abbreviations are listed in 3GPP TR 21.905 [1].

In addition, for the purposes of the present document, the following abbreviations apply:

<u>ADD</u>	<u>Automatic Device Detection</u>
PUESBINE	Provision of User Equipment Specific Behaviour Information to Network Entities
UESBI-Iu	User Equipment Specific Behaviour Information over the Iu interface

Next modification

4.1.2 Detailed procedure in the VLR

4.1.2.1 Process Update_Location_Area_VLR

General comment: at any stage in the location updating process the MSC may receive an indication from the BSS that the MM transaction has been released. The MSC then sends an Abort signal to the VLR. Upon receipt of this message, the VLR shall follow one of two possible courses of action.

The two possible courses of action and the conditions determining which course shall be taken are as follows:

1. If a successfully authenticated radio connection is already established before the Abort message is received, the VLR shall ignore the message.
2. If a successfully authenticated radio connection has not been established before the Abort message is received, the VLR shall abort the Update Location Area process and return to the idle state.

Sheet 1: the location area updating process will be activated by receiving an Update Location Area indication from the MSC. If there are parameter errors in the indication, the process is terminated with the appropriate error sent in the Update Location Area response to the MSC. Else, the behaviour will depend on the subscriber identity received, either an IMSI or a TMSI.

~~Sheet 1: the handling starting with the procedure call "Retrieve_IMEISV_If_required" and finishing with the output signal "Send_UESBI-Iu to Access Network" is specific to PUESBINE. If the VLR does not support PUESBINE, processing continues with the test "Identity used?".~~

The ADD function is an optional feature that allows the HLR to be updated with the current User Equipment (IMEISV) and thus enables the network to configure the subscriber's equipment based on a predefined profile. A device management system can retrieve the IMEISV either from VLR or from HLR, or be triggered by a changed IMEISV in either VLR or HLR. The mechanism for the configuration is outside the scope of this specification. The VLR requests the IMEISV and checks if the stored value is identical to the current one provided at the IMSI Attach/Location Update. If the IMEISV is not the same an Update Location message on MAP to the HLR is triggered including the IMEISV.

Sheet 2: at the decision "HLR updating required?" the "True" branch shall be taken if and only if one or more of the following conditions is true:

- (1) Location Info Confirmed in HLR is false.
- (2) Data Confirmed by HLR is false.

Sheet 2: : The execution of the test "HLR supports ADD?" and the action "set: skip subscriber data update" is an operator configurable option.

Sheet 3: the procedure Obtain_IMSI_VLR is specified in 3GPP TS 23.018 [5a].

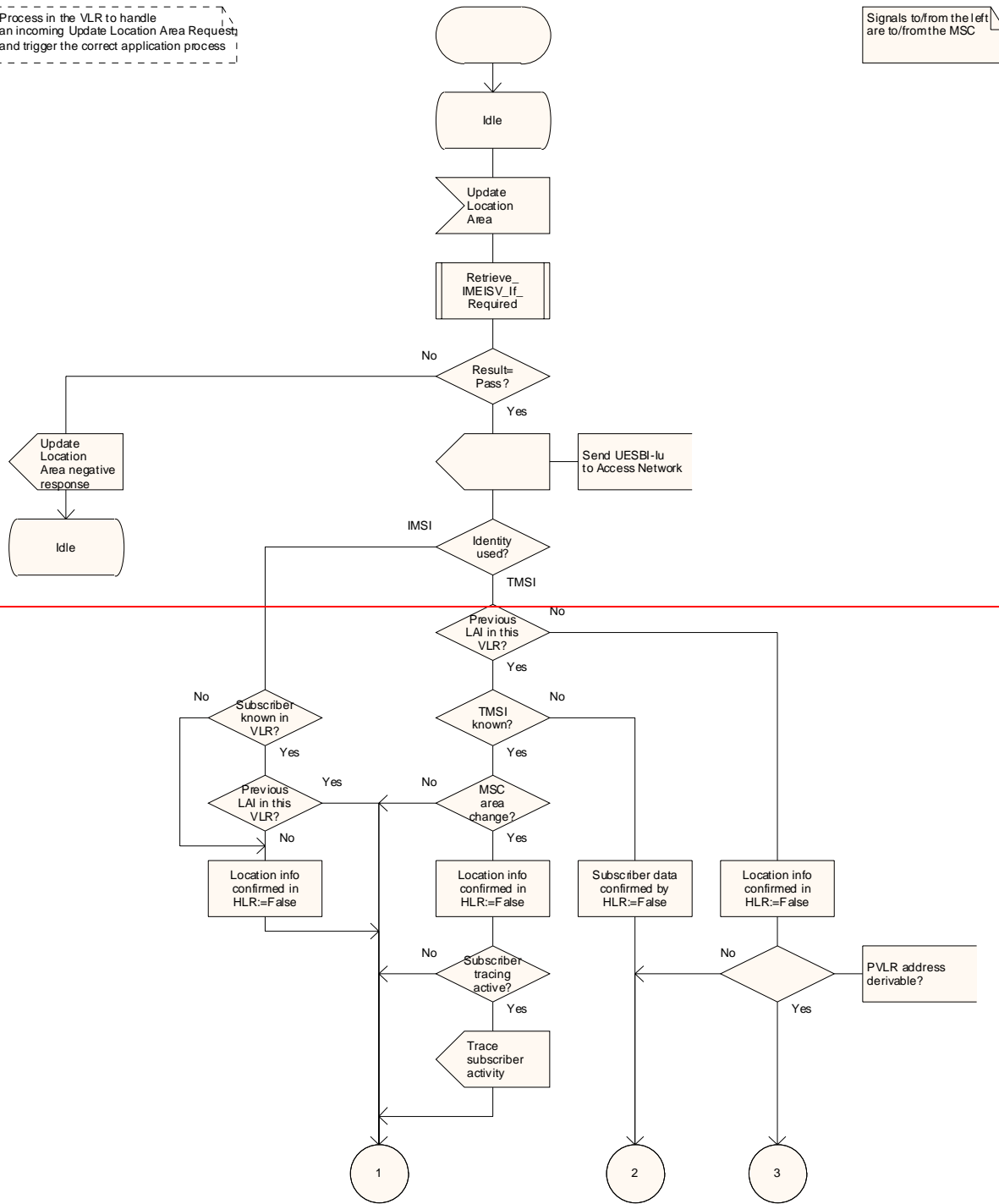
The type of Location Update is retrieved in 3G TS 23.078 procedure 'Set_Notification_Type' and is returned into the 'Notify' variable; this information is necessary for the CAMEL Mobility Management event notification procedure 3G TS 23.078 'Notify_gsmSCF'.

process Update_Location_Area_VLR

ULA_VLR1(3)

Process in the VLR to handle an incoming Update Location Area Request and trigger the correct application process

Signals to/from the left are to/from the MSC



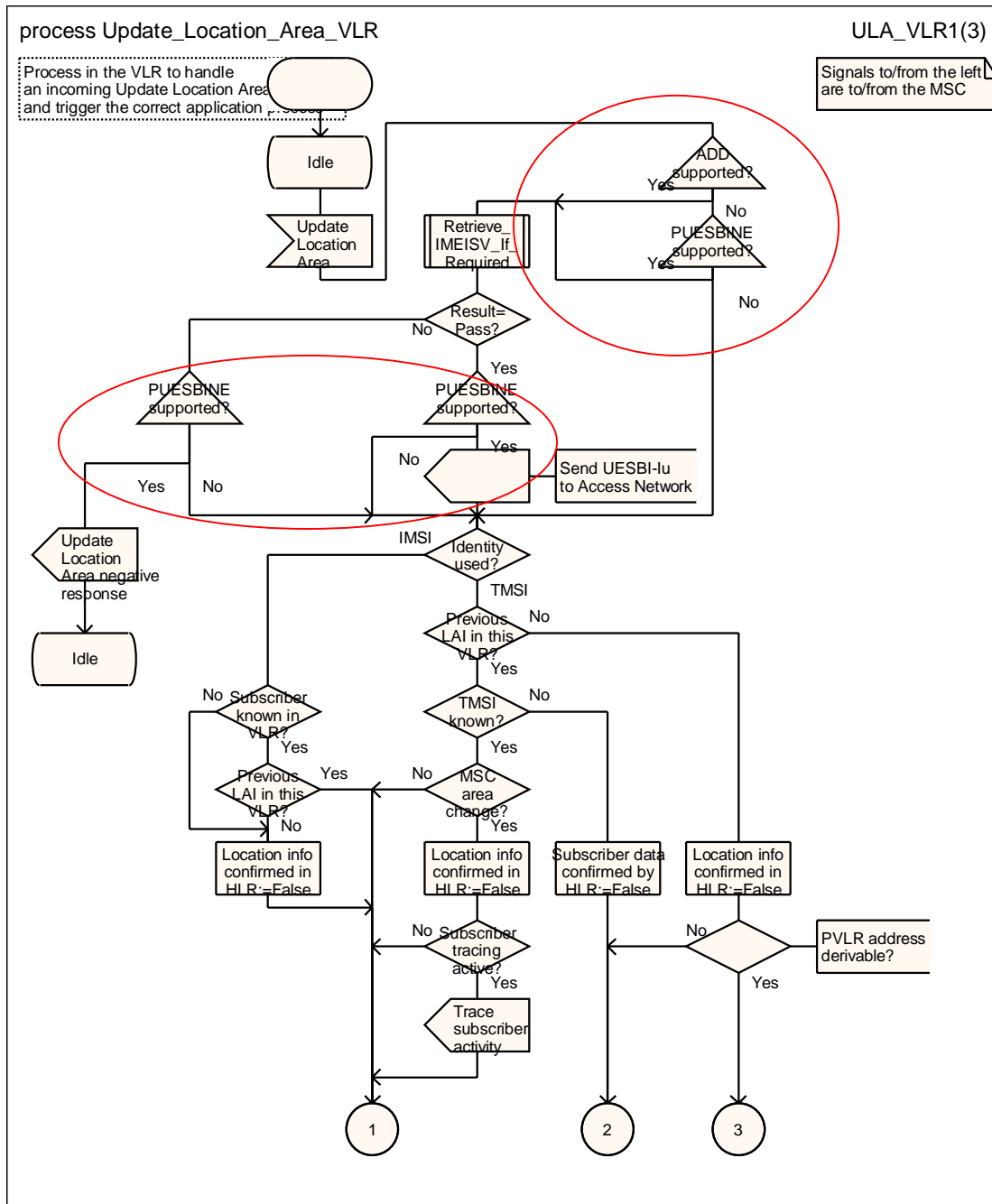


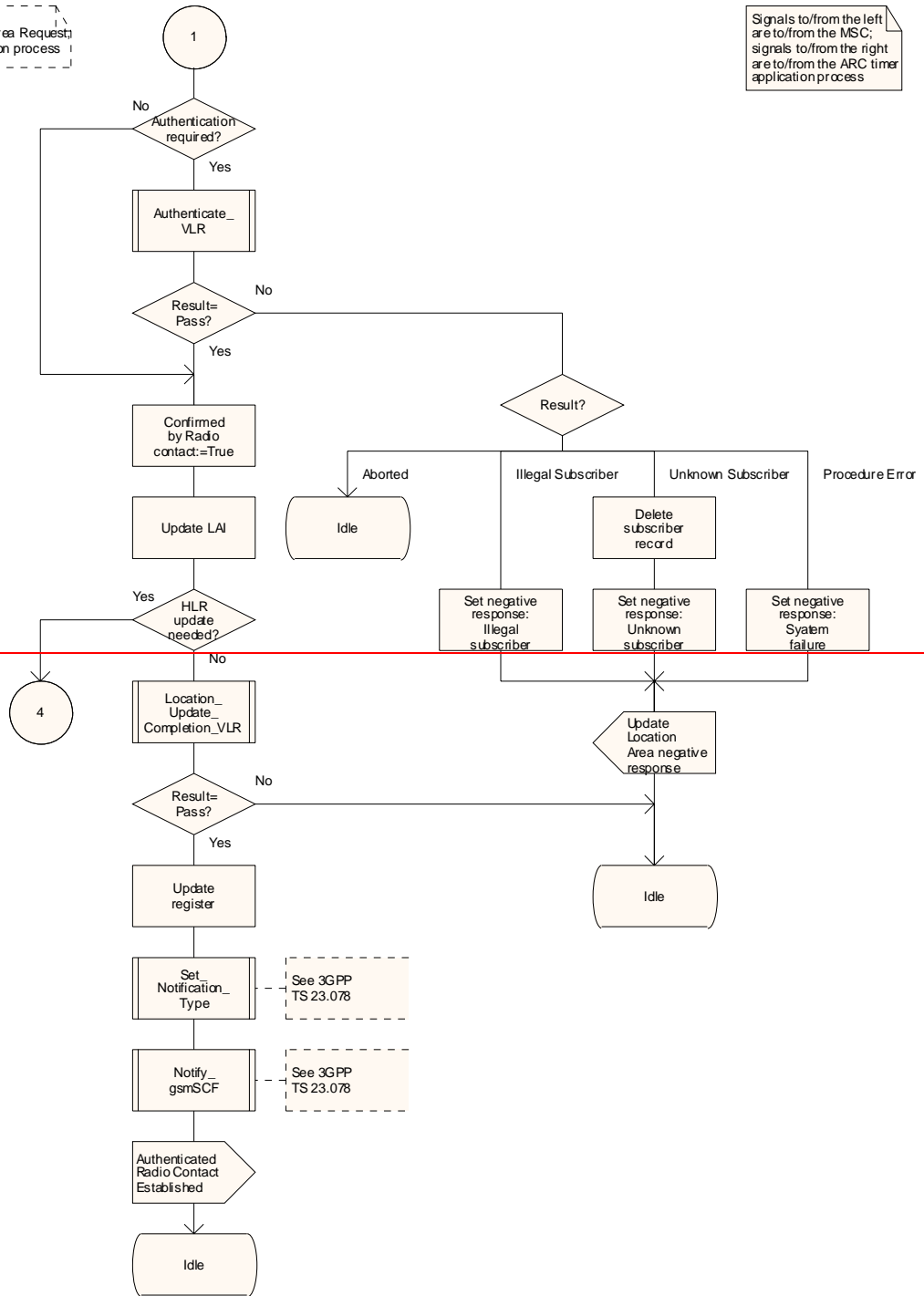
Figure 4.1.2.1 (sheet 1 of 3): Process Update_Location_Area_VLR

process Update_Location_Area_VLR

ULA_VLR2(3)

Process in the VLR to handle an incoming Update Location Area Request and trigger the correct application process

Signals to/from the left are to/from the MSC; signals to/from the right are to/from the ARC timer application process



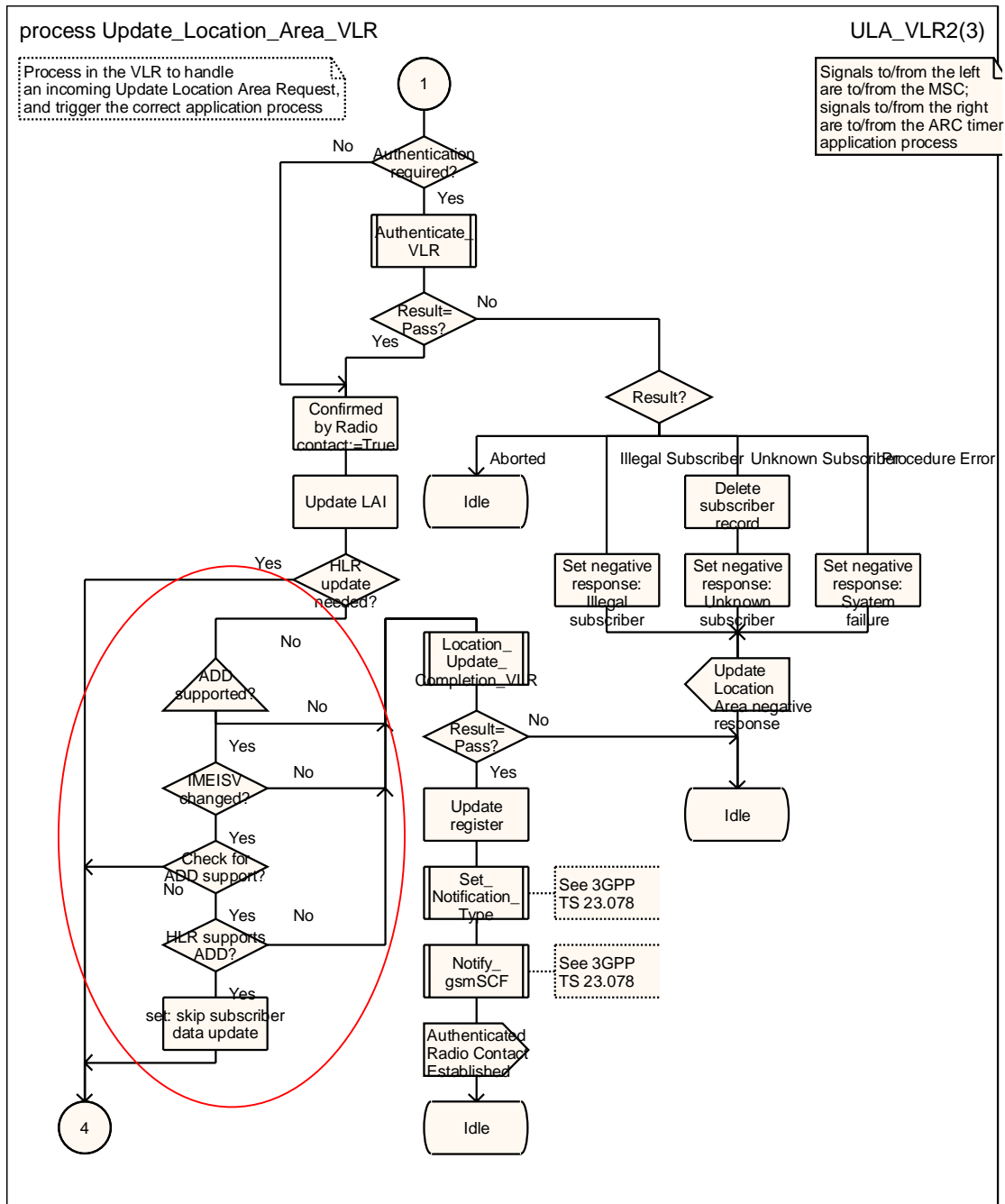


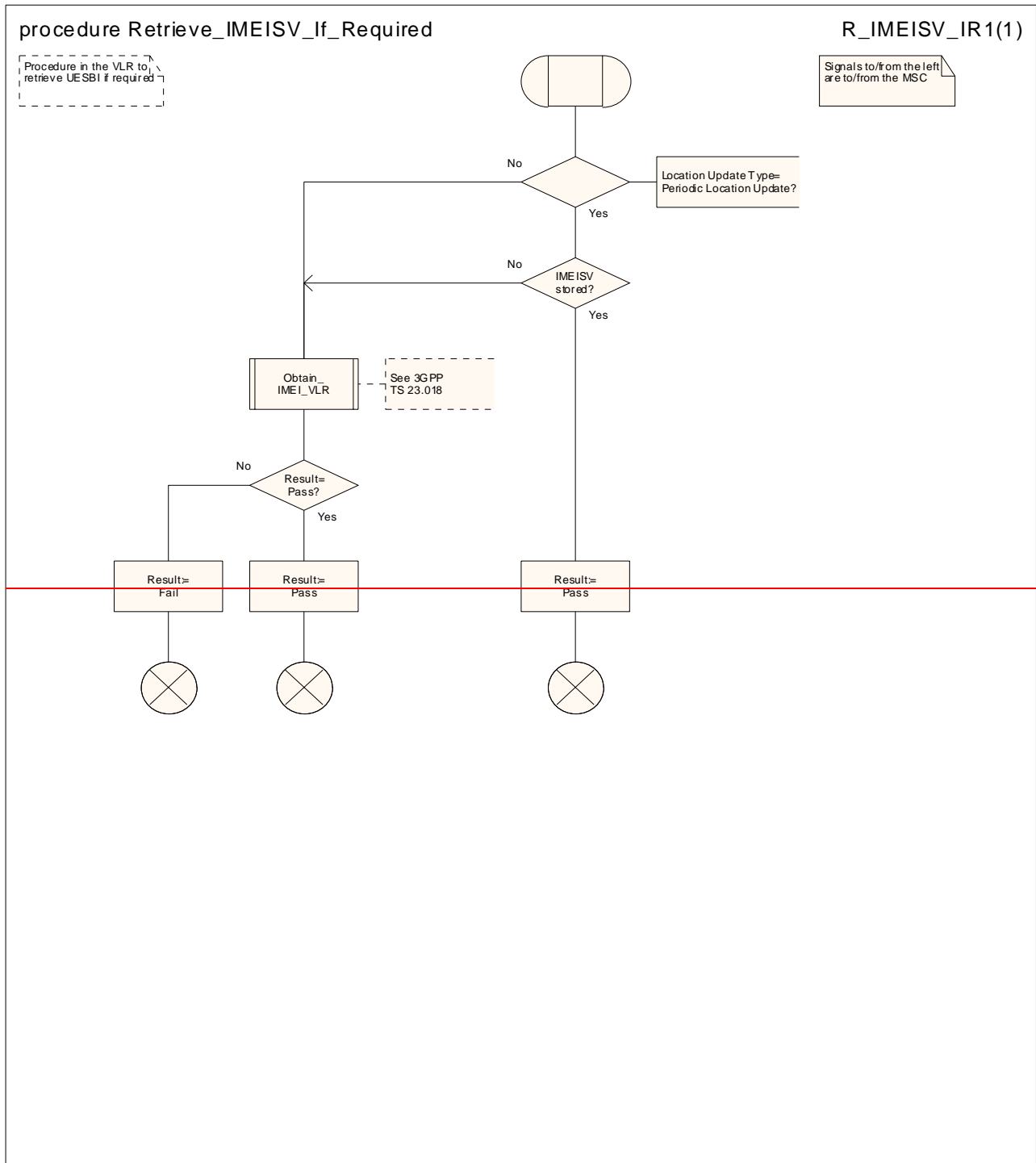
Figure 4.1.2.1 (sheet 2 of 3): Process Update_Location_Area_VLR

Next modification

4.1.2.1a Procedure Retrieve_IMEISV_If_Required

The procedure Obtain_IMEI_VLR is specified in 3GPP TS 23.018 [5a].

The decision box "received IMEISV = stored IMEISV" takes the "No" exit if no IMEISV is stored.



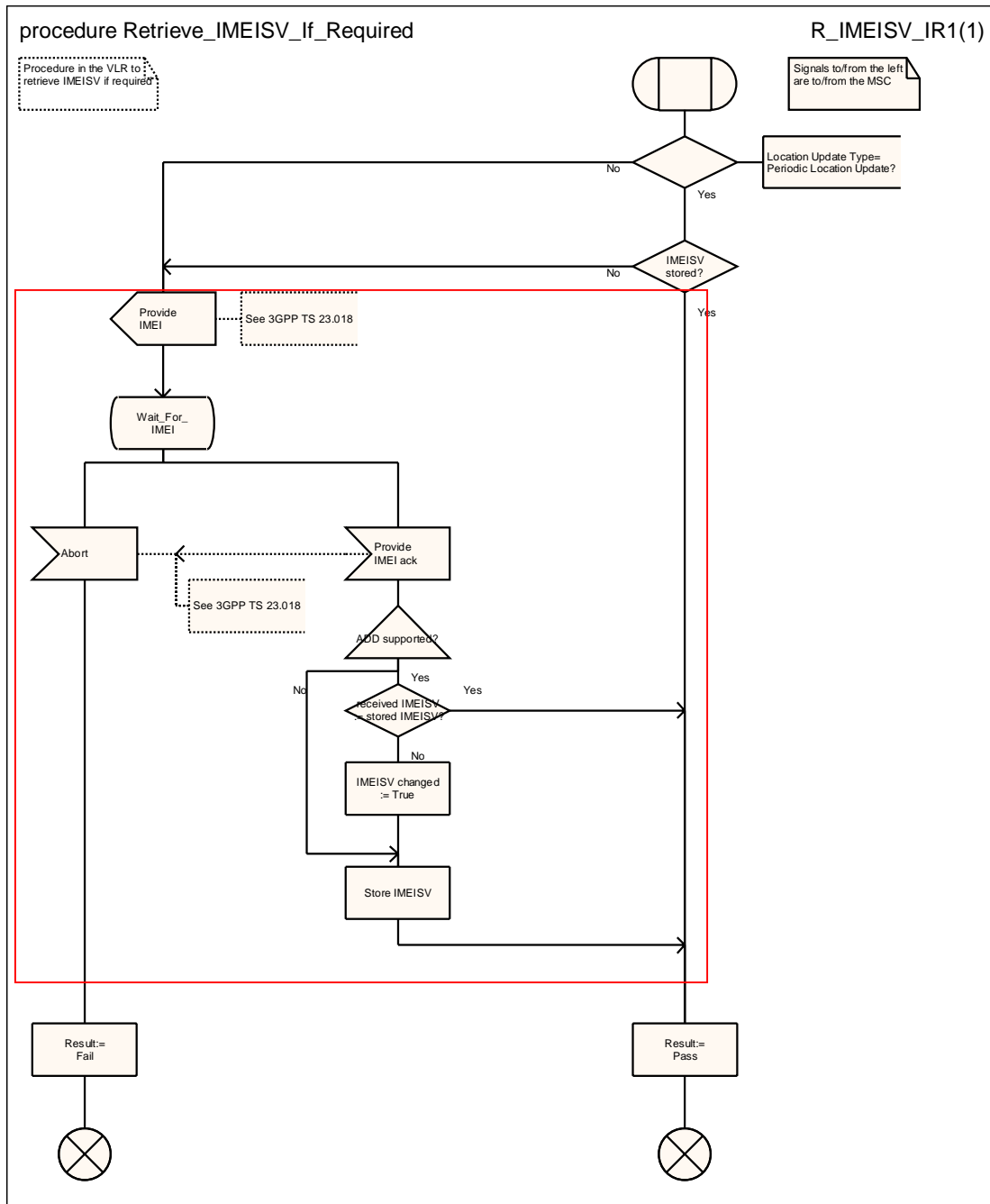


Figure 4.1.2.1A: Procedure Retrieve_IMEISV_If_Required

Next modification

4.1.3 Detailed procedure in the HLR

4.1.3.1 Process Update_Location_HLR

Sheet 1: The procedure Check_Parameters is specified in 3GPP TS 23.018 [5a].

Sheet 1: The procedure Super_Charged_Cancel_Location_HLR is specific to Super-Charger; it is specified in TS 23.116 [7]. If the previous VLR and the originating HLR support the Super-Charger functionality, processing continues from the "Yes" exit of the test "Result=Pass?".

Sheet 2: The procedure Super_Charged_Location_Updating_HLR is specific to Super-Charger; it is specified in TS 23.116 [7]. If subscription data needs to be sent to the VLR, processing continues from the "No" exit of the test "Result=Pass?".

Sheet 2: The execution of the test "skip subscriber data update?" is optional and depends on the presence of the relevant indication from the VLR. If no indication is received, then the result of the test is "No".

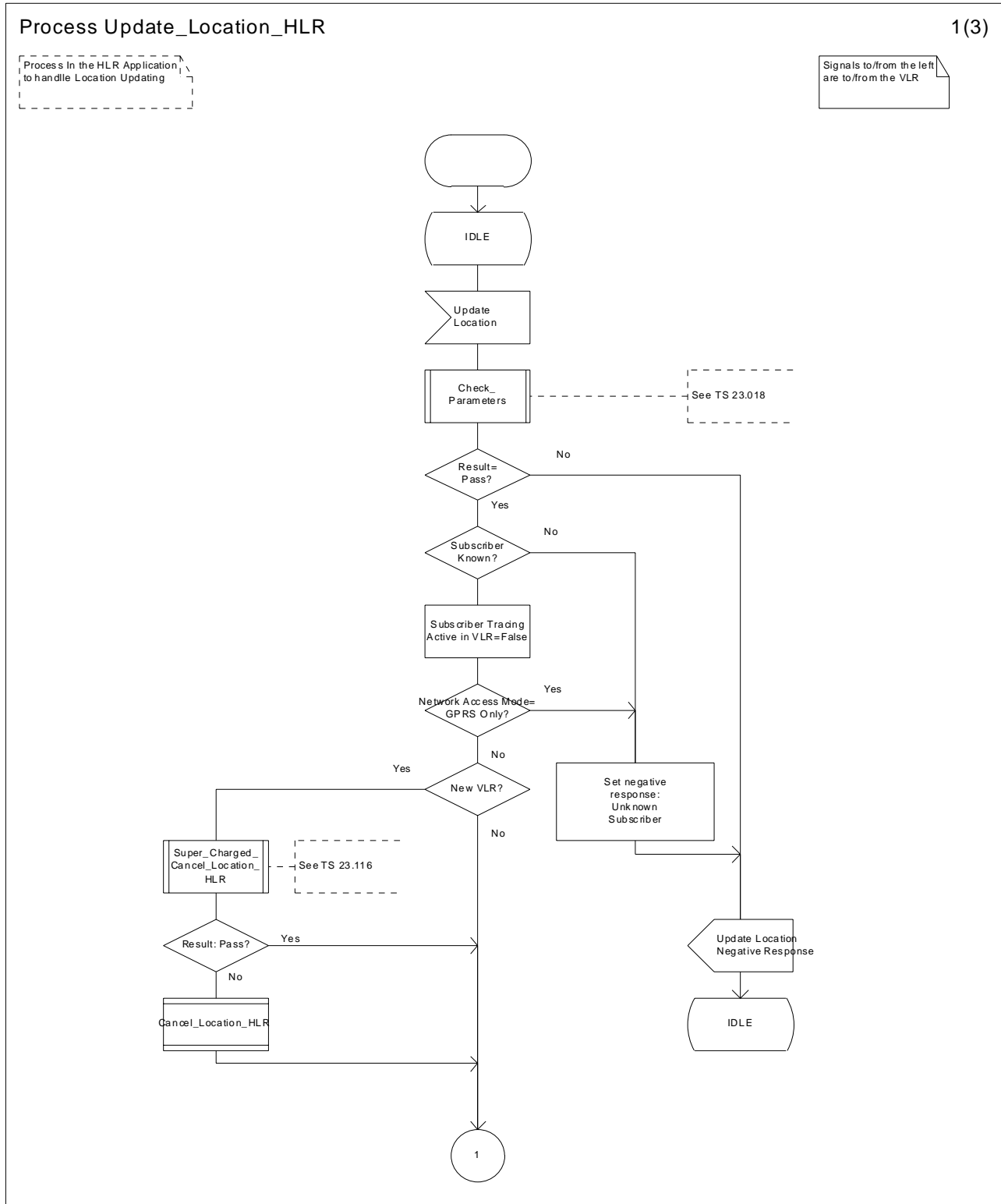


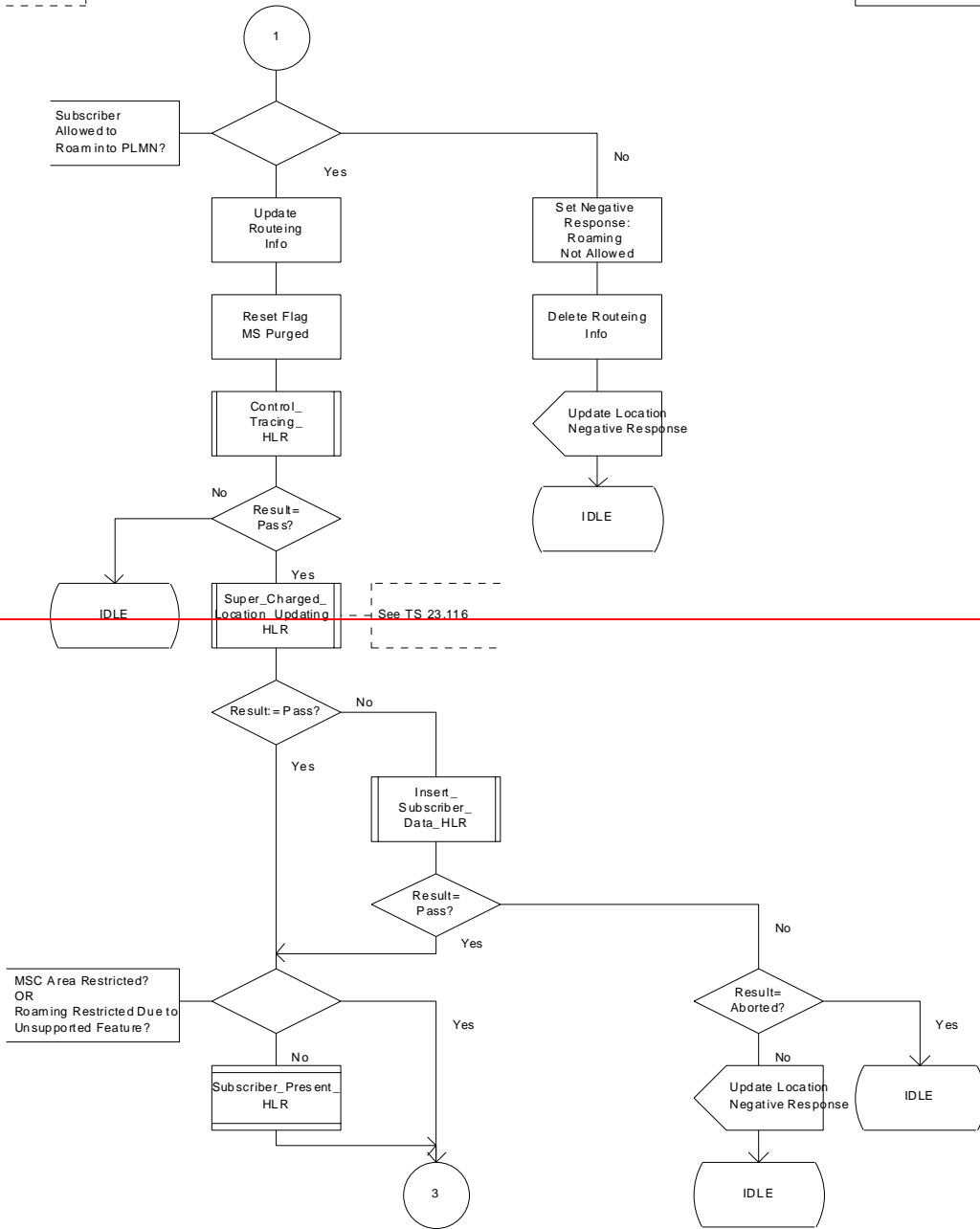
Figure 4.1.3.1 (sheet 1 of 3): Process Update_Location_HLR

Process Update_Location_HLR

2(3)

Process In the HLR Application to handle Location Updating

Signals to/from the left are to/from the VLR



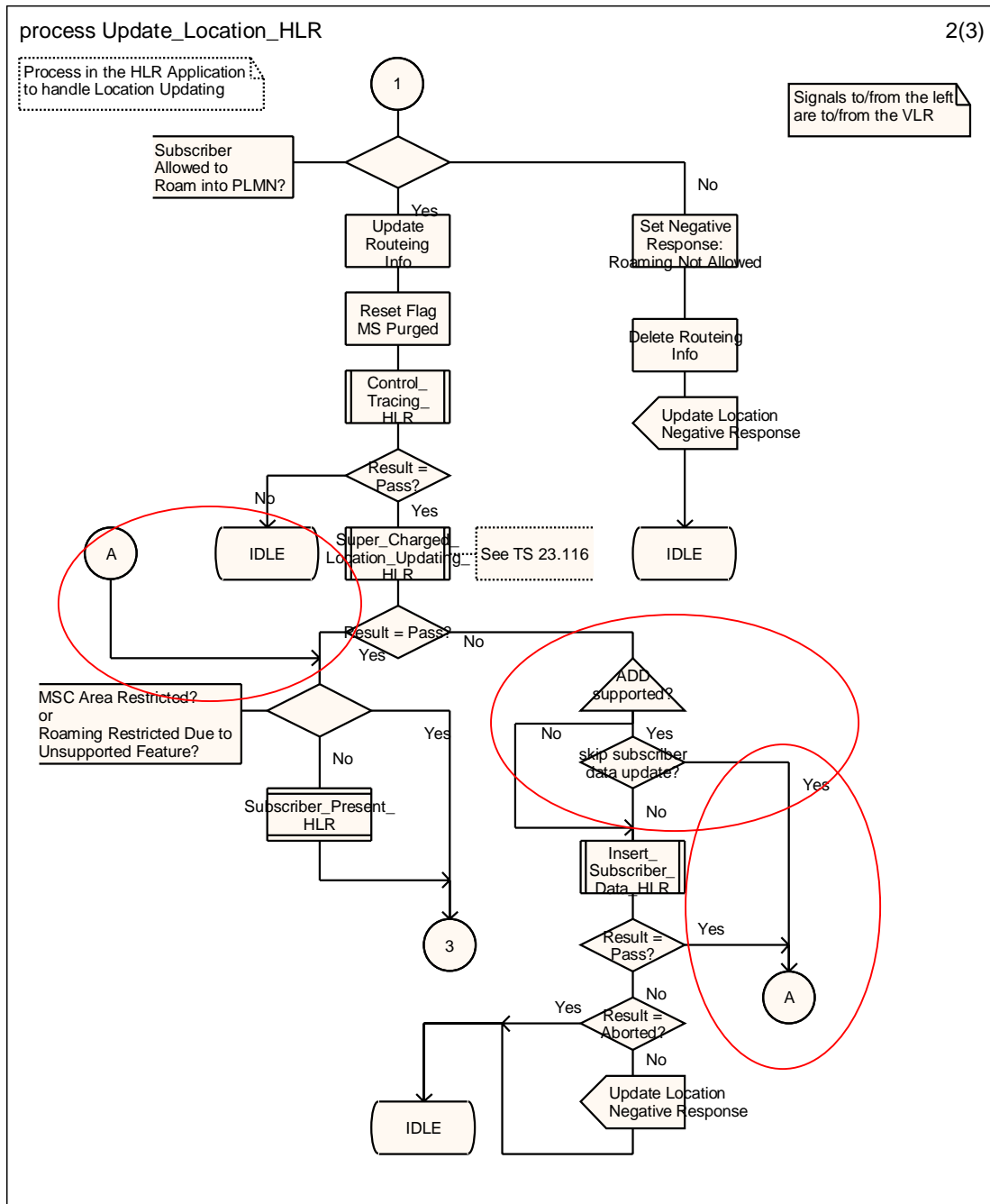


Figure 4.1.3.1 (sheet 2 of 3): Process Update_Location_HLR

Modification end