
Source: TSG SA WG2
Title: CRs on 23.195 (Early UE)
Agenda Item: 7.2.3

The following Change Requests (CRs) have been approved by TSG SA WG2 and are requested to be approved by TSG SA plenary #24.

S2 doc #	Title	Spec	CR #	cat	Versi on in	Rel	WI	S2 meeting	Clauses affected
S2-042828	IMEISV obtaining for UEs supporting only UMTS radio access	23.195	011r1	F	5.3.0	5	LATE_ UE	S2 #41	5.2.1.1; 5.2.14.2

CR-Form-v7.1

CHANGE REQUEST

⌘ **23.195 CR 011** ⌘ rev **1** ⌘ Current version: **5.3.0** ⌘

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:	⌘ IMEISV obtaining for UEs supporting only UMTS radio access		
Source:	⌘ SA2 (Nokia)		
Work item code:	⌘ LATE_UE	Date:	⌘ 18/08/2004
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> 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) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: <i>Ph2</i> (GSM Phase 2) <i>R96</i> (Release 1996) <i>R97</i> (Release 1997) <i>R98</i> (Release 1998) <i>R99</i> (Release 1999) <i>Rel-4</i> (Release 4) <i>Rel-5</i> (Release 5) <i>Rel-6</i> (Release 6) <i>Rel-7</i> (Release 7)

Reason for change:	⌘ Currently stage 2 specification mandates obtaining of IMEISV for all UEs at IMSI attach and for normal location updating if the IMSI was not previously registered in the VLR. However, it was recently decided that UESBI-Iu shall not be conveyed to GERAN over A-interface. As a consequence of this decision the IMEISV must be obtained over A-interface only from UEs supporting UMTS radio access technology. It should be noted that for UEs supporting UMTS radio access technology the IMEISV needs to be obtained also when the UE performs attach or location update over A-interface. The IMEISV is needed in case of forthcoming inter-system handovers to UMTS.
Summary of change:	⌘ In clause 5.2.1.1 and 5.2.14.2 it is clarified that the IMEISV obtaining is required for UMTS capable UEs only.
Consequences if not approved:	⌘ The specification forces implementations to obtain IMEISV for UEs that UESBI-Iu information is never used. In early phases of mixed GSM-UMTS networks majority of the UEs are still GSM/GERAN only capable.

Clauses affected:	⌘ 5.2.1.1; 5.2.14.2										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	⌘	X	⌘	X	⌘	X		
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.

5.2 UESBI-Iu signalling flows

5.2.1 CS attach / normal location update without Gs

5.2.1.1 Obtaining the IMEISV

In order for the UESBI-Iu functionality to perform satisfactorily, the CS domain shall indicate that IMSI Attach-Detach shall be applied in both 2G and 3G cells.

When the UE sends a Location Updating Request message to the MSC/VLR, then:

- a) if the Location Updating Type is set to "IMSI attach", the MSC/VLR shall obtain the IMEISV from the UE;
- b) if the Location Updating Type is set to "Periodic updating", the MSC/VLR need not obtain the IMEISV from the UE;
- c) if the Location Updating Type is set to "Normal Location Updating" then the MSC/VLR should obtain the IMEISV from the UE.

In order to limit unnecessary signalling, for cases (a) and (c) above the MSC/VLR need not obtain the IMEISV for UE's which cannot support UMTS. The detection of non-support of UMTS can be based on Revision Level (GSM phase 1 or GSM phase 2 mobile station) in MS Classmark 1 or MS Classmark 2.

For case (c) above, the MSC/VLR shall obtain the IMEISV if the IMSI was not previously registered in the VLR. Optimisation of the MSC/VLR behaviour for case (c) is permitted in order to balance the signaling load caused by obtaining the IMEISV at every intra-MSC normal location update against the chances that the MSC/VLR does not discover IMEISV changes caused by the SIM being inserted into a new UE which then Location Updates to a new LA within the same MSC/VLR.

- Note 1: If any mismatch between the UE's IMEISV and the IMEISV stored in the MSC/VLR leads to the user having problems, then the problems may be cleared by the user switching the UE off and back on, forcing a CS domain IMSI Attach to occur.
- Note 2: any such optimisations should be re-evaluated if the Supercharger (see TS 23.116 [12]) or Intra Domain Connection of RAN Nodes to Multiple CN nodes ("Iu-flex", TS 23.236 [10]) features are implemented in the MSC/VLR.

The MSC/VLR can obtain the IMEISV by either the MM Identification Procedure defined in TS 24.008 [3] or by using the Cipher Mode Control procedure defined in TS 48.008 [8].

5.2.1.2 Transfer of UESBI-Iu to RAN

Because of potential UE problems with the Security procedures, the MSC/VLR shall send the UESBI-Iu information to the RNC before sending the RANAP Security Mode Command message to the RNC.

*****NEXT CHANGE *****

5.2.14 Emergency call handling

5.2.14.1 Mobile with (U)SIM registered in MSC/VLR

This is handled as in clause 5.2.7.1, above.

5.2.14.2 Mobile without (U)SIM, or, Mobile with (U)SIM that is not registered in MSC/VLR

The MSC/VLR shall request the IMEISV from the UE using the MM Identification procedure. Once the IMEISV has been obtained, the MSC/VLR shall send the UESBI-Iu to SRNC. On the Iu interface, the UESBI-Iu shall be sent to the SRNC before the RAB Assignment Request message is sent.

In order to limit unnecessary signalling, the MSC/VLR need not obtain the IMEISV for UEs which cannot support UMTS. The detection of non-support of UMTS can be based on Revision Level (GSM phase 1 or GSM phase 2 mobile station) in MS Classmark 1 or MS Classmark 2.