

Source: Siemens

Title: Problem with no USIM-ME interface in GSM-only ME

Document for: Discussion and decision

Agenda item:

1. Problem setting

From various other working groups we have to provide interoperation for a USIM inserted in the following type of ME:

Release 99 ME capable of the UTRAN radio interface
shall support the USIM-ME interface, hence UMTS AKA is executed

Release 99 ME not capable of the UTRAN radio interface
shall not/may support the USIM-ME interface, hence GSM AKA is executed

Pre-release 99 ME (not capable of the UTRAN radio interface)
shall not support the USIM-ME interface, hence GSM AKA is executed

The Release 99 VLR/SGSN receives from the UE an indication of what Release the ME is – and shall

Send a UMTS challenge (i.e., RAND and AUTN)
when the UE is Release 99

Send a GSM challenge (i.e., RAND)
when the UE is Pre-release 99

When the UE is Release 99 two things may now happen:

The Release 99 ME supports UMTS AKA, RAND and AUTN are passed to the USIM, the USIM computes RES (max. 128 bits) and the ME sends **RES (max. 128 bits)** to the VLR/SGSN.

The Release 99 ME does not support UMTS AKA, AUTN is ignored, RAND is passed to the USIM, the USIM computes SRES (32 bits) and the ME sends **SRES (32 bits)** to the VLR/SGSN.

The problem therefore is that the VLR/SGSN may receive two different responses, and does not know beforehand which it will receive.

2. Proposal

In response to a UMTS challenge (i.e., RAND and AUTN) that possibly went over a UTRAN, the VLR/SGSN accepts both RES (max. 128 bits) and SRES (32 bits).