

3GPP TSG SA WG3 Security — S3#35
St Paul's Bay, Malta, 5–8 October 2004

Tdoc **S3-040738**

CR-Form-v7.1

PSEUDO CHANGE REQUEST

33.def CR CRNum rev - Current version: **0.0.2**

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: Removing an editor's note in section 7.2.1

Source: Nokia

Work item code: Security for early MS **Date:** 27/09/2004

Category:
Use one 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](#).

Release:
Use one of the following releases:
Ph2 (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)
Rel-7 (Release 7)

Reason for change: Having RADIUS to DIAMETER conversion in the interface between GGSN and HSS is a useful implementation alternative so that HSS will not need to support RADIUS. Therefore it is appropriate to have this alternative as a Note instead of an editor's note.

Summary of change: Change the editor's note in 7.2.1 into a Note

Consequences if not approved:

Clauses affected: 7.2.1

	Y	N
Other specs affected:	<input type="checkbox"/>	<input type="checkbox"/>
Other core specifications	<input type="checkbox"/>	<input type="checkbox"/>
Test specifications	<input type="checkbox"/>	<input type="checkbox"/>
O&M Specifications	<input type="checkbox"/>	<input type="checkbox"/>

Other comments:

7.2.1 Update of mobile's IP address in HSS depending on PDP context state

During PDP context request towards the IMS, the GGSN shall send a RADIUS "ACCOUNTING-REQUEST START" message to a RADIUS server attached to the HSS. The message shall include the UE's IP address and MSISDN. The format of the message shall be compliant with 3GPP TS 29.061 [4]. On receipt of the message, the HSS shall use the MSISDN to find the subscriber's IMPI (derived from IMSI) and then store the IP address against the IMPI.

NOTE1: It is assumed here that the RADIUS server for handling the accounting request to receive the IP address from the GGSN is different to the RADIUS server that the GGSN may use for access control and IP address assignment. However, according to TS 23.060 [5] there is no limitation on whether RADIUS servers for Accounting and Access control have to be separate or combined.

~~Editor's note: An alternative approach would be to re-use the AAA architecture of I-WLAN i.e. the 3GPP AAA Proxy or Server and its capability to perform RADIUS to DIAMETER conversion such that the HSS will not specifically need to support RADIUS (existing DIAMETER functionality of HSS can be re-used). This is ffs.~~

NOTE2: It is also possible to utilize RADIUS to DIAMETER conversion in the interface between GGSN and HSS. This makes possible to utilize the existing support for DIAMETER in HSS. One possibility to implement the conversion is to re-use AAA architecture of I-WLAN i.e. the 3GPP AAA Proxy or Server and its capability to perform RADIUS to DIAMETER conversion.

GGSN shall not activate the PDP context if the accounting start message is not successfully handled by the HSS. In particular, it shall not be possible to have an active IMS PDP context if the corresponding IP address is not stored in the HSS.

In case of PDP context deletion, the GGSN sends an "ACCOUNTING-REQUEST STOP" message to the HSS after the idle timer in the GGSN expires. The HSS shall then start the 3GPP HSS-initiated de-registration procedure.

If the UE establishes a new PDP context and therefore gets a new IP address, the UE shall start the IMS initial registration procedure. Because the idle timer in the GGSN could be set with a large value, e.g. 1 hour, it is quite likely that the UE will send a PDP context creation request before the idle timer expires. Two cases are distinguished:

- If the PDP context creation request is processed by the same SGSN as the old PDP context, then the SGSN will assign the existing PDP context to the UE. Therefore the IP address of the UE is unchanged and the IMS registration is still valid.
- If the PDP context creation request is processed by a different SGSN compared to the old PDP context, e.g. in case of a routing area update, the SGSN will create a new PDP context for the UE. In this case the GGSN shall send an "ACCOUNTING-REQUEST START" to the HSS with the new IP address. Because this IP address is different to the IP address the UE registered with, the HSS shall start the 3GPP HSS-initiated de-registration procedure. Later, the idle timer for the old PDP context expires and the old PDP context will be deleted by the GGSN. The HSS will be informed about the event via the "ACCOUNTING-REQUEST STOP" message. The HSS checks the IP address indicated by the "ACCOUNTING-REQUEST STOP" message against the IP address stored in the HSS. If they are the same, a network-initiated de-registration procedure shall be started. In this case they are different, so the HSS shall then ignore the message.