

## PSEUDO CHANGE REQUEST

⌘ **33.878 Pseudo-CR CRNum** ⌘ rev **1-** ⌘ Current version: **0.0.3** ⌘

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

<b>Title:</b>	⌘ Correction of idle timer-related issues		
<b>Source:</b>	⌘ Huawei, Siemens, Vodafone		
<b>Work item code:</b>	⌘ Early IMS	<b>Date:</b>	⌘ 25/11/2004
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-6
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: 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)

<b>Reason for change:</b>	⌘ Idle timer is not mentioned in any 3G specification, is not needed for this TR, use may be implementation-dependent. Furthermore, the text seems unclear in places. A dependency of non-IMS services sharing a PDP context with IMS services on the correct functioning of IMS is removed.
<b>Summary of change:</b>	⌘ The text is clarified so that there is no need to mention an idle timer. Dependency of RADIUS account start confirmation on HSS-initiated IMS de-registration is changed.
<b>Consequences if not approved:</b>	⌘ Unclear text about idle timer. Unnecessary dependency.

<b>Clauses affected:</b>	⌘ 7.2.1						
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
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<b>Other comments:</b>	⌘ -						

## 7.2.1 Update of UE'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.

NOTE2: It is also possible to utilize RADIUS to DIAMETER conversion in the interface between GGSN and HSS. This makes it possible to utilize the existing support for DIAMETER in the HSS. One possibility to implement the conversion is 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. It should be noted that the GGSN shall always use RADIUS for this communication. Furthermore, it should be noted that DIAMETER is not mandatory to support in the HSS for communication with the GGSN.

GGSN shall not accept the activation of the PDP context if the accounting start message is not successfully handled by the HSS (e.g. a positive Create PDP Context Response should not be sent by the GGSN until the "ACCOUNTING-REQUEST START" response is received or a negative Create PDP Context Response is sent after some RADIUS response timeout occurs). In particular, it shall not be possible to have an active ~~IMS~~-PDP context at associated with the IMS APN 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 When the UE establishes a new its first PDP context at for an the IMS APN and therefore of a GGSN it gets a new IP address is obtained, and the GGSN shall send an "ACCOUNTING-REQUEST START" to the HSS with the assigned new IP address. In case if this IP address is different from the IP address already stored in the HSS with which the UE is registered in the HSS (i.e. the an "old" IP address), the HSS shall start the 3GPP IMS HSS-initiated de-registration procedure, if the UE is IMS registered, using a Cx-RTR/Cx-RTA exchange, and delete the old IP address. If the de-registration procedure is successful The HSS stores the new IP address and confirms the accounting start message to the GGSN when either the de-registration procedure is successfully completed or after a suitable time-out. †The UE shall start the IMS initial registration procedure. The HSS shall abandon the de-registration procedure when a new successful authentication for this user is signalled by the S-CSCF in a Cx-SAR message.~~

~~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.~~

When all the PDP contexts are de-activated at the IMS APN of the GGSN, the GGSN sends an "ACCOUNTING-REQUEST STOP" message to the HSS.

- 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~~HSS-initiated de-registration procedure shall be started, if the UE is registered, using a Cx-RTR/Cx-RTA exchange. In ~~the~~is case they are different, ~~so~~ the HSS shall ~~then~~ ignore the message.