**3GPP TSG-SA WG6 Meeting #63S6-245509**

**Orlando, USA, 18th – 22th Nov 2024 (revision of S6-244616, 5161)**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **23.434** | **CR** | **0335** | **rev** | **3** | **Current version:** | **19.3.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network | **x** |

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| ***Title:***  | Enhancements to location reporting procedure |
|  |  |
| ***Source to WG:*** | Samsung,CATT |
| ***Source to TSG:*** | SA6 |
|  |  |
| ***Work item code:*** | eLSApp |  | ***Date:*** | 2024-11-08 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | In previous meeting, SA6 agreed procedure to provide target VAL UE’s location by surrounding UEs. The procedure assumes that the target VAL UE is always available nearby the VAL UE which is not the case. Also, the requested posioning method also may not be supported by target VAL UE. In such case, the procedure is not clear how to handle. |
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| ***Summary of change:*** | Added clarification to send failure message is VALUE is not able to get target VAL UE’s location as the target VAL UE is moved away or required positioning method is not supported.========================================================Additional changes:1. Add the texts in step 4 of clause 9.3.4 to align with the new description in step 3.
2. Add “failure reason” IE in clause 9.3.2.2.

All of changes have been marked in yellow. |
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| ***Consequences if not approved:*** | The procedure remains ambiguous and not clear.  |
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| ***Clauses affected:*** | 9.3.4,9.3.2.2 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* First Change \* \* \* \*

### 9.3.4 On-demand location reporting procedure

The location management server can request UE location information at any time by sending a location information request to the location management client, which may trigger location management client to immediately send the location report.



Figure 9.3.4-1: On-demand location information reporting procedure

1. Based on configurations such as periodical location information timer, or location information request from other entities (e.g., another location management client, VAL server), location management server initiates the immediately request location information from the location management client.

2. The location management server sends a location information request to the location management client.

3. If the target VAL UE ID or user ID is not equal to its own VAL UE or VAL User identity, the LM client triggers off-network location management procedures as described in clause 9.5 to obtain target VAL UE location. If the received UE positioning method is PC5 SEAL LM, target VAL UE location information (including velocity) is obtained via off-network procedure as defined in clause 9.5; if the received UE positioning method is non-3GPP (e.g. WiFi, BT), target VAL UE location information (including velocity) is obtained via the corresponding non-3GPP method. If SEAL LM client is unable to find the target VAL UE's location (either the target VAL UE has moved away, or required positioning method is not supported by target VAL UE) then SEAL LM client may send the failure message to the SEAL LM server. If the target VAL UE ID or user ID is equal to its own VAL UE or VAL user identity, VAL user or VAL UE is notified and asked about the permission to share its location. VAL user can accept or deny the request.

Editor's note: Potential enhancement to on-demand location reporting procedure is FFS**,** e.g. whether using SL/Ranging positioning method to obtain target UE location.

4. The location management client immediately responds to the location management server with a report containing location information identified by the location management server and available to the location management client or the failure reason when the requested UE’s location information can’t be obtained.

5. Upon receiving the report, the location management server updates location of the reporting location management client. If the location management server does not have location information of the reporting location management client before, then just stores the reporting location information for that location management client.

\* \* \* Next Change \* \* \* \*

#### 9.3.2.2 Location information report

Table 9.3.2.2-1 describes the information flow from the location management client to the location management server for the location information reporting or from the location management server to the requesting location management client or VAL server to report location information.

Table 9.3.2.2-1: Location information report

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| --- | --- | --- |
| Information element | Status | Description |
| Set of identities | M | Set of identities of the reporting VAL users or VAL UEs |
| Triggering event | M | Identity of the event that triggered the sending of the report. The triggering event may be e.g., SAI changes, ECGI changes, RAT changes. |
| Location Information | M | Location information. For LM-UU reference point, it may include UE location information via non-3GPP positioning technologies (e.g. GNSS, Sensor, TBS, WLAN, Bluetooth) as described in 3GPP TS 37.355 [53]. |
| Failure Reason | O(NOTE) | Indcates the failure reason when the LM Client can’t obtain the requested UE’s location information (e.g. the target VAL UE has moved away, or required positioning method is not supported by target VAL UE) |
| Timestamp | O | Timestamp of the location report |
| NOTE: This element is only applicable when the Location information IE is null. |

\* \* \* End of Change \* \* \* \*