**3GPP TSG-SA WG6 Meeting #39-bis-e S6-202003**

**e-meeting, 12th – 20th October 2020 (revision of S6-201857)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.434** | **CR** | **0027** | **rev** | **1** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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:*** | Tracking UE and obtaining dynamic UE information | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Hisilicon | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eV2XAPP | | | | |  | ***Date:*** | | | 2020-09-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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 can be 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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | LMS is enhanced with features for tracking UE and obtaining dynamic UE information at a location.  Such features are useful for advanced/remote driving mode with slow to moderate speed and deployed in areas like campus (e.g. autonomous shuttle vehicles), factories or ports (e.g. autonomous/remotely controlled guided vehicles). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding features for tracking UE and obtaining dynamic UE information at a location.  Clause 9.3.7 and Clause 9.3.8 are enhanced. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The new features for tracking UE and obtaining dynamic UE information at a location cannot be supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.7, 9.3.8, 9.3.y (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **N** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **N** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **N** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

### 9.3.7 Location information subscription procedure

Figure 9.3.7-1 illustrates the high level procedure of location information subscription request. The same procedure can be applied for location management client and other entities that would like to subscribe to VAL user or VAL UE location information. This procedure is also used for intiating tracking a UE's location.



Figure 9.3.7-1: Location information subscription request procedure

1. The VAL server sends a location information subscription request to the location management server to subscribe location information of one or more VAL users or VAL UEs.

2. The location management server shall check if the VAL server is authorized to initiate the location information subscription request. Further, the location management server may initiate location reporting configuration with the location management client of the UE for immediate reporting.

3. The location management server may optionally subscribe for UE location information from 3GPP core network for the UE.

4. The location management server determines the UE location information of the UE as received in steps 3 and 4.

5. The location management server replies with a location information subscription response indicating the subscription status and if immediate reporting was requested, the location information of the VAL UE(s).

### 9.3.8 Event-trigger location information notification procedure

Figure 9.3.8-1 illustrates the high level procedure of event-trigger usage of location information. The same procedure can be applied for location management client and other entities that would like to subscribe to location information of VAL user or VAL UE. This procedure is also used for obtaining latest UE's location for tracking purpose.



Figure 9.3.8-1: Event-trigger usage of location information procedure

1. The location management server receives the latest location information of the UE as per the location report procedure described in clause 9.3.3.3.

2. The location management server may optionally receive the location information of the UE from 3GPP core network.

3. Based on the configurations, e.g., subscription, periodical location information timer, location management server is triggered to report the latest user location information to VAL server. The location management server determines the location information of UE as received in steps 1 and 2.

4. The location management server send the location information report including the latest location information of one or more VAL users or VAL UEs to the VAL server..

5. VAL server may further share this location information to a group or to another VAL user or VAL UE.

NOTE: For other entities, the step 5 can be skipped if not needed.

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

### 9.3.y Obtaining UE(s) information at a location

Figure 9.3.y-1 describes the procedure for obtaining UE(s) information at a location.

Pre-condition:

- The VAL server has a jurisdiction over a geographical area for which the location management server is configured to operate.

- The UE(s) in the geographical area have provided its location information to the location management server.



Figure 9.3.y-1: Obtaining UE(s) information at a location

1. The VAL server sends get UE infomation request to the location management server. The request contains a location information and application defined proximity range.

2. The location management server determines the UE(s) whose location are within the application defined proximity range of the location information provided in step 1.

3. The location management server sends get UE information response to the VAL server with a list of UE(s) and its corresponding location information as determined in step 1.