**3GPP TSG-SA WG6 Meeting #37-e S6-200801**

**e-meeting, 14th – 26th May 2020 (revision of S6-xxxxxx)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.434** | **CR** | **0020** | **rev** | **-** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | Correction for location reporting trigger | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, Hisilicon | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SEAL | | | | |  | ***Date:*** | | | 2020-05-06 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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:*** | | CT3 has sent an LS to SA6 in S6-200631 to clarify whether update and cancel operations from VAL server are supported for location reporting trigger configurations.  Correlating the procedure in clause 9.3.5 (Client-triggered or VAL server-triggered location reporting procedure) and procedure in clause 9.3.2.2 (Fetching location reporting configuration), it can be concluded that update operation is supported. A NOTE is required to clarify that clause 9.3.5 also can be used for update operation. The service operation definition for update trigger location reporting configuration is to be provided.  As VAL server or LMC can create the location reporting trigger configuration, it is required that the configuration can also be removed or cancelled by the VAL server or LMC. It is not clear from the clause 9.3.6 when the configurations at the target UE are cancelled. Hence, to avoid any mis-operations at the LMS, it is required that cancel operation is also support initiated by LMC or VAL server. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add service operations for Update and Cancel.  Add a NOTE in clause 9.3.5 to clarify that it also supports Update operation.  Correct the procedure in clause 9.3.6 to handle LMC or VAL server initiated cancel procedure.  Add missing information flow tables for cancel procedure. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Implementation in stage 3 will be insufficient for actual deployments and may cause mis-operations. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.2.4, 9.3.2.X (new), 9.3.5, 9.3.6, 9.4.2.2, 9.4.2.3 (new), 9.4.2.4 (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 \* \* \* \*

#### 9.3.2.4 Location reporting trigger

Table 9.3.2.4-1 describes the information flow from the location management client or VAL server to the location management server for triggering a location reporting procedure.

Table 9.3.2.4-1: Location reporting trigger

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| Identity | M (NOTE 1) | Identity of the requesting authorized VAL user or VAL UE |
| Identity | M (NOTE 1) | Identity of the requested VAL user or VAL UE |
| Immediate Report Indicator | O (NOTE 2) | Indicates whether an immediate location report is required |
| Requested location information | O (NOTE 2) | Identifies what location information is requested |
| Triggering criteria | O (NOTE 2) | Identifies when the client will send the location report |
| Minimum time between consecutive reports | O (NOTE 2) | Defaults to 0 if absent otherwise indicates the interval time between consecutive reports |
| NOTE 1: The identity of the requesting VAL user/UE and the requested VAL user/UE should belong to the same VAL service.  NOTE 2: At least one of these rows shall be present. | | |

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

#### 9.3.2.X Location reporting configuration cancel request

Table 9.3.2.X-1 describes the location reporting configuration cancel request information flow from the location management client or VAL server to the location management server.

Table 9.3.2.X-1: Location reporting configuration cancel request

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| Identity | M | Identity of the requesting authorized VAL user or VAL UE |
| Identity | M | Identity of the requested VAL user or VAL UE |

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

### 9.3.5 Client-triggered or VAL server-triggered location reporting procedure

Figure 9.3.5-1 illustrates the high level procedure of client-triggered or VAL server-triggered location reporting.



Figure 9.3.5-1: Client-triggered location reporting procedure

1. Location management client 2 (authorized VAL user or VAL UE) or VAL server sends a location reporting trigger to the location management server to activate a location reporting procedure for obtaining the location information of location management client 1.

NOTE: Step 1 can be performed when Location management client 2 or VAL server require to update the location reporting trigger.

2. Location management server checks whether location management client 2 or VAL server is authorized to send a location reporting trigger. Depending on the information specified by the location reporting trigger, location management server initiates an on-demand location reporting procedure as specified in clause 9.3.4 or an event-triggered location reporting procedure as specified in clause 9.3.3 for the location of location management client 1.

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

### 9.3.6 Location reporting event triggers configuration cancel

Figure 9.3.6-1 illustrates the procedure used for cancelling the location reporting event triggers configuration at the targetLocation management client.

Pre-conditions:

1. The location management server has subscribed the location management client 2 location with the location reporting event triggers.

2. If multicast delivery mode is used, the MBMS bearer being used is activated by the location management server.



Figure 9.3.6-1: Location reporting event triggers configuration cancel

1. The location management client 1 (authorized VAL user or VAL UE) or VAL server sends a location reporting configuration cancel request to the location management server (1a).The location management server sends the location reporting configuration cancel request to the location management client 2 to stop receiving the UE location information (1b). This message can be sent via unicast or multicast.

NOTE 1: Step 1b can be initiated without Step 1a.

2. The location management client invalidates the location reporting event triggers configuration and no longer reports its location to the location management server.

3. The location management client 2 sends the location reporting configuration cancel response to the location management server (3a) as an acknowledgement. The location management server sends the location reporting configuration cancel response to the location management client 1 (3b) as an acknowledgement.

NOTE 2: Step 3b need not be sent if step 1a was not initiated.

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

#### 9.4.2.2 Create\_Trigger\_Location\_Reporting operation

**API operation name:** Create\_Trigger\_Location\_Reporting

**Description:** Creates the trigger to report location information.

**Known Consumers:** VAL server.

**Inputs:** Refer subclause 9.3.2.4

**Outputs:** Refer subclause 9.3.2.4

See subclause 9.3.5 for the details of usage of this API operation.

#### 9.4.2.3 Update\_Trigger\_Location\_Reporting operation

**API operation name:** Update\_Trigger\_Location\_Reporting

**Description:** Updates the trigger to report location information.

**Known Consumers:** VAL server.

**Inputs:** Refer subclause 9.3.2.4

**Outputs:** Refer subclause 9.3.2.4

See subclause 9.3.5 for the details of usage of this API operation.

#### 9.4.2.4 Cancel\_Trigger\_Location\_Reporting operation

**API operation name:** Cancel\_Trigger\_Location\_Reporting

**Description:** Cancels the trigger to report location information.

**Known Consumers:** VAL server.

**Inputs:** Refer subclause 9.3.2.X

**Outputs:** Refer subclause 9.3.2.X

See subclause 9.3.6 for the details of usage of this API operation.