**3GPP TSG-SA WG6 Meeting #37-e S6-200642**

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

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.280** | **CR** | **0254** | **rev** | **-** | **Current version:** | **17.2.0** |  |
|  | | | | | | | | |
| *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:*** | Status location history reporting | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | BDBOS, BMWi | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | enh3MCPTT | | | | |  | ***Date:*** | | | 2020-05-25 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | Currently existing information flows and procedures do not support the status reporting of stored location reports of an MC service user after returning from off-network operation.  [R-5.11-009] in 3GPP TS 22.280 in clause 5.11 for on-network and off-network location reports based on triggered events.  Clause 7.1 in 3GPP TS 22.280 describes in general that MC services available during off-network are functional comparable to MC services during on-network and this includes location management, as an essential feature of MC communication. While triggered location reports are available during on-network operation, the same or modified off-network triggers allow such MC service continuity while off-network operation. The location reports provided after returning to on-network operation.  Use case #5, solutions #6 and #7 discussed in 3GPP TR 23.744. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | New information flow and new procedure for the request of status reports on stored location information after returning to on-network operation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The operational analysis of location information triggered during off-network operation cannot be included into operative-tactical decisions after returning to on-network operation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.9.2.11 (new), 10.9.2.12 (new), 10.9.3.9.3 (new), 10.9.3.9.3.1 (new), 10.9.3.9.3.2 (new), 10.9.3.9.3.3 (new), | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.280 CR 0252, 0253 | | |
| ***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 \* \* \* \*

#### 10.9.2.11 Location information history status request

Table 10.9.2.11-1 describes the information flow from the location management client to the location management server to request the status of stored location information, following a return to report location information to the location management server.

Table 10.9.2.11-1: Location information history status request (LMC – LMS)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | Identity of the MC service user from whom status is requested |
| MC service ID | M | Identity of the MC service user, who has requested the status |

Table 10.9.2.11-2 describes the information flow from the location management server to the location management client to request the status of stored location information, following a return to report location information to the location management server.

Table 10.9.2.11-2: Location information history status request (LMS – LMC)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | Identity of the MC service user from whom status is requested |

Table 10.9.2.11-3 describes the information flow from the MC service server to the location management server to request the status of stored location information, following a return to report location information to the location management server.

Table 10.9.2.11-3: Location information history status request (MC service server – LMS)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | Identity of the MC service user from whom status is requested |
| MC service ID | O | Identity of the MC service user, who has requested the status |

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

#### 10.9.2.12 Location information history status report

The location management client stored location information, while not reporting location information to the location management server, and subsequently the reporting may start following the reestablishment of a communication link between the location management client and the location management server.

Table 10.9.2.12-1 describes the information flow from the location management client to the location management server to report the status of stored location information.

Table 10.9.2.12-1: Location information history status report (LMC – LMS)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID list | M | List of identities (e.g. MCPTT ID, MCData ID, MCVideo ID) of the MC service user who reports the status |
| Number of stored reports | O | Indicates either zero or the number of available reports |
| Start time | O | First time of measurement of the available reports |
| End time | O | Last time of measurement of the available reports |
| Triggered event list (see NOTE) | M | Identifies the criteria when the location management client generated location information, while not reporting location information |
| NOTE: Each triggered criterion is shown once with either the associated Number of stored reports, or with the associated Start time, or with the associated Start time and End time or with the associated End time. | | |

Table 10.9.2.12-2 describes the information flow from the location management server to the location management client to report the status of stored location information.

Table 10.9.2.12-2: Location information history status report (LMS – LMC)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | Identity of the MC service user who reports the status |
| MC service ID | M | Identity of the MC service user to receive the status report |
| Number of stored reports | O | Indicates either zero or the number of available reports |
| Start time | O | First time of measurement of the available reports |
| End time | O | Last time of measurement of the available reports |
| Triggered event list (see NOTE) | M | Identifies the criteria when the location management client generated location information, while not reporting location information |
| NOTE: Each triggered criterion is shown once with either the associated Number of stored reports, or with the associated Start time, or with the associated Start time and End time or with the associated End time. | | |

Table 10.9.2.12-3 describes the information flow from the location management server to the MC service server to report the status of stored location information.

Table 10.9.2.12-3: Location information history status report (LMS - MC service server)

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | Identity of the MC service user who reports the status |
| Number of stored reports | O | Indicates either zero or the number of available reports |
| Start time | O | First time of measurement of the available reports |
| End time | O | Last time of measurement of the available reports |
| Triggered event list (see NOTE) | M | Identifies the criteria when the location management client generated location information, while not reporting location information |
| NOTE: Each triggered criterion is shown once with either the associated Number of stored reports, or with the associated Start time, or with the associated Start time and End time or with the associated End time. | | |

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

##### 10.9.3.9.3 Usage of status location history reporting procedure

###### 10.9.3.9.3.1 Status location history reporting procedure (LMC – LMS)

The location management client can report the status of stored location information at any time to the location management server, following a return to report location information to the location management server.

Figure 10.9.3.9.3.1-1 illustrates the procedure for the usage of the status reporting from the location management client.

Pre-conditions:

1. The location management client has returned to report location information and has stored location information reports.



Figure 10.9.3.9.3.1-1: Status location history reporting procedure (LMC – LMS)

1. The location management client returns to report location information to the location management server.
2. The location management client reports without a status request the status of the stored location information to the location information server.

###### 10.9.3.9.3.2 On-demand status location history reporting procedure (LMS – LMC)

The location management server can request the status of stored location information at any time from the location management client, following a return to report location information to the location management server.

Figure 10.9.3.9.3.2-1 illustrates the procedure for the on-demand based usage of requesting the status of the stored location information from the location management client.

Pre-conditions:

1. The location management client has returned to report location information and has stored location information reports.



Figure 10.9.3.9.3.2-1: On-demand based usage of status location history reporting procedure (LMS – LMC)

1. The location management client returns to report location information to the location management server.

2. The location management server requests the status of the stored location information from the location management client.

3. The location management client reports the status of the stored location information to the location information server.

###### 10.9.3.9.3.3 On-demand status location history reporting procedure

The MC service server or the location management client can request the status of stored location information at any time, following a return to report location information to the location management server.

Figure 10.9.3.9.3.3-1 illustrates the procedure for the on-demand based usage of the status location history reporting procedure.

Pre-conditions:

1. The location management client 1 has returned to report location information and has stored location information reports.



Figure 10.9.3.9.3.3-1: On-demand based usage of status location history reporting procedure

1. The MC service server or location management client 2 requests the status of the stored location information reports from the location management client 1.
2. The location management server checks the authorization of this request.
3. The location management server forwards the status request to the location management client 1.
4. The location management client 1 responds with the status report of the stored location information reports.
5. The location management server forwards this information to the MC service server or location management client 2.

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