**3GPP TSG-SA WG6 Meeting #49-e S6-22xxxx**

**e-meeting, 16th – 25th May 2022 (revision of S6-221137)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.286** | **CR** | **0071** | **rev** | **1** | **Current version:** | **17.3.0** |  |
|  | | | | | | | | |
| *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:*** | Add location reference in HDmap | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eV2XAPP | | | | |  | ***Date:*** | | | 2022-04-30 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The information elements in Table 9.16.2.3-1 includes Distance information of the nearby V2X UE. But it is not defined how to measure the distance, i.e. the referenced location is missing in the procedure. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Added the host V2X UE location as the referernce point for the distance info of nearby UE. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Missing information in the HD map location report. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.16.2.1, 9.16.2.3, 9.16.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

#### 9.16.2.1 Subscribe HD map dynamic information request

Table 9.16.2.1-1 describes the information flow for a V2X application specific server to subscribe to HD map dynamic information at the VAE server.

Table 9.16.2.1-1: Subscribe HD map dynamic information request

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| V2X UE ID | M | Identifier of the host V2X UE. |
| Application defined proximity range information | M | Description of the range information over which the HD map dynamic information is required. |

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

#### 9.16.2.3 Notify HD map dynamic information

Table 9.16.2.3-1 describes the information flow for a V2X application specific server to receive notification about HD map dynamic information from the VAE server.

Table 9.16.2.3-1: Notify HD map dynamic information

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| Subscription ID | M | Identifier of the subscription for this notification. |
| Location of the host V2X UE | M | The location of the host V2X UE during the HD map dynamic information subscription. |
| List of V2X UEs information | M | The information of the V2X UEs which were detected in the application defined proximity range. |
| >Nearby V2X UE ID | M | The identifier of nearby V2X UE |
| >Location information | M | Location information of the nearby V2X UE within the application defined proximity range |
| >Distance information | M | Distance information of the nearby V2X UE, relative to the host V2X UE. |

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

### 9.16.6 Notification of HD map dynamic information

Pre-conditions:

- V2X application specific server has performed subscription as per procedure in clause 9.16.3 with VAE server 1.

- VAE server 1 has prepared the HD map dynamic information as per procedure in clause 9.16.5.3.



Figure9.16.6: Notification for HD map dynamic information

1. The VAE server 1 sends notification of HD map dynamic information to the V2X application specific server. The notification includes the aggregated information of all the UEs in the application defined proximity range of the host vehicle and the location of the host vehicle.

2. The V2X application specific server updates the HD map information with the HD map dynamic information received in step 1.

\* \* \* End of Changes \* \* \* \*