**3GPP TSG-SA WG6 Meeting #39-bis-e S6-202001**

**e-meeting, 12th – 20th October 2020 (revision of S6-201855)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.286** | **CR** | **0024** | **rev** | **1** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | V2X service discovery across multiple V2X service providers | | | | | | | | | |
|  |  | | | | | | | | | |
| ***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:*** | | Support for V2X service discovery across multiple V2X service providers. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Procedure added to support V2X service discovery across multiple V2X service providers. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | V2X service discovery across multiple V2X service providers cannot be supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.9.2.1, 9.9.x (new), 9.9.x.1 (new), 9.9.x.2 (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 \* \* \* \*

#### 9.9.2.1 Get V2X UE service discovery request

Table 9.9.2.1-1 describes the information flow get V2X UE service discovery request from the VAE client to the VAE server and between VAE servers.

Table 9.9.2.1-1: Get V2X UE service discovery request

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| V2X UE ID | M | Identity of the V2X UE requesting the service discovery information. |
| V2X UE location information | O | Location information of the V2X UE |

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

### 9.9.x V2X service discovery across multiple V2X service providers

#### 9.9.x.1 General

This clause describes the procedure for V2X UE (having V2X application subscription with V2X service provider A) obtaining the V2X UE service discovery information (offered by V2X service provider B) while in the service area of V2X service provider B.

#### 9.9.x.2 Procedure

The procedure for V2X UE obtaining the V2X UE service discovery across multiple V2X service providers is illustrated in figure 9.9.x.2‑1.

Pre-conditions:

1. The V2X UE has connected to the VAE server 1 of V2X service provider A with whom the V2X UE has a V2X application subscription with.

2. The V2X UE is in the service area of the VAE server 2 operated by V2X service provider B.

3. The service area and VAE server 2 mapping information of V2X service provider B is available at VAE server 1 of V2X service provider A.



Figure 9.9.x.2-1: V2X service discovery across multiple V2X service providers

1. The VAE client sends a get V2X UE service discovery request to the VAE server 1 for obtaining V2X UE service discovery information with V2X UE ID and current V2X UE location.

2. The VAE server 1 determines, based on the V2X UE location that the V2X UE is in the service area operated by the VAE server 2 of the V2X service provider B. The VAE server 1 sends the get V2X UE service discovery request to the VAE server 2 to get the V2X application server information for the V2X UE. The V2X UE location is included in the request.

3. The VAE server 2 determines the local V2X application server information based on UE location, and sends get V2X UE service discovery response to the VAE server 1. This message carries the local V2X application server information.

4. The VAE server 1 forwards the get V2X UE service discovery response to the VAE client.

Editor's note: Whether and how to resolve user privacy issue for this procedure is FFS.