3GPP WG-SA6 Meeting #45e S6-211xxxx

e-meeting, 25th Aug – 3rd Sep 2021 (revision of S6-21XXXX)

**Source: Huawei, Hisilicon**

**Title: New WID for study on enhancements to application layer support for V2X services Phase 2**

**Document for: Agreement**

**Agenda Item: 11**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>   
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Study on enhancements to application layer support for V2X services; Phase 2

Acronym: FS\_eV2XAPP\_Ph2

Unique identifier:

Potential target Release: *Rel-18*

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No | X |  | X |  |  |
| Don't know |  |  |  |  | X |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Feature |
|  | Building Block |
|  | *Work Task* |
| X | Study Item |

## 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| None |  |  |  |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| Other related Work /Study Items (if any) | | |
| Unique ID | Title | Nature of relationship |
| 910037 | Support of advanced V2X services – Phase 2 | 5GS enhancements for advanced V2X services like V2P |
| 920017 | Study on enhanced architecture for enabling Edge Applications | Edge deployments supporting V2X services. |

# 3 Justification

SA2 has studied in TR 23.776 enhancements for 5GS considering advanced V2X services like V2P (Vehicle to Pedestrian) and has further specified the 5GS enhancements in TS 23.287. The use cases for V2P are also supported in 5GAA and ETSI C-ITS work. Several aspects of V2P like clustering, hotzones, etc may have impact on the V2X application support capabilities specified in TS 23.286.

5GAA and ETSI MEC has further worked on topics like edge computing for V2X services and enhanced predictive QoS. Specifically how applications like Platooning, See through, Intersection safety, etc can be supported by V2X communicated enabled by edge deployments. TS 23.558 has developed an edge enabling architecture and may have impact on the V2X application enabler architecture specified in TS 23.286 to support these advanced V2X services for edge deployments.

5GAA has also further worked on advanced services based on 5GS like UE monitoring service for Haptics/ToD use case and its impact on the V2X application support capabilities specified in TS 23.286 can be investigated further.

Considering the above work on advanced V2X services in the industry, it is beneficial to study and investigate the impact on the V2X application enablers for any further enhancements to support these advanced V2X services.

# 4 Objective

The objectives of the study include:

1. Analyze the stage 1 requirements for advanced V2X services like V2P, ToD specified in TS 22.185 and TS 22.186 and the corresponding 3GPP system architecture enhancements (e.g. enhanced predictive QoS) specified in TS 23.287;

2) Analyze the impact of edge enabler architecture (specified in TS 23.558) usage on the existing V2X application enabler functionalities specified in TS 23.286 and the corresponding support for edge computing for advanced V2X services; and

3) Based on (1) and (2), develop key issues, corresponding architecture requirements and solution recommendations to enable the application layer support for the advanced V2X services over 3GPP systems (5GS, EPS).

# 5 Expected Output and Time scale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| New specifications {One line per specification. Create/delete lines as needed} | | | | | |
| Type | TS/TR number | Title | For info  at TSG# | For approval at TSG# | Rapporteur |
| Internal TR | 23.XYZ | Study on enhancements to application layer support for V2X services; Phase 2 | SA#95  (Mar 2022) | SA#96  (Jun 2022) | Niranth Amogh, Huawei Telecommunications India, namogh@huawei.com |

# 6 Work item Rapporteur(s)

Niranth Amogh, Huawei Telecommunications India, namogh@huawei.com

# 7 Work item leadership

SA6

# 8 Aspects that involve other WGs

SA1 on service aspects, SA2 on aspects related to 3GPP system, SA3 on aspects related to security, SA5 on aspects related to charging.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| Hisilicon |
| Lenovo? |
| Motorola Mobility? |
| CATT? |
| Samsung? |
| CMCC? |
| China Unicom? |
| Deutsche Telekom? |
| Ericsson? |