**3GPP TSG-CT WG3 Meeting #114e *C3-211167***

**E-Meeting, 24th February – 05th March 2021**

**Source: Huawei, HiSilicon**

**Title: New WID on CT aspects of Enhanced application layer support for V2X services**

**Document for: Endorsement**

**Agenda Item: 17.1.1**

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: CT aspects of Enhanced application layer support for V2X services

## Acronym: eV2XAPP-CT

## Unique identifier: TBD

Potential target Release: Rel-17

## 1 Impacts

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

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This work item is a building block.

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

### 2.2 Parent Work Item

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Work / Study Items | | | |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| eV2XAPP | SA6 | 890025 | Enhanced application layer support for V2X services |

### 2.3 Other related Work Items and dependencies

|  |  |  |
| --- | --- | --- |
| **Other related Work Items (if any)** | | |
| **Unique ID** | **Title** | **Nature of relationship** |
|  |  |  |

**Dependency on non-3GPP (draft) specification**: none

## 3 Justification

Enhanced application layer support for V2X services (eV2XAPP) is a Rel-17 SA6 WG work which impacts the CT WGs (see WID in SP-200831). The work is to provide for enhanced application layer support capabilities.

The SA6 WG are enhancing the VAE layer and the SEAL layer as specified in TS 23.286 and TS 23.434 under the eV2XAPP work item.

Additionally, SA WG1 provides the necessary service requirements in TS 22.185 and TS 22.186. The EPS architecture for V2X communications is specified in TS 23.285, and the 5GS architecture to support V2X services is specified in TS 23.287.

## 4 Objective

The objective of this building block is to specify the CT aspects of enhanced application layer support for V2X services in order to enhance the CT WGs specifications based on the stage 2 requirements developed by the SA6 WG. Stage 3 work shall be started only after the applicable normative stage 2 work is available.

The following areas of work are expected to be covered but will be adjusted or detailed based on the final conclusions of the stage 2 normative requirements, if required.

For CT1, the expected work includes:

a) enhancements to the V2X application enabler (VAE) layer protocol for V5-AE and V1-AE;

- enhancement of the V2X UE registration procedure;

- enhancement of the V2X network monitoring procedure;

- introduction of the PC5 provisioning in multi-operator V2X scenarios;

- introduction of the V2X service discovery across multiple V2X service providers;

- support for UE-to-UE broadcast/groupcast configuration;

- support for V2V communication mode switching;

- support for HD map dynamic information;

b) enhacencements to the service enabler architecture layer for verticals (SEAL) layer protocols for SEAL-Uu and SEAL-PC5;

- tracking UE and obtaining dynamic UE information;

- temporary groups formation;

- support of local MBMS delivery.

NOTE: The list of expected work will be updated when further new stage 2 normative requirements are added.

For CT3, the expected work includes:

* enhanment of APIs provided by the V2X application enabler (VAE) server for Vs and VAE-E;
* enhanment of APIs provided by the SEAL server for SEAL-S SEAL-E and SEAL-X.

## 5 Expected Output and Time scale

|  |  |  |  |
| --- | --- | --- | --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* | | | |
| TS/TR No. | Description of change | Target completion plenary# | Remarks |
| 24.486 | Enhancement to VAE layer protocol | TSG CT #95 (March 2022) | CT1 |
| 24.544 | Possible update to group management SEAL service protocol | TSG CT #95 (March 2022) | CT1 |
| 24.545 | Possible update to location management SEAL service protocol | TSG CT #95 (March 2022) | CT1 |
| 24.546 | Possible update to configuration management SEAL service protocol | TSG CT #95 (March 2022) | CT1 |
| 24.547 | Possible update to identity management SEAL service protocol | TSG CT #95 (March 2022) | CT1 |
| 24.548 | Possible update to network resource management SEAL service protocol | TSG CT #95 (March 2022) | CT1 |
| 29.549 | Possible update to the SEAL service | TSG CT #95 (March 2022) | CT3 |

## 6 Work item Rapporteur(s)

Herrero Veron, Christian (Huawei)

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## 7 Work item leadership

CT1

## 8 Aspects that involve other WGs

SA1 for the requirements aspects, SA6 for the architectural aspects.

## 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| Huawei |
| HiSilicon |
| CATT |
| China Mobile |
| China Unicom |
| Lenovo |