**3GPP TSG-CT WG1 Meeting #123-eC1-20abcd**

**Electronic meeting; 16-24 April 2020**

**Source: Ericsson**

**Title: V2X service discovery procedure corrections**

**Spec: 3GPP TS 24.486 v1.0.0**

**Agenda item: 16.2.12**

**Document for: Agreement**

**1. Introduction**

V2X service discovery procedure contains errors that should be corrected.

**2. Reason for Change**

The following issues need to be corrected in the V2X service discovery procedure

1. The service-discovery-info structure differs between procedure specification and coding clause where the root service-discovery-info is used in procedure part and service-discovery in coding part. It is proposed to use root as in procedure part to alig to naming of other procedures (using “-info” suffix). The coding defined -info IE is proposed to be renamed to -data to avoid ambuguity between information levels.
2. Incorrect procedure reference.
3. Some editorial corrections

**3. Conclusions**

It is concluded that the above issues should be corrected.

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.486 v1.0.0.

\*\*\* First change \*\*\*

### 6.6.1 Client procedure

In order to discover V2X service information from a VAE server (e.g. available VAE services identified by V2X service identities), the VAE client shall send an HTTP POST request according to procedures specified in IETF RFC 2616 [12]. In the HTTP POST request, the VAE client:

a) shall set the Request-URI to the URI provided by the SEAL layer;

b) shall include a Content-Type header field set to "application/vnd.3gpp.VAE-service-discovery-info+xml";

c) shall include an application/vnd.3gpp.VAE-service-discovery-info+xml MIME body and in the <service-discovery-info> root element:

1) shall include a <identity> element with a <V2X-UE-id> child element set to the identity of the UE which requests the service discovery.

\*\*\* Next change \*\*\*

### 6.6.2 Server procedure

Upon reception of an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.VAE-service-discovery-info+xml"; and

b) an application/vnd.3gpp.VAE-registration-+xml MIME body with a <service-discovery-info> root element, the VAE server:

1) shall reply with a HTTP response with a <result> element of the <service-discovery-info> element set to a value "success" or "fail", and may include a <service-discovery-data> element which provides the V2X UE service discovery data.

\*\*\* Next change \*\*\*

## 8.3 Structure

The VAE document shall conform to the XML schema described in clause 8.4.

The <VAE-info> element shall be the root element of the VAE document.

The <VAE-info> element shall include at least one of the following:

a) an <identity> element;

b) a <registration-info> element;

c) a <de-registration-info> element;

d) a <location-tracking-info> element;

e) a <message-info> element; or

f) a <service-discovery-info> element.

The <identity> element shall include a <V2X-UE-id> child element.

The <service-discovery-info> element shall include a <result> element and may include a <service-discovery-data> element.

The <service-discovery-data> element shall include an <identity> element.

The <registration-info> element shall include at least one of the following:

a) an <identity> element;

b) a <service> element; or

c) a <result> element.

The <service> element shall include a <V2X-service-id> or a <V2X-MSG-type> child element.

The <de-registration-info> element shall include the following:

a) an <identity> element; and

b) a <service> element.

The <location-tracking-info> element shall include one of the following:

a) an <identity> element shall include a <V2X-UE-id> element;

b) a <geographical-identifier> element shall include a <geo-id> element; or

c) a <result> element.

The <geographical-identifier> element shall include one or more <geo-id> elements which each shall include:

a) a <polygon-area> element; and

b) an <ellipsoid-arc-area> element.

The <message-info> element shall include at least one of the following:

a) an <identity> element shall include a <V2X-UE-id> element;

b) a <group> element shall include a <V2X-group-id>;

c) a <payload> element;

d) a <service> element shall include a <V2X-service-id>;

e) a <geographical-identifier> element shall include a <geo-id> element;

f) a <message-reception-ind> element; or

g) a <result> element.

The <group> element shall include a <V2X-group-id> child element.

\*\*\* Next change \*\*\*

## 8.5 Data semantics

The <VAE-info> element is the root element of the XML document. The <VAE-info> element contains the <identity>, <registration-info>, <de-registration-info>, <location-tracking.info>, <message-info> and <service-discovery> sub-elements.

<identity> is a mandatory element used to include the identity of a VAL client. The <identity> element contains a <V2X-UE-id> attribute that contains the identity of the VAL client.

The <registration-info> element contains the <result> sub-element and may include a <service-discovery-info> sub-element.

<result> is a mandatory element which indicates a value "success" or "fail".

<de-registration-info> is an optional element used to include the de-V2X registration information. The <de-registration-info> element contains the <identity> and <service> sub-elements.

<service> is a mandatory element used to include the types of V2X messages that the UE is no longer interested in receiving. The <service> element contains either a <V2X-service-id> attribute that contains one or more identifiers of V2X service identifiers as specified in ETSI TS 102 965 [10] and ISO TS 17419 [13] or a <V2X-MSG-type> attribute that contains one or more identifiers of a V2X service identifiers as specified in ETSI TS 102 965 [10] and ISO TS 17419 [13].

<service-discovery-info> is a mandatory element used to include the V2X service discovery response information. The <service-discovery-data> element contains an <identity> sub-element.

<geographical-identifier>, an optional element specifying one or more geographical area identifiers. This element consists of one or more <geo-id> elements. The <geo-id> element has the following sub-elements:

a) <polygon-area>, an optional element specifying the area as a polygon specified in clause 5.2 of 3GPP TS 23.032 [2]; and

b) <ellipsoid-arc-area>, an optional element specifying the area as an ellipsoid arc specified in clause 5.7 of 3GPP TS 23.032 [2].

<group> is an optional element used to include the identity of a VAL group. The <group> element contains a <V2X-group-id> attribute that contains the group identity of a set of VAL clients according to the VAL service.

<payload> is an optional element used to include the payload of the V2X message as specified in ETSI TS 102 965 [11].

<message-reception-ind> is an optional element used to indicate that a reception report is required to be sent.

\*\*\* End of changes \*\*\*