**3GPP TSG-CT WG1 Meeting #146C1-240376**

**E-meeting, 22 – 26 January 2024**

Title: LS on UE selection for Ranging\_SL

Response to:

Release: Release 18

Work Item: Ranging\_SL

Source: CT1

To: SA2

Cc: RAN2

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Attachments:

**1. Overall Description:**

CT1 finds that SA2 has specified the following on UE selection as defined in TS 23.586:

1. for located UE selection

*Multiple candidate Located UEs may be discovered, in that case, the Located UE(s) is selected from the candidate Located UE list. The Located UE(s) is selected based on:*

* + *Candidate list of Located UE(s), if available.*
	+ *Capabilities of the candidate Located UE(s), e.g. the supported Sidelink Positioning methods.*
	+ *The required positioning QoS.*
	+ *Whether the serving PLMN of candidate Located UE(s) is same with serving PLMN of Target UE.*
	+ *UE's information including whether UE is in coverage or not, UE's location, etc.*

as defined in clause 5.2.2 of TS 23.586.

1. for SL positioning server UE selection

*SL Positioning Server UE Discovery & Selection is performed by the Target UE, when it meets one or more of the following criteria:*

* + *The Target UE and the discovered SL Reference UEs are currently not served by a network supporting Ranging/SL Positioning.*
	+ *The Target UE is not capable of performing SL Positioning Server UE functionalities or related positioning methods.*
	+ *The SL Reference UEs are not capable of performing SL Positioning Server UE functionalities or related positioning methods.*
	+ *UE's information including whether UE is in coverage or not, UE's location, etc.*

asdefined in clause 5.2.3 of TS 23.586.

However, CT1 also finds the following questions requires clarification from SA2 to implement the UE selection (located UE selection and SL positioning server UE selection ):

* For "*Capabilities of the candidate Located UE(s), e.g. the supported Sidelink Positioning methods*" considered for located UE selection,
	+ it is not clear how the target UE obtains the capabilities of the discovered UEs. And if capabilities exchange via SLPP over PC5-U is used, it requires to set up of useless PC5 link establishment if the UE is not selected.
* For "*The required positioning QoS*" considered for located UE selection,
	+ it is not clear whether this information is considered by target UE or LMF or both, and how the related information is available.
* For "*UE's information including whether UE is in coverage or not, UE's location, etc.*" considered for located UE selection
	+ it is not clear what information is considered "coverage condition" or "UE's location" or both? And how the target UE obtains the related information.
* For "*related positioning methods*" considered for SL positioning server UE selection
	+ it is not clear how the target UE obtains the related positioning methods supported by the discovered UEs. And if capabilities exchange via SLPP over PC5-U is used, it requires to set up of useless PC5 link establishment if the UE is not selected.
* For "*UE's information including whether UE is in coverage or not, UE's location, etc.*" considered for SL positioning server UE selection
	+ it is not clear what information is considered "coverage condition" or "UE's location" or both? And how the target UE obtains the related information.

Considering the above and the feasibility of the stage 3 specification, clarification on UE selections is needed, CT1 would like to ask SA2 to provide feedback on the following:

Q1. How the target obtains "Capabilities of the candidate Located UE(s), e.g. the supported Sidelink Positioning methods" for located UE selection.

Q2. Whether the "*The required positioning QoS*" is considered by target UE or LMF or both, and how the related information is available for located UE selection.

Q3. what information "*UE's information including whether UE is in coverage or not, UE's location, etc.*" includes, "coverage condition" or "UE's location" or both, and how target UE obtains the related information for located UE selection and SL positioning server UE selection.

Q4. How the the target obtains "*related positioning methods*" for SL positioning server UE selection.

**2. Actions:**

**To SA WG2 group.**

**ACTION:** CT WG1 asks SA WG2 group to provide CT WG1 feedback for the above questions.

**3. Date of Next CT1 Meetings:**

CT1#147 26th February –1st March 2024 Athens, Greece

CT1#148 15th April- 19th April 2024 China (TBC), CN

CT1#149 27th May- 31st May 2024 India, IN