**3GPP TSG-RAN WG2 Meeting #117R2-2203691**

**eMeeting, 21st February – 3rd March, 2022**

**Title: [Draft] LS on how to receive the first PC5-S unicast message during PC5-S connection setup procedure**

**Response to: -**

**Release:** **Rel-16**

**Work Item:** **5G\_V2X\_NRSL-Core**

**Source:** **CATT [to be RAN2]**

**To:** **SA2**

**Cc:** **-**

**Contact Person:**

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**Attachments:** None

**1. Overall Description:**

RAN2 had discussed the issue on how to receive the first PC5-S unicast signalling in AS layer during PC5-S connection setup procedure. RAN2 would like to ask SA2 to confirm that RX UE cannot know the peer UE’s source L2 ID for the following scenarios:

Scenario 1:

Scenario 1 is shown in the following Figure-1, where the cast type of the DCR message is unicast. That’s to say, the DCR is the first PC5-S unicast message.



**Figure-1 Scenario 1**

**Question-1: For scenario 1, before receiving the DIRECT LINK ESTABLISMENT REQUEST (unicast) in Figure-1, whether the UE\_2a knows the source L2 ID of UE\_1 or not from SA2 perspective?**

Scenario 2:

Scenario 2 is shown in the following Figure-2. In Figure-2, the DCR message is transmitted in broadcast and the DIRECT LINK AUTHENTICATION REQUEST message is transmitted in unicast. That’s to say, the DIRECT LINK AUTHENTICATION REQUEST is the first PC5-S unicast message.



**Figure-2 Scenario 2**

**Question-2: For scenario 2, before receiving the DIRECT LINK AUTHENTICATION REQUEST (unicast) in Figure-2, whether UE\_1 knows the source L2 ID of UE\_2a or not from SA2 perspective?**

Scenario 3:

Scenario 3 is shown in the following Figure-3. In Figure-3, the DCR message is transmitted in broadcast, the DIRECT LINK AUTHENTICATION REQUEST/RESPONSE messages are absent, and the DIRECT LINK SECURITY MODE COMMAND is transmitted in unicast. That’s to say, the DIRECT LINK SECURITY MODE COMMAND is the first PC5-S unicast message.



**Figure-3 Scenario 3**

**Question-3: For scenario 3, before receiving the DIRECT LINK SECURITY MODE COMMAND (unicast) in Figure-3, whether UE\_1 knows the source L2 ID of UE\_2a or not from SA2 perspective?**

RAN2 have discussed whether there would be some problem for related AS layer functions (e.g. MAC addressing filtering, SLRB handling, etc.), if in any above cases a UE cannot know the peer UE’s Source L2 ID in advance. In case SA2 confirms the aforementioned issue exists for any of above scenario, RAN2 had already made WAs to solve related problems, and thus do not expect any impact/change caused to SA2 Specs.

**2. Actions:**

**To SA2:**

**ACTION:** RAN2 kindly asks SA2 to provide answers on the questions above.

**3. Date of Next TSG-RAN WG2 Meetings:**

TSG-RAN WG2 Meeting #118-e 09 – 20 May 2022 Electronic

TSG-RAN WG2 Meeting #119 22 – 26 Aug 2022 Toulouse