**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 whether there is a problem for Rx UEto know the peer UE’s source L2 ID for the following scenarios. RAN2 had made working assumption to solve this issue from RAN2 perspective.

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 notfrom SA2 perspective?**

**2. Actions:**

**To SA2:**

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

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

TSG-RAN WG2 Meeting #118-e 16 – 27 May 2022 Electronic

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