3GPP TSG RAN WG2 Meeting #116-e R2-211xxxx

Electronic, 1st - 12th Nov, 2021

**Title: [draft]Reply LS on discovery and relay (re)selection**

**Response to: R2-2111236 (S2-2107972)**

**Release: Release 17**

**Work Item: NR\_SL\_Relay-Core**

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

**To: SA2, RAN3**

**CC:**

**Contact Person:**

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Attachments: None

**1. Overall Description:**

RAN2 thanks SA2 for the LS on discovery and relay (re)selection. RAN2 had discussed the LS in RAN2#116-e meeting, and provided RAN2 understanding on these issues as below:

**Q1)** SA2 has assumed 5G MOCN architecture is supported for 5G ProSe Layer-2 UE-to-Network Relay as described in clause 4.2.7.2 of TS 23.304, and would like to ask RAN2 to confirm this assumption. SA2 has also realized PLMN IDs are required (before Layer-2 link has been established) for the Layer-2 Remote UE to perform PLMN selection as well as Relay selection under 5G MOCN architecture, and would like to know whether PLMN IDs are forwarded by Layer-2 UE-to-Network Relay to Layer-2 Remote UE via the AS layer message.

**[Answer]:**

For Rel-17 U2N sidelink relay, RAN2 discussed whether RAN sharing can be supported for the NG-RAN node for Rel-17 Layer-2 UE-to-Network Relay. Unfortunately, no consensus was reached. While the majority view is it can be supported. Furthermore, RAN2 has made working assumption:

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| Agreements  Proposal 17: WA: cellAccessRelatedInfo from SIB1 [16/23] is forwarded before PC5-RRC connection. FFS the exact signalling. |

plmn-IdentityList is included in cellAccessRelatedInfo. If SA2 conclude RAN sharing should be supported, RAN2 majority prefer to deliver the non-serving PLMN IDs to remote UE via discovery message. It is up to SA2 to decide whether to include the non-serving PLMN IDs in discovery message directly or in a RRC container within the discovery message. Both can work while the majority view is a RRC container of discovery message is preferred.

**Q2)** SA2 has realized TAI is needed for 5G ProSe Layer-2 Remote UE to determine the type of initial access message (Mobility Registration Update or Service Request), and would like to ask whether TAI is forwarded by 5G ProSe Layer-2 UE-to-Network Relay to the 5G ProSe Layer-2 Remote UE via the AS layer message.

**[Answer]:**

RAN2 confirms that TAI can be forwarded by 5G ProSe Layer-2 UE-to-Network Relay to the 5G ProSe Layer-2 Remote UE after PC5 connection establishment via PC5-RRC messageAnd TAI can be forwarded by 5G ProSe Layer-2 UE-to-Network Relay to the 5G ProSe Layer-2 Remote UE before PC5 connection establishment via discovery or PC5-RRC (FFS in discovery or by forwarding SIB).

**Q3)** SA2 has discussed the Editor’s Note in TS 23.304 clause 6.4.3.6:

Editor’s Note Whether the Layer-2 link modification procedure is also applicable to ProSe Communication via 5G ProSe Layer-2 UE-to-Network Relay requires cooperation with RAN2.

SA2 understands that during the Layer-2 link establishment procedure the 5G ProSe Layer-2 UE-to-Network Relay and 5G ProSe Layer-2 Remote UE do not interact with the QoS Info (the information about PC5 QoS Flows), meaning there is no PC5 QoS Flow established in the PC5 unicast link between Layer-2 UE-to-Network Relay and Layer-2 Remote UE and the QoS handing is therefore setup by RAN. SA2 would like to ask as the Layer-2 link modification procedure is used to add/modify/remove PC5 QoS Flow(s) in the PC5 unicast link, whether this procedure is applicable or not to the Layer-2 UE-to-Network Relay?

**[Answer]:**

RAN2 confirms during the Layer-2 link establishment procedure the Relay UE and Remote UE do not interact with the PC5 QoS Flows Info. Whether the Layer-2 link modification procedure is used should be decided by SA2.

**Q4)** Per TS 23.304 clause 6.6.2, NG-RAN is provided with 5G ProSe authorised information indicating whether a UE is authorized to use 5G ProSe Direct Discovery, 5G ProSe Direct Communication, to act as a 5G ProSe Layer-2 UE-to-Network Relay, a 5G ProSe Layer-3 UE-to-Network Relay and a 5G ProSe Layer-2 Remote UE. NG-RAN is not provided with authorisation information for whether a UE is authorised to act as a 5G ProSe Layer-3 Remote UE.

Is the authorisation information for whether a UE can act as a 5G ProSe Layer-3 Remote UE needed by NG-RAN to enable configuring the UE with correct discovery configuration information via dedicated signalling?

**[Answer]:**



Whether authorization information for L3 remote UE is needed for NG-RAN can be decided by RAN3.

**2. Actions:**

**To SA2:** RAN2 kindly asks SA2 to take the above information into account for the future work.

**To RAN3:** RAN2 kindly asks RAN3 to take the above information into account for the future work and feedback on Q4.

**3. Date of Next RAN2 Meetings:**

TSG-RAN WG2 #116bis-e Jan 17 – 25 2022 Electronic Meeting

TSG-RAN WG2 #117-e Feb 21 – Mar 3 2022 Electronic Meeting