3GPP TSG-RAN WG3 #115-e draft R3-222478

Feb. 21~Mar.3, 2022

**Online**

**Agenda item: 23.3 (Specification of Control Plane procedures)**

**Source: Samsung (moderator)**

**Title: Summary of offline discussion on CB # SLRelay2\_ControlPlane**

**Document for: Approval**

# Introduction

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| **CB: # SLRelay2\_ControlPlane****- Check the open issues related with CP procedures.****- The local ID of remote UE can be notified to gNB-DU before initial access of remote UE?****- Inclusion of Relay UE ID in INITIAL UL RRC MESSAGE?****- Notification of local ID of remote UE before initial access?****- Lower layer configuration for remote UE in INITIAL UL RRC MESSAGE TRANSFER message and indication of rejection to remote UE?****- Service continuity impacts, i.e. path switch from direct to indirect?****- Any other issue has potential impacts on CP procedures, if not listed above?****- Work on the TPs for BLCRs of TS 38.401 and TS 38.473.****- Work on the TP on L2 U2N Relay for the BLCRs of TS 38.470.**(Samsung - moderator)Summary of offline disc [R3-222478](Inbox%5CR3-222478.zip) |

This e-mail discussion is divided into two phases:

* Phase I: View collection

Deadline: Wednesday, Feb. 23rd, 2022, 11:00 UTC.

* Phase II:

Deadline: TBD

# For the Chairman’s Notes

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# Discussions

Issue 1: **Inclusion of Relay UE ID in INITIAL UL RRC MESSAGE?**

**Related FFS (stage-3):**

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| *gNB-DU UE F1AP ID of Relay UE*(Init. UL RRC Msg. Transfer) | FFS whether it is included |

[1](China Telecom), [3](Qualcomm), [4](Huawei), [7](Ericsson), [10](Nokia), [14](ZTE), [18](CMCC), and [20](Samsung) agree to include Relay UE ID considering the remote UE ID uniqueness per relay UE.

*Potential proposal 1: the Relay UE ID (gNB-DU UE F1AP ID) is included in INITIAL UL RRC MESSAGE TRANSFER message for remote UE considering the remote UE local ID uniqueness per relay UE.*

##### **Q1: Can companies agree the potential proposal 1? If better rewording is foreseen, please spell it out.**

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Issue 2: **remote UE ID provision from CU to DU**

**Aspect 1: Notification of local ID of remote UE before initial access**

**Related FFSes (stage-2/3):**

*Editor’s Notes: FFS on whether including local ID of U2N Remote UE in the UE CONTEXT MODIFICATION REQUEST message*

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| *Remote UE Local ID to be updated List* (UE Cntxt. Mod. Req.) | [FFS for the name and whether it is used for only updates or also for notifying DU about assigned] |

Majority companies, i.e., [1](China Telecom), [3](Qualcomm), [7](Ericsson), [10](Nokia), [13](CATT) , [14](ZTE), [17](Lenovo), disagreed to introduce this, while [17](CMCC) and [20](Samsung) raise some points to allow the notification of remote UE’s local ID before initial access, e.g., this feature can help gNB-DU determine whether a new received UL SRB0 message is from a remote UE with the local ID matched to the one allocated by gNB-CU. In particular, if the gNB-DU receives a UL SRB0 with SRAP header containing a local ID, which is unknown by the gNB-DU according to the local ID contained in UE Context Modification Request message, the gNB-DU can reject the access of such remote UE.

In moderator’s view, this feature is a “nice-to-have” feature. Since we agree to include the remote UE’s local ID in INITIAL UL RRC MESSAGE TRANSFER message, the gNB-CU can identify whether a remote UE is the one with the local ID assigned by such gNB-CU, and it can reject the access if the remote UE is an unknown one. Considering majority view, the moderator proposes to have the following potential proposal.

*Potential proposal 2: the remote UE’s local ID is not sent to gNB-DU before initial access of remote UE.*

**Aspect 2: remote UE ID provision when configuring the PC5 RLC channel of relay UE**

**Related FFSes**

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| *Remote UE Local ID* under PC5 RLC Channel to Be Setup/Modified/Released List, PC5 RLC Channel Required to be Modified/Released List(UE Cntxt. Setup/Mod Req.; UE Cntxt, Mod. required) | [FFS - this IE is not needed when sent to remote but for simplicity we prefer M – the name and type of this identity is also FFS] |
| *Remote UE Local ID under PC5 RLC Channel Setup/Modified List, PC5 RLC Channel Modified List**(UE Cntxt. Setup/Mod. Resp. ; UE Cntxt, Mod. Confirm)* | [FFS - this IE is not needed when sent from remote but for simplicity we prefer M][FFS- The naming and meaning of this IE needs double check] |
| *Remote UE Local ID under PC5 RLC Channel Failed to Setup/Modified List**(UE Cntxt. Setup/Mod. Req.)* | [FFS - this IE is not needed when sent from remote but for simplicity we prefer M][FFS- The naming and meaning of this IE needs double check] |

Three options are mentioned in the meeting:

* Option 1: remote UE’s local ID is not needed, e.g., [4](HW)
* Option 2: remote UE’s local ID is needed, e.g., [20](Samsung)
* Option 3: use gNB-DU UE F1AP ID instead of remote UE’s local ID, e.g., [14](ZTE)

**Aspect 3: Remote UE ID update**

**Related FFSes**

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| *Layer-2 ID* under Remote UE Local ID to be updated List(UE Cntxt. Mod. Req.) | [FFS whether we use an old + new remote local ID instead] |

Three options are mentioned in the meeting:

* Option 1: use layer-2 ID + new local ID, e.g., [4](HW)
* Option 2: old + new remote local ID, e.g., [2](China Telecom), [3](Qualcomm)
* Option 3: no need of layer-2 ID, e.g., [20](Samsung)

The companies selecting option 2 consider that gNB-DU does not know layer-2 ID of the remote UE. While option 3 is selected since the local ID update is performed via remote UE’s F1AP message.

##### **Q2: Please provide views on the following aspects:**

1. Agree *potential Proposal 2* for “**Notification of local ID of remote UE before initial access**”
2. Select option for “**remote UE ID provision when configuring the PC5 RLC channel of relay UE**”
3. Select option for “**Remote UE ID update**”

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Issue 3: **Lower layer configuration for remote UE in INITIAL UL RRC MESSAGE TRANSFER message and indication of rejection to remote UE**

**Related FFSes**

Stage-2 TP: *Editor’s Notes: FFS on the inclusion of the configurations of PC5 RLC channel at least for the transmission of U2N Remote UE’s SRB1 in Step 12&13.*

Stage-3 TP:

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| *Sidelink Configuration Container*(Init. UL RRC Msg. Transfer) | *SL-PHY-MAC-RLC-Config* IE as defined in subclause x in TS 38.331 [8]. (FFS) |

* Aspect 1: whether to include SL-PHY-MAC-RLC-Config IE for PC5 RLC channel configuration for remote UE’s SRB1 at least in INITIAL RRC MESSAGE TRANSFER message

Majority companies, i.e., [3](Qualcomm), [4](HW), [10](Nokia), [14](ZTE), [18](CMCC), and [20](Samsung) , believe a separate IE is a better choice, while one company prefer to reuse the existing DU to CU RRC container by adding semantic description.

In addition, one company, i.e., [13](CATT) disagrees to have this IE since RAN2 running RRC CR does not introduce SL-PHY-MAC-RLC-Config IE in RRCSetup message.

* Aspect 2: the presence of SL-PHY-MAC-RLC-Config IE for admission result

Majority companies agree to provide the admission result of gNB-DU to gNB-CU, and most of companies prefer to use the presence of SL-PHY-MAC-RLC-Config, while one company, i.e., [13](CATT), prefer to using the presence of relay UE ID and remote UE local ID. However, one company, i.e., [7](Ericsson), considers to not send INITIAL UL RRC MESSAGE TRANSFER message when the admission of remote UE is rejected by gNB-DU (this is unaligned with the Rel-15 design, and the connection failure of remote UE has to be detected only after T300 expiry, which delay remote UE access after the RRC establishment failure).

In moderator’s view, [13] raises a valid point that RAN2 didn’t include SL-PHY-MAC-RLC-Config IE in RRCSetup message. It seems that majority companies do not mention this in their contributions. If we follow majority view, RAN2 specification change is needed for RRCSetup message. Since the above Aspect 1 is closely related to the RAN2, the moderator encourages companies have some internal coordination to check RAN2 view on this, and then make a decision for RAN3. At this moment, the moderator will give a Working assumption based on majority view:

*Working assumption: the INITIAL UL RRC MESSAGE TRANSFER message is enhanced to include SL-PHY-MAC-RLC-Config as a new RRC container to at least include the configurations of PC5 RLC Channel for remote UE’s SRB1, and the presence of such container indicates the access of remote UE is admitted by gNB-DU.*

Since this WA is related to RAN2 decision, the moderator provides the following questions by considering different RAN2 decisions.

##### **Q3: Please provide views of the following three aspects:**

1. What’s your RAN2 colleague feedback on configuring PC5 RLC Channel for remote UE’s SRB1 in *RRCSetup* message?
2. In case that RAN2 decides to add SL-PHY-MAC-RLC-Config IE in RRCSetup message, can companies agree to turn the above working assumption to agreement? If not, please indicate the clear benefit of the selected method (e.g., admission result indication mentioned by [7](Ericsson) or [13](CATT))?
3. In case that RAN2 decides to not add SL-PHY-MAC-RLC-Config IE in RRCSetup message, is any enhancement in INITIAL UL RRC MESSAGE TRANSFER message needed?

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Issue 4: **Configuration of Uu RLC channel for remote UE’s SRB0/SRB1 before remote UE’s initial access**

**Related FFSes (Stage-3)**

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| *Uu RLC Channel to be Setup List*(UE Cntxt. Setup Req.) | [this IE is FFS – the need for this needs to be confirmed] |

Both [4](HW) and [16](ZTE) suggest to allow Uu RLC channel setup for SRB0/SRB1 in UE Context Setup/Modification Request message for relay UE. This can happen before remote UE’s initial access (e.g., during/after relay UE’s initial access). Moreover, [4](HW) indicates that the Uu RLC Channel for SRB0/SRB1 can be a shared one for all remote UEs. However, [13](CATT) and [17](Lenovo) propose to not include Uu RLC channel to be setup list in UE CONTEX SETUP REQUEST message of relay UE since the gNB-CU is unaware of relay UE.

The moderator believes that the Uu RLC channel to be setup list for remote UE’s SRB0/SRB1 can be included in UE CONTXT MODIFICATION REQUEST message before remote UE’s initial access. While the discussion point is whether or not the Uu RLC Channel to be setup list is needed in UE CONTEXT SETUP REQUEST message of relay UE before remote UE’s initial access. To make it clear, companies need to figure out how does gNB-CU figure out a UE is a relay UE during its initial access procedure.

##### **Q4: Please provide views of the following aspects:**

1. Agree the proposal: the Uu RLC Channel to be Setup List for remote UE’s SRB0/SRB1 can be included in UE CONTEXT MODIFICATION REQUEST message of relay UE before remote UE’s initial access
2. Necessity of including the Uu RLC Channel to be setup list for remote UE’s SRB0/SRB1 needed in UE CONTEXT SETUP REQUEST message of relay UE. If the necessity is indicated by company, please also indicate how to know an UE is a relay UE at gNB-CU side when an relay UE accesses the network
3. The Uu RLC Channel for remote UE’s SRB0/SRB1 is shared by all remote UEs or remote UE-specific (i.e., multiple Uu RLC Channels for remote UE’s SRB0/SRB1 can be configured for different remote UEs)

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Issue 5: **impact of service continuity**

[4](HW) and [10](Nok) proposed to add remote UE local ID in UE CONTEXT SETUP REQUEST message of remote UE, which is used to reflect the previous agreement ” The UE CONTEXT SETUP REQUEST message is enhanced to include local ID of remote UE for, e.g., inter-gNB-DU mobility”. Moreover, [18](CMCC) and [20](Samsung) propose to provide the path switch configurations (including target relay UE ID, remote UE local ID, and txxx) to gNB-DU since this is needed to generate *SL-PathSwitchConfig* in CellGroupConfig container.

##### **Q5: Can company agree to provide path switch configurations (including, target relay UE ID, remote UE local ID and txxx) to gNB-DU in order to support direct-to-indirect path switch?**

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Issue 6: **RB mapping for relay UE’s F1AP message**

**Related FFSes (Stage-3)**

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| *RB mapping* (UE Cntxt. Setup/Mod. Req.) | [FFS on including such IE. The detailed structure is FFS][FFS whether we use an add+remove list] to reduce the need to send full list all the time] |

[3](Qualcomm), [4](HW) and [20](Samsung) proposed to remove this IE, while [14](ZTE) suggests to keep this IE. We already discussed this issue in last meeting, and reached the agreement “the UE associated F1AP message(s) of remote UE are used to configure the mapping between DRB/SRB and Uu RLC Channel at the gNB-DU ”. So, the moderator proposes to keep our agreement and remove this IE.

*Potential proposal 3: the bearer mapping via UE associated F1AP of relay UE is not needed, e.g., remove RB mapping IE in stage-3 TP.*

##### **Q6: Can company agree to potential proposal 3?**

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Issue 7: **FFS clean-up**

In this issue, the moderator list all FFSes in both stage-2/stage-3 TPs (except the ones addressed by the above Issue 1~5) in terms of different topics, and the summary&proposals are given for discussion.

Table 1 FFS-clean up

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| **Topics** | **FFS description** | **Summary and proposals**  |
| **FI-1:**Configure PC5 RLC CH for remote UE’s SRB1 when preparing PC5/Uu RLC CH for SRB1 | Stage-2:(initial access)*Editor’s Notes: FFS on whether step 15 can be used to configure PC5 RLC channel for the U2N Remote UE.*(Reestab.) *Editor’s Notes: FFS on whether step 13 can be used to configure PC5 RLC channel for the U2N Remote UE*(Resume) *Editor’s Notes: FFS on whether step 13 can be used to configure PC5 RLC channel for the U2N Remote UE.* | Majority companies consider PC5 RLC CH for remote UE’s SRB1 is provided when gNB-DU sends INITIAL UL RRC MESSAGE TRANSFER message. Proposal: remove ENs |
| **FI-2:**Early implementation of PC5/Uu RLC channel preparation for SRB1 | Stage-2:(initial access) *Editor’s Notes: FFS on whether performing step 15 earilier.* | [5](HW): via step 5~8[8](Ericsson): a general note, i.e., step 15 may be performed earlier[13](CATT): performed at step 7[15](ZTE): Uu RLC CH for SRB0 in step3 or in step 7-8, Uu RLC CH SRB1 in step 5~8[19](CMCC): no need to be implemented earlierMajority companies indicate step 15 can be performed earlier, while different views on the earliest step followed by step 15. Ericsson proposal would be a possible way-forward since when to implement step 15 becomes an implementation issue. Proposal: remove EN and add a Note, i.e., “step 15 may be performed earlier” |
| **FI-3:**Early implementation of PC5/Uu RLC CH preparation for DRBs/SRBs | Stage-2:(initial access) *Editor’s Notes: FFS on whether performing step 30 earilier.*(Reestab.) *Editor’s Notes: FFS on whether performing step 24 earilier.*(Resume) *Editor’s Notes: FFS on whether performing step 20 earilier.* | (initial access)[5]( HW): earlier before 20&22 for remote UE, earlier before 11 for relay UE[8](Ericsson): Note 2: Step 30 may be performed earlier.[13](CATT): step 20[15](ZTE): “may be performed in earlier steps”, i.e., Uu/PC5 RLC CH and bearer mapping for SRB2 in steps 5~8 for relay UEUu/PC5 RLC CH and bearer mapping for DRB after step 19 for relay UEUu/PC5 RLC CH and bearer mapping for SRB2/DRB after step 19 for remote UE(Reestab.)[5] (HW): earlier before 19 for remote UE, earlier before 11 for relay UE[8] (Ericsson): Note 1: Step 24 may be performed earlier(Resume)[5](HW): earlier before 14 for remote UE, earlier before 11 for relay UE[8](Ericsson): Note 1: Step 20 may be performed earlierCompanies believe “Early implementation of PC5/Uu RLC CH preparation for DRBs/SRBs” is possible. However, for initial access, different companies may have different views. The moderator consider the detailed order may be an implementation issue. So, a general note, as proposed by Ericsson, would be enough. Proposal: remove ENs on “early implementation of PC5/Uu RLC CH preparation for DRBs/SRBs”, and add a general note, e.g., “step xx may be performed earlier”  |
| **FI-4:**Add more details on some steps | Stage-2:(initial access)*Editor’s Notes: FFS on adding more details in some steps, e.g., step 7,12,20,25, etc.*(Reestab.) *Editor’s Notes: FFS on adding more details in some steps, e.g., step 12, etc.*(Resume) *Editor’s Notes: FFS on adding more details in some steps, e.g., step 12, etc.* | Majority companies delete this EN, and some details are added. Proposal: remove ENs |
| **FI-5:**SRB/DRB Mapping info | Stage-3:This IE contains the mapped Uu RLC CH ID for the SRB [FFS]This IE contains the mapped Uu RLC CH ID of the DL tunnel corresponding to such UL tunnel[FFS] | [3](Qualcomm), [4](HW), and [20](Samsung) propose to remove FFS, and keep the IE. Proposal: remove FFS and keep the IE |
| **FI-6:**PC5 RLC Channel QoS (UE Cntxt. Setup/Mod. Req.) | Stage-3:FFS on which QoS parameters should be referred to, e.g., PC5 QoS flow, or DRB’s QoS flow | [4](HW), [14](ZTE) propose to reuse QoS flow level QoS parameters Proposal: the QoS flow level QoS parameters are reused for PC5 RLC Channel QoS |
| **FI-7:***maxnoofUuRLCChannels*&*Uu RLC Channel ID* | Stage-3:*FFS for maxnoofUuRLCChannels*INTEGER (1.. x, ...) FFS for *Uu RLC Channel ID*[FFS whether this ID is allocated by CU independent from *LogicalChannelIdentity*] | [20] (Samsung) propose to be 65536 Proposal: *maxnoofUuRLCChannels=65536, and x for Uu RLC Channel ID is 65536* |
| **FI-8:***maxnoofPC5RLCChannels*&*PC5 RLC Channel ID* | Stage-3:*FFS for maxnoofPC5RLCChannels*INTEGER (1.. x, ...) FFS for *PC5 RLC Channel ID* [FFS whether this ID is allocated by CU independent from *SL-RLC-BearerConfigIndex*] | [20] (Samsung) propose to be 64 Proposal: *maxnoofPC5RLCChannels =64, and x for PC5 RLC Channel ID is 64* |
| **FI-9:***maxnoofRemoteUEs* | Stage-3:FFS | This depends on discussion on Aspect 3 of issue 2. If option 1 or 2 is selected, [20](Samsung) proposes to be 256 to align the number of remote UEs under one relay UE. Proposal: if option 1 or 2 is selected for aspect 3 of issue 2, *maxnoofRemoteUEs=256* |

##### **Q7: Please provide views on the proposal for each FFS in above table I.**

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Issue 8: **Others**

* New stage-2 TP on TS38.470

[6](HW), [9](Ericsson) and [11](Nokia) provides TP. The moderator suggests to take [11] as baseline for phase-2 discussion.

* PDB clarification

[15](ZTE) provides the clarification on PDB for Uu/PC5 RLC channel as “For a PC5 RLC channel, the Packet Delay Budget defines the upper bound for the time that a packet may be delayed between the L2 U2N relay UE and L2 U2N remote UE. For a Uu RLC channel, the Packet Delay Budget defines the upper bound for the time that a packet may be delayed between the gNB-DU and L2 U2N relay UE”. The moderator suggests to take [15] as baseline for phase-2 discussion.

* Clarification on cause of RAN initiated release

[21](CATT) provides clarification when releasing the relay UE as “For L2 U2N relay, the UE Context Release procedure should be initiated when both L2 U2N relay UE and it served remote UE are user inactivity on all PDU sessions.” The moderator suggests to take [21] as baseline for phase-2 discussion.

* Add remote UE ID in remote UE’s UE CONTEXT SETUP REQUEST message

[17](Lenovo) propose to add remote UE ID in UE CONTEXT SETUP REQUEST message of remote UE to set up the association between remote UE local ID and gNB-DU UE F1AP ID. The moderator assumes that this is related to direct to indirect path switch. So, it can be covered by issue 5.

* Stage-2 TPs for service continuity

[3](Qualcomm) proposed to adopt 1) baseline call flow for inter-gNB-DU mobility when relay UE is in RRC\_CONNECTED, 2) baseline call flow for the inter-gNB-DU mobility when relay UE is in RRC\_IDLE or RRC\_INACTIVE, and 3) some changes for existing intra-gNB-DU mobility for remote UE.

[12](Nokia) proposed call flow for direct-to-indirect path switch.

[20](Samsung) proposed call flows for 1) switch from indirect to direct path, and 2) switch from direct to indirect path.

The first two call-flows of [3] seems to be related to direct to indirect path switch, and the difference is [3] considers the different RRC status of relay UE. It is better for us to make decision on which procedure should be developed in stage-2 TPs. Thus, the moderator suggests to have a choice in phase-I discussion.

##### **Q8: Please provide views on the following aspects.**

1. New stage-2 BL CR on TS38.470: take [11] (Nok) as baseline for phase-2 discussion
2. PDB clarification: take [15](ZTE) as baseline for phase-2 discussion
3. Clarification on cause of RAN initiated release: take [21](CATT) as baseline for phase-2 discussion
4. Add remote UE ID in remote UE’s UE CONTEXT SETUP REQUEST message: discuss it Issue 5
5. Stage-2 TPs for service continuity: select the included procedures in TS38.401 among the followings:
6. switch from indirect to direct path
7. switch from direct to indirect path
8. update for existing intra-gNB-DU mobility by considering remote UE

Note: 1) & 2) can take different RRC status of relay UE into account.

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##### **Q9: please provide comments if any other issues are missing**

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# Conclusion, Recommendations [if needed]

If needed

# References

[1] R3-221718 Discussion on control plane procedure issues for SL Relay (China Telecommunication)

[2] [R3-221719](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221719.zip) Support remote UE local ID update (China Telecommunication)

[3] [R3-221755](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221755.zip) Control Plane procedures and Adaptation layer design for U2N relays (Qualcomm Incorporated)

[4] [R3-221835](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221835.zip) (TP for SLrelay BLCR for 38.473) Control Plane procedures (Huawei)

[5] [R3-221836](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221836.zip) (TP for SLrelay BLCR for 38.401) Control Plane procedures (Huawei)

[6] [R3-221837](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221837.zip) Addition of SL Relay (Huawei)

[7] [R3-221856](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221856.zip) Control plane procedures for SL Relay (Ericsson)

[8] [R3-221857](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221857.zip) (TP for SL Relay BL CR to TS 38.401) Updates on overall procedures (Ericsson)

[9] [R3-221858](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221858.zip) (TP for SL Relay BL CR to TS 38.470) Support of SL Relay (Ericsson)

[10] [R3-221902](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221902.zip) (TP for TS 38.473 BL CR) Discussion on control procedures for L2 U2N Relay (Nokia, Nokia Shanghai Bell)

[11] [R3-221903](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221903.zip) (Stage-2 F1AP CR) support for NR Sidelink Relay (Nokia, Nokia Shanghai Bell)

[12] [R3-221904](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221904.zip) (TP for TS38.401 BL CR) Update on Rel-17 Sidelink Relay (Nokia, Nokia Shanghai Bell)

[13] [R3-221910](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221910.zip) (TP for TS38.401 and TS38.473) Open issues for Sidelink Relay (CATT)

[14] [R3-221915](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221915.zip) Further discussion on F1 signalling design for the SL relay (ZTE)

[15] [R3-221916](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221916.zip) (TP for SL relay BLCR to TS 38.473) PDB of Uu/PC5 RLC channel (ZTE)

[16] [R3-221917](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221917.zip) Further discussion on RRC procedures for SL relay (ZTE)

[17] [R3-221994](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221994.zip) (TP to SL Relay BLCR to TS 38.473) Control plane issues on SL relay (Lenovo, Motorola Mobility)

[18] [R3-222265](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-222265.zip) Discussion on CP issue for SL relay (CMCC)

[19] [R3-222266](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-222266.zip) (TP for SL relay BLCR to 38.401) Control plane (CMCC)

[20] [R3-222320](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-222320.zip) (TP to BL CR on TS38.401 and TS38.473) Discussion on open issues for sidelink relay (Samsung)

[21] [R3-221912](file:///D%3A%5CWork%5C3GPP%5CRAN3%5CRAN3%23115e%28202202%29%5CInbox%5CCB%20%23%20SLRelay2_ControlPlane%5CDocs%5CR3-221912.zip) (TP for TS38.413) Impacts on RAN of AN Release of Relay UE (CATT)