**3GPP TSG-RAN WG3 #116 R3-223694R3-215701**

E-meeting, 9-19th, May, 2022

Agenda Item: 9.1.8.1

Source: CMCC (moderator)

Title: Summary of offline discussion on Sidelink relay Corrections

Document for: Discussion

# Introduction

This contribution provides the summary of the following email discussion,

**CB: # SR1\_Corrections**

**- Whether to configure Uu RLC channel in UE CONTEXT SETUP procedure of Relay UE?**

**- Correction for 5G ProSe UE PC5 Aggregate Maximum Bit Rate IE, to define a new IE or to change ASN.1? Whether to modify the definition for NR UE Sidelink Aggregate Maximum Bit Rate IE in NG/Xn/F1?**

**- The definition of PC5 RLC channel ID, per remote UE or per relay UE? The value of maxnoofPC5RLCChannels?**

**- Whether to add a container pointing to SL-PathSwitchConfig in Path Switch Configuration IE?**

**- Whether to add PC5 low layer configuration IE in DU to CU RRC Information IE?**

**- Check other stage2/3 details**

**- Capture agreements and provide CRs if agreeable**

(CMCC - moderator)

Summary of offline disc R3-223694

Phase 1: To collect views on the proposals and try to make agreements. Please provide your feedback by **23:59 UTC Thursday May 12th  to leave more time for CRs**

Phase 2: Work split among companies and work on CRs

# For the Chairman’s Notes

Propose to capture the following: [TBD]

# Discussion

##  Correction for TS 38.413 and TS 38.423

###  ASN.1 and tabular misalignment issue

Contribution [5] and [6] point out the misalignment between ASN.1 and tabular and suggest define a new IE instead of referencing to IE “NR UE Sidelink Aggregate Maximum Bit Rate” 9.3.1.148 to avoid that misalignment.

**Question 1: Do companies support to define a new IE for 5G ProSe UE PC5 Aggregate Maximum Bit Rate IE as [5] and [6]?**

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| Company | Comments |
| Nokia | Yes. |
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###  Editorial corrections

There are still some editorial and minor corrections proposed in [3] and [9], we will not discuss these editorial corrections on by one, but **those corrections can be taken into account when we work on the CRs in phase2.**

## Correction for TS 38.473

### SL-PathSwitchConfig

As described in contribution [7], there are two explicit IEs, i.e., Target Relay UE ID, and Txxxx (should be T420 as defined in TS 38.331) in the Path Switch Configuration and they have been defined as SL-PathSwitchConfig in TS 38.331. Contribution [7] thinks that such information can be directly transferred from the gNB-CU to gNB-DU then to the UE in the RRC container instead of explicit signaling over F1. The corresponding change is adding a container pointing to SL-PathSwitchConfig,and remove the Target Relay UE ID and Txxxx IEs.

**Question 2: Do companies agree to add a container pointing to SL-PathSwitchConfig in Path Switch Configuration IE?**

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| Company | Comments |
| Nokia | what is the issue for current spec?  |
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###  PC5 low layer configuration IE

As mentioned in contribution [11], according to TS38.331, the sidelink configuration is provided by sl-ConfigDedicatedNR-r17 IE, which contains:



The highlighted part is referring to lower layer configuration provided by gNB-DU. However, currently, the gNB-DU only provides the SL-PHY-MAC-RLC-Config IE. Contribution [11] suggests adding PC5 low layer configuration IE in DU to CU RRC Information IE.

**Question 3: Do companies agree to add PC5 low layer configuration IE in DU to CU RRC Information IE?**

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| Company | Comments |
| Nokia | agree |
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###  maxnoofPC5RLCchannels

Contribution [4] [10] mention the explanation of maxnoofPC5RLCChannels in 9.2.2.7, three options are listed as following,

A: Maximum no. of SL RLC bearers allowed for L2 U2N relaying per Relay UE, [10]

B: Maximum no. of PC5 Relay RLC channels allowed for L2 U2N relaying per Remote UE or per Relay UE, [4]

C: No change

**Question 4: which option above is your preference?**

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| Company | Comments |
| Nokia | Prefer B.  |
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###  Miscellaneous corrections

Contribution [2] [4] [10][11] indicate some changes to align with other specifications. We list those changes as following:

A: change undefined timer to T420 [11]

B: change maxnoofPC5RLCChannels to 64 [2] [4]

C: Change “Uu RLC channel” and “PC5 RLC channel” to “Uu Relay RLC channel” and “PC5 Relay RLC channel” [4] [10]

D: the semantics of *Sidelink Configuration Container* IE should refer to sl-ConfigDedicatedNR-r17 IE [11]

E: Add procedure description of “5G ProSe Authorized”, “5G ProSe UE PC5 Aggregate Maximum Bit Rate”, “5G ProSe PC5 Link Aggregate Bit Rate”. [4]

F: Add procedure description of “Updated Remote UE Local ID”.

G: Remove Uu RLC channel related description and bear mapping in UE context setup procedure. [2]

*NOTE: For G, moderator think it is related to question 8 and will discuss it in question 8-2.*

**Question 5: Do companies agree the above changes?**

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| Company | Comments |
| Nokia | Agree with all. |
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###  Editorial corrections

There are still some editorial and minor corrections proposed in [2] [4] [7] [10] and [11], we will not discuss these editorial corrections on by one, but **those corrections can be taken into account when we work on the CRs in phase2.**

##  Correction for TS 38.401

###  Configuration of PC5/uu RLC channel

Contribution [9] clarifies that the bearer mapping configurations for Relay UE and Remote UE are different. The bearer mapping for Relay UE are between U2N Remote UE’s DRB/SRB(s) and PC5/Uu Relay RLC channel(s), while the bearer mapping for Remote UE are between U2N Remote UE’s DRB/SRB(s) and PC5 Relay RLC channel(s). The working procedures for Remote UE in TS 38.401, such as step 30 in clause 8.19.1 and step 24 in clause 8.19.2, step 20 in clause 8.19.3 are not correct. Contribution [1] understands those 3 working procedures is for relay UE only and remove remote UE related description.

**Question 6-1:** **Do companies agree that those 3 procedures is for both relay UE and remote UE?**

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| Company | Comments |
| Nokia | Agree that the bearer mapping is different for Relay and Remote. But 38.401 is RAN3 spec, and should focus on RAN3 related mapping configuration. So Prefer contribution [1]. |
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**Question 6-2: If your answer is Yes for Q 6-1, do you agree the changes for the 3 procedures in contribution [9]?**

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| Company | Comments |
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Contribution [12] indicates that Step15 in 8.19.1 is used to prepare PC5 and uu RLC channel for SRB1. uu RLC channel is for Relay UE only and PC5 RLC channel is for both Remote UE and Relay UE. So, step15 should include the Remote UE behaviour, which is align with preparation of PC5 and uu RLC channel for DRBs and SRBs in step 30. For the above reasons, contribution [12] recommends adding Remote UE related description in step 15 in 8.19.1, step 13 in 8.19.2 and step 13 in 8.19.3 and removing NOTE about earlier performed fore step 15/13/13.

**Question 7-1: Do companies agree to add** **Remote UE related description in step 15 in 8.19.1, step 13 in 8.19.2 and step 13 in 8.19.3?**

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| Company | Comments |
| Nokia | agree |
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**Question 7-2: If your answer is Yes for Q 7-1, do companies agree that change for step 15/13/13 in contribution [12]?**

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| --- | --- |
| Company | Comments |
| Nokia | agree |
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### Whether to configure uu RLC channel in UE CONTEXT SETUP procedure of Relay UE

In contribution [1], it clarifies that gNB establishes Uu RLC channel for remote UE only after receives SUI. It suggests to remove “During RRC connection establishment procedure of the U2N Relay UE, gNB may configure the U2N Relay UE with Uu RLC channel(s) for relaying of U2N Remote UE’s SRB0/1” in step 3.

The conclusion may also affect F1 changes, e.g. section 3.2.4

G: Remove Uu RLC channel related description and bear mapping in UE context setup procedure. [2]

**Question 8-1 : Do companies agree the change for step 3 in contribution [1]?**

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| Company | Comments |
| Nokia | Agree with the change for Step 3 in Contribution [1].  |
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**Question 8-2: if your answer is Yes for 8-1, do you agree to remove Uu RLC channel related description and bear mapping in UE context setup procedure as contribution [2]?**

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| Company | Comments |
| Nokia | Agree |
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### Editorial corrections

There are still some editorial and minor corrections proposed in [1]and [9], we will not discuss these editorial corrections on by one, but **those corrections can be taken into account when we work on the CRs in phase2.**

##  Others

## If any significant issue in CRs is ignored, companies can list it here.

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| Company | Comments |
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# Conclusion, Recommendations [if needed]

[TBD]

# References

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| --- | --- | --- | --- |
| 1 | [R3-223223](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223223.zip) | CR on TS38.401 for Rel-17 Sidelink Relay (CATT) | CR0209r, TS 38.401 v17.0.0, Rel-17, Cat. F |
| 2 | [R3-223224](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223224.zip) | CR on TS38.473 for Rel-17 Sidelink Relay (CATT) | CR0882r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| 3 | [R3-223228](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223228.zip) | Corrections on NR SL Relay for 38.413 (ZTE) | CR0793r, TS 38.413 v17.0.0, Rel-17, Cat. F |
| 4 | [R3-223229](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223229.zip) | Miscellaneous corrections on NR SL Relay for 38.473 (ZTE) | CR0883r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| 5 | [R3-223257](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223257.zip) | Corrections for 5G ProSe UE PC5 Aggregate Maximum Bit Rate IE (NGAP) (Nokia, Nokia Shanghai Bell) | CR0794r, TS 38.413 v17.0.0, Rel-17, Cat. F |
| 6 | [R3-223258](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223258.zip) | Corrections for 5G ProSe UE PC5 Aggregate Maximum Bit Rate IE (XnAP) (Nokia, Nokia Shanghai Bell) | CR0793r, TS 38.423 v17.0.0, Rel-17, Cat. F |
| 7 | [R3-223415](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223415.zip) | SL Relay corrections over F1 (Ericsson) | CR0918r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| 8 | [R3-223416](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223416.zip) | Stage-2 corrections for SL Relay (Ericsson) | draftCR |
| 9 | [R3-223485](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223485.zip) | Corrections to SL relay (Huawei) | CR0219r, TS 38.401 v17.0.0, Rel-17, Cat. F |
| 10 | [R3-223486](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223486.zip) | Corrections for SL relay (Huawei) | CR0930r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| 11 | [R3-223545](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223545.zip) | Correction on Rel-17 sidelink relay (F1AP) (Samsung) | CR0941r, TS 38.473 v17.0.0, Rel-17, Cat. F |
| 12 | [R3-223653](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_116-e%5CDocs%5CR3-223653.zip) | CR to TS38.401 on R17 Sidelink Relay (CMCC) | CR0230r, TS 38.401 v17.0.0, Rel-17, Cat. F |