**3GPP TSG-RAN WG2 #113-e *R2-210xxxx***

**E-meeting, January 2021**

Agenda Item: 6.4.2

Source: OPPO

Title: Summary of  [AT113-e][704][V2X/SL] Left issue on reset configuration (OPPO)

Document for: Discussion, Decision

# Introduction

This is for the following email discussion

* [AT113-e][704][V2X/SL] Left issue on reset configuration (OPPO)

 **Scope:** discuss if there is real problem with the current specification and what is the best option to solve it (if problem is justified). Prepare the agreeable CR (if needed).

 **Intended outcome:** Agreeable 38.331 CR in R2-2102178 and discussion summary in R2-2102179 (if needed).

 **Deadline:** Feb 04 0430 (UTC)

# Discussion

In the current spec, the procedure for reset configuration is specified as follows

5.8.9.1.10 Sidelink reset configuration

The UE shall:

1> release/clear all current sidelink radio configuration of this destination;

1> release the sidelink DRBs of this destination, in according to sub-clause 5.8.9.1a.1;

1> reset the sidelink specific MAC of this destination.

NOTE: Sidelink radio configuration is not just the resource configuration but may include other configurations included in the *RRCReconfigurationSidelink* message except the sidelink DRBs of this destination.

I.e., there are 3 aspects specified, configuration release, bearer release and MAC re-set.

As clarified in [1], the R16 V2X is designed in a way that the configuration / operation is direction-specific, i.e., UE1 is in charge of the configuration for the direction of UE1 => UE2, while UE2 is in charge of the configuration for the direction UE2 => UE1, so there is a need to check if the reset configuration is in line with the design principle.



Figure 1 Configuration flow for PC5 interface
(gNB1 controls of UE1=>UE2 direction, gNB2 controls UE2=>UE1 direction)

In the following, the questions are to firstly check the intention and then to check whether a CR is needed including whether the wording is correct or not.

## Issue-1: Configuration Release

According to the current spec, the configuration release is specified as follows

1> release/clear all current sidelink radio configuration of this destination;

[…]

NOTE: Sidelink radio configuration is not just the resource configuration but may include other configurations included in the *RRCReconfigurationSidelink* message except the sidelink DRBs of this destination.

In [1], it is proposed that

P1: For reset configuration, only the configuration received in the *RRCReconfigurationSidelink* is released.

**Q1-1: Do you agree that, during the re-set configuration, only the configuration received in the *RRCReconfigurationSidelink* (i.e., the configuration for Rx) is to be released, i.e., the configuration received from dedicated-RRC/SIB/Pre-configuration (i.e., the configuration for Tx) is not released?**

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| --- | --- | --- |
| Company | Agree/Not-agree | Comment |
| Samsung | Agree | We are fine to make clarification as the rapporteur pointed out. |
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**Q1-2: If agree to Q1-1, i.e., the intention is correct, do you think the CR in [2] is needed?**

1> release/clear current sidelink radio configuration of this destination received in the *RRCReconfigurationSidelink*;

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| Company | Yes/No | ***Comment on the wording if any*** |
| Samsung | Yes |  |
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## Issue-2: DRB Release

According to the current spec, the DRB release is specified as follows

1> release the sidelink DRBs of this destination, in according to sub-clause 5.8.9.1a.1;

In [1], considering the bearer maybe bi-direction at least for RLC-AM, i.e., different from configuration-release, it is not feasible for Rx-UE to only release the bearer for a single direction, it is proposed to release all bearers but add back afterwards based on the configuration dedicated-RRC/SIB/Pre-configuration autonomously.

Otherwise, there would be a misalignment between UEs (the bearers have been released) and network (thought the bearers are still being used), or there is a need to trigger reconfiguration by network to re-add the bearers.

P2: For reset configuration, after bearer release, bearer(s) is to be re-added, based on the stored configuration received from dedicated-RRC/SIB/Pre-configuration.

**Q2-1: Do you agree that, during the re-set configuration, after DRB release, they are to be re-added, based on the stored configuration received from dedicated-RRC/SIB/Pre-configuration?**

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| --- | --- | --- |
| Company | Agree/Not-agree | Comment |
| Samsung | Agree | We share the view as the rapporteur that this part needs to be clarified. |
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**Q2-2: If agree to Q2-1, i.e., the intention is correct, do you think the CR in [2] is needed?**

1> perform the sidelink DRB addition procedure according to the current sidelink configuration of this destination, received in *sl-ConfigDedicatedNR,* *SIB12* and *SidelinkPreconfigNR*, according to sub-clause 5.8.9.1a.2;

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| Company | Yes/No | ***Comment on the wording if any*** |
| Samsung | Yes |  |
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## Issue-3: MAC Re-set

According to the current spec, the MAC re-set is specified as follows

1> reset the sidelink specific MAC of this destination.

In [1], it is observed that

* On the one hand, the MAC reset procedure is used by RLF and proactive PC5 link release (by upper layer) procedure as well, which requires both Tx side and Rx side reset;
* On the other hand, for reset configuration, it ideally only requires Rx side reset;

Given this gap, the result is waste of SL grant if the UE is configured as mode-1, i.e., although Rx-UE has cleared the Tx-buffer, but it is not known by gNB, which may further provide re-transmission SL grant to Rx-UE.

**Q3-1: Do you agree that, during the re-set configuration, according to the current spec, MAC re-set may lead to SL grant waste?**

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| Company | Agree/Not-agree | Comment |
| Samsung | See comment | We somewhat share the view as the rapporteur that the gNB can be informed about re-set especially in case of mode-1 configured. But no strong view and we are fine to follow majority view. |
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Considering that for RLF and proactive PC5 link, this issue is solved by SUI report, [1] proposes to adopt the same solution to solve it. So far, rapporteur has not identified other reasons for reset configuration report.

P3: RAN2 discuss whether to introduce reset indication in SUI to indicate the reception of sl-ResetConfig or not.

**Q3-2: Do you agree to introduce SUI report for reset configuration?**

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| Company | Agree/Not-agree | Comment |
| Samsung |  | See the comment for Q3-1 |
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**Q3-3: if agree to Q3-2, do you think the CR in [2] is needed, which is to introduce SUI report for reset configuration?**

3> if the received *RRCReconfigurationSidelink* includes the *sl-ResetConfig*:

4> initiate transmission of the *SidelinkUEInformationNR* message to indicate the NR sidelink communication transmission resources required by the UE in accordance with 5.8.3.3;

And



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| Company | Yes/No | ***Comment on the wording if any*** |
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1. Xxx

# Conclusion

We have the following proposals

[Proposal 1 xxx.](#_Toc62216175)

# Reference

1. R2-2100118 Left issue on reset configuration OPPO discussion Rel-16 5G\_V2X\_NRSL-Core
2. R2-2100115 Correction reset configuration OPPO CR Rel-16 38.331 16.3.1 2302 - F 5G\_V2X\_NRSL-Core