3GPP TSG-RAN WG1 Meeting #103-e R1-20xxxxx

Online, October 26th – November 13th, 2020

Agenda Item: 7.2.4

Source: Moderator (Ericsson)

Title: Thread 14 on the reply to the LS in R1-2007522

Document for: Discussion, Decision

# 1 List of issues for discussion

[103-e-NR-Rel-16-V2X-14]: For LS in [R1-2007522](file:///C%3A%5C%5CUsers%5C%5Cwanshic%5C%5COneDrive%20-%20Qualcomm%5C%5CDocuments%5C%5CStandards%5C%5C3GPP%20Standards%5C%5CMeeting%20Documents%5C%5CTSGR1_103%5C%5CDocs%5C%5CR1-2007522.zip), a reply LS is necessary – target 10/29 for email approval. To be handled under 7.2.4 – Ricardo (Ericsson).

# 2 Discussion

The LS in R1-2007522 includes the following question:

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| **1. Overall Description:**RAN2 discussed the sidelink configured grant handling and would like to ask RAN1 the following question.***Question：***Is it possible to use the retransmission opportunities for initial transmission for a sidelink configured grant in case when the data was not available for the transmission opportunity for initial transmission?**2. Actions:****To RAN1****ACTION:**  RAN2 respectfully asks RAN1 to take the above information into account and provide feedback on the question. |

This LS is addressed by contributions submitted to AI 5 as well as to AI 7.2.4. All of them but one propose to reply to RAN2 that, from RAN1 perspective it is possible to use the retransmission opportunities for initial transmission for a sidelink configured grant in case when the data was not available for the transmission opportunity for initial transmission.

Several contributions include (at least) the following two agreements to support their conclusion:

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| Agreements:* A dynamic grant provides resources for one or multiple sidelink transmissions of a single TB.
* A configured grant (type-1, type-2) provides a set of resources in a periodic manner for multiple sidelink transmissions.
	+ UE decides which TB to transmit in each of the occasions indicated by a given configured grant.
	+ FFS: whether different transmissions of a TB can take place across multiple configured grants.
	+ Other restrictions on what can be transmitted in a given configured grant (e.g., based on QoS, destination UE, etc.) are up to RAN2.

**Agreements**:* Only one new TB can be transmitted in one period of the configured grant.
	+ FFS any issue with retransmission spanning multiple periods
* The DCI scheduling the retransmissions uses the HARQ process ID corresponding to the first transmission of the TB, as agreed for Q2.
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Proposal:

* Reply to RAN2 that from RAN1 perspective it is possible to use the retransmission opportunities for initial transmission for a sidelink configured grant in case when the data was not available for the transmission opportunity for initial transmission

**FL update 27/10/2020**

* It seems that the proposal is acceptable to everyone. I have uploaded a draft LS here: <https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_103-e/Inbox/drafts/7.2.4/Thread%20%2314/R1-200xxxx%20%5BDraft%5D%20LS%20reply%20on%20SL%20CG%20handling_v00_FL%20.doc>
* There was a question by DCM on whether some update to the RAN1 spec was necessary or not. Many companies have expressed their view that no such update is necessary. The FL shares that view too.

Is the proposal acceptable? If not, please state which part of the specification or which of the existing agreements are violated, or whether this is a new agreement:

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| --- | --- |
| **Company** | **View** |
| Ericsson | Agree |
| OPPO | Agree |
| LG | Agree |
| CATT | AgreeFL reply 27/10/2020Thanks for adding below the missing reference. |
| NTT DOCOMO | AgreeCorresponding update of RAN1 spec is necessary or not? Note that for CG PUSCH, 214 has corresponding text (6.1.2.3.X), with condition of RV=0.FL reply 27/10/2020Regarding the impact to the RAN1 specs, I share the view expressed in their comments by vivo, Samsung, and Huawei/HiSilicon. |
| Vivo | AgreeRegarding DCM’s question, we think no spec change on RAN1 is neededFor SL CG, since the SCI includes RV field, there is no blind decoding problem for PSSCH RV for RX UE. Thus, TX UE is free to decide which occasion is used for initial transmission and set the RV field in the corresponding SCI to RV0. Given that the whole procedure can be up to TX UE implementation, we think no further clarification in phy layer spec is needed. |
| Apple | Agree |
| Panasonic | Agree |
| Samsung | AgreeRegarding DCM’s question, we also think it’s unnecessary to update RAN1 spec. For CG PUSCH, gNB allocates RV for each resource to avoid blind detection, and the reason of restricting RV=0 for initial TX is that only RV 0 is self-decodable. For SL CG, since RV is indicated in SCI, UE can start TX at any resource of a CG period with RV=0.  |
| Huawei, HiSilicon | Agree. We also think it is unnecessary to update the RAN1 spec, since the RV is indicated in the SCI which is different from NR Uu configured grant.  |
| Futurewei | Agree |
| Intel | Agree |
| Nokia, NSB | Agree with proposal. Additionally I share the view that no RAN1 spec update is needed. |

# References

## AI 5

R1-2007522 LS to RAN1 on sidelink configured grant handling RAN2, Huawei

R1-2007920 [DRAFT] Reply LS to RAN1 on sidelink configured grant handling ZTE, Sanechips

R1-2008120 Draft reply LS to RAN1 on sidelink configured grant handling Samsung

R1-2008593 Draft reply LS on LS to RAN1 on sidelink configured grant handling Qualcomm Incorporated

R1-2008648 Draft Reply LS on sidelink configured grant handling vivo

R1-2008746 Discussion on RAN2 LS on SL CG handling Ericsson

R1-2008747 [Draft] LS reply on SL CG handling Ericsson

R1-2008781 On sidelink configured grant handling Huawei, HiSilicon

R1-2007800 Discussion on the LS from RAN2 on sidelink configured grant handling CATT

## AI 7.2.4

R1-2007773 Discussion on essential corrections in resource allocation for Mode 1 LG Electronics

R1-2007810 Remaining issues on Mode 1 resource allocation in NR V2X CATT

R1-2008530 Maintenance for resource allocation mechanism mode 1 NTT DOCOMO, INC.