**3GPP TSG-RAN WG2 Meeting #115 electronic R2-2108992**

**Online, 9th – 27th August 2021**

Agenda item: 6.2.3

**Source: Huawei, HiSilicon**

**Title: Summary [AT115-e][707][V2X/SL] Corrections on the dynamic sidelink grants (Huawei)**

**Document for: Discussion and Decision**

# Introduction

This document is the summary of below offline discussion:

* [AT115-e][707][V2X/SL] Corrections on the dynamic sidelink grants (Huawei)

 **Scope:** Discuss R2-2107168 (including the need of CR) and prepare the CR if needed.

 **Intended outcome:** Agreeable MAC CR in R2-2108991. Summary discussion in R2-2108992 if needed. Will be approved by email.

 **Deadline:** 8/24 13:00pm UTC

# Discussion on CR in R2-2107168 and its revision

During the online session, the main concern on CR in R2-2107168 is that the relocated section may bring unintended restrictions on sidelink configured grant, i.e. grant addressed to MAC entity's SLCS-RNTI with NDI=0. We think it is a fair concern and the intended behavior of the relocated section is indeed targeting dynamic sidelink grant, i.e. grant addressed to MAC entity's SL-RNTI and SLCS-RNTI with NDI=1.

A revision is thus provided in draft R2-2108991, further changing two “sidelink grant” in the relocated section to “dynamic sidelink grant”. we think this extra change would address the raised consern.

##### On first change: changing “dynamic grant” in clause 5.8.3 to “dynamic sidelink grant”.

**Q1: Would your company agree/disagree with the above proposed change?**

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| --- | --- | --- |
|  Company | Agree/Disagree | Comments |
| Huawei, HiSilicon (proponent) | Agree | In MAC spec, there are clauses e.g. 5.4.2.2 where sidelink procedure/terms are described together with Uu procedure/terms. Even 5.8.3 is clause for sidelink, it is good to clarify. In light of the newly added change in 2.2, the first change looks more than “good to have”. It will become another place to use term “dynamic sidelink grant”, besides the sentence “A sidelink grant addressed to SLCS-RNTI with NDI = 1 is considered as a dynamic sidelink grant” in MAC spec (the same clause 5.22.1.1).  |
| vivo | Agree |  |
| ZTE | Agree |  |
| LG | Agree |  |
| Lenovo | Agree |  |
| Apple | Agree |  |
| Qualcomm | Agree |  |
| MediaTek | Agree |  |

##### On the second change: in clause 5.22.1.1, relocation plus changing “sidelink grant” to “dynamic sidelink grant”.

**Q2: What is your company’s view on the proposed change above?**

Option 1: Agree relocation plus changing “sidelink grant” to “dynamic sidelink grant”

Option 2: Only relocation (the same as in R2-2107168)

Option 3: No change needed for this issue

Option 4: Explicitly specifying the case of SLCS-RNTI with NDI=1

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| --- | --- | --- |
|  Company | Option | Comments |
| Huawei, HiSilicon(proponent) | 1 | The revised second change limits the intended “clearing durations” behavior on dynamic sideline grants and avoids any restrictions on the configured grant.  |
| vivo | Option 4 | We have a suggestion to solve the issue and to be more aligned with original texts: 1> else if a sidelink grant has been received on the PDCCH for the MAC entity's SLCS-RNTI:2> if PDCCH contents indicate retransmission(s) for the identifed HARQ process ID that has been set for an activated configured sidelink grant identified by *sl-ConfigIndexCG*:3> use the received sidelink grant to determine PSCCH duration(s) and PSSCH duration(s) for one or more retransmissions of a single MAC PDU according to clause 8.1.2 of TS 38.214 [7].2> else if PDCCH contents indicate configured grant Type 2 deactivation for a configured sidelink grant:3> trigger configured sidelink grant confirmation for the configured sidelink grant.2> else if PDCCH contents indicate configured grant Type 2 activation for a configured sidelink grant:3> trigger configured sidelink grant confirmation for the configured sidelink grant;3> store the configured sidelink grant;3> initialise or re-initialise the configured sidelink grant to determine the set of PSCCH durations and the set of PSSCH durations for transmissions of multiple MAC PDUs according to clause 8.1.2 of TS 38.214 [7].2> if a sidelink grant is addressed to SLCS-RNTI with NDI = 1 and the grant is available for retransmission(s) of a MAC PDU which has been positively acknowledged as specified in clause 5.22.1.3.1a:3> clear the PSCCH duration(s) and PSSCH duration(s) corresponding to retransmission(s) of the MAC PDU from the sidelink grant. |
| OPPO | Option 3 | Option-1 is not feasible since so far the dynamic SL grant is limited to SL-CS-RNTI, by “A sidelink grant addressed to SLCS-RNTI with NDI = 1 is considered as a dynamic sidelink grant”, i.e., missing the SL-RNTI case. Option-2 is not not accepted since it is applicable to all cases.[added comment] we share the same view below that the original part is redundant so no need to add more redundancy. |
| ZTE | Option3 | Actually, the original description is also a redundant description from our side. Since if we do not capture “clear the duration when MAC PDU MAC PDU which has been positively acknowledged”, UE can also drop the SL grant if UE can not find the MAC PDU in the HARQ buffer as shown in following, therefore the corresponding change is not necessary:

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| 1> else (i.e. retransmission):2> if the HARQ Process ID corresponding to the sidelink grant received on PDCCH, the configured sidelink grant or the selected sidelink grant is associated to a Sidelink process of which HARQ buffer is empty; or2> if the HARQ Process ID corresponding to the sidelink grant received on PDCCH is not associated to any Sidelink process:3> ignore the sidelink grant. |

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| LG | Option 3 | We think that it would be better to keep legacy specification, if technical issue was not found. |
| Lenovo | Option 1 | We are fine for option-1 consider this clearance is only for dynamic sidelink grant. We understand sidelink for SL-RNTI is also a kind of dynamic sidelink grant as specified RNTI usage in table 7.1-2 in MAC spec: SL-RNTI: “Dynamically scheduled sidelink transmission”. |
| Apple  | Option 4 | NO need to relocation. Just add the missing case for SLCS-RNTI with NDI=1 |
| Qualcomm | Option 3 | Agree with LG |
| MediaTek | Option 4 | To avoid changing the legacy spec, we can just add the missing case for SLCS-RNTI with NDI =1.  |

# Conclusions

# Reference