**3GPP TSG-RAN WG2 Meeting #115-e *R2-2108994***

**Online, August, 2021**

**Agenda item: 6.2.3**

**Source: LG Electronics Inc. (Rapporteur)**

**Title: [AT115-e][709][V2X/SL] MAC discussion on remaining issues (LG)**

**Document for: Discussion and decision**

# Introduction

This document is to trigger the following email discussion:

* [AT115-e][709][V2X/SL] MAC discussion on remaining issues (LG)

**Scope:** Discuss all remaining CRs in R2-2107302, R2-2108220, R2-2107185, R2-2107185, R2-2107186, R2-2107187, R2-2108707, R2-2107189 and R2-2108221.

**Intended outcome:** Discussion summary in R2-2108994 and agreeable MAC CR in R2-2108996 if needed. Will be approved by email.

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

# Discussion

#### R2-2107302 (Sharp, ZTE Corporation, Sanechips, OPPO)

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Question 1: Do you agree to reflect the above change in 38.321?

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| Company | Yes/No | Comment |
| LG |  | In the last meeting this issue was already discussed. As a result, there was no consensus and captured *“*Will revisit the issue next meeting (if needed)”  Based on the results, Rapporteur thinks this CR seems to be discussed in this meeting |
| Ericsson |  | We don’t have strong views, the changes are ok, but meanwhile the spec is not broken without the change. |
| OPPO | Yes | It’s clearer to change “next PSCCH duration” into “next MAC PDU” since “next PUCCH duration” causes confusion of “retransmission” and “next MAC PDU transmission”. |

Summary 1:

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| Answer | Number of supporting companies |
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**Recommendation 1:**

#### R2-2108220 (VIVO, ZTE)

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Question 2: Do you agree to reflect the above change in 38.321?

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| Company | Yes/No | Comment |
| LG | Yes |  |
| Ericsson | Yes |  |
| OPPO | See comments | We are fine with the CR after changing “**or**” into “**and**”. |

Summary 2:

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| Answer | Number of supporting companies |
| Yes |  |
| No |  |

**Recommendation 2:**

#### R2-2107185 (OPPO, Apple)

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Question 3: Do you agree to reflect the above change in 38.321?

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| Company | Yes/No | Comment |
| LG | No | The same issue was already discussed in the last meeting (R2-2104833) and the results was noted.  Rapporteur are thinking that this CR seems not to be needed. Although the sentence is not needed in MAC specification, there is no technical impact. Moreover, current sentence is helpful to understand conditions of SL prioritized transmission. |
| Ericsson | No | Agree with LG |
| OPPO | proponent | There seems some misunderstanding by email rapp: the original CR (4833) include 2 changes, where change-1 was addressed by last meeting and removed in the updated version here, and the resubmission is for change-2 only which has not been touched by last meeting.  We can’t agree with Rapp that “there is no technical impact” and “current sentence is helpful to understand conditions of SL prioritized transmission”.  By following the logic of the current wording of SL/UL prioritization in MAC spec, to judge “The transmission of the MAC PDU is **prioritized over uplink transmissions** of the MAC entity or the other MAC entity”, one has to rely on **clause 5.4.2.2** to judge “**uplink transmission is not prioritized**”, while in clause 5.4.2.2 there is a condition for “**uplink transmission is prioritized over sidelink transmission**” that “the **NR sidelink communication is prioritized** as described in clause **5.22.1.3.1a**”, which means 5.4.2.2 and 5.22.1.3.1a are circularly referred to each other, and that makes a confusion on the definition of “The transmission of the MAC PDU is prioritized over uplink transmissions of the MAC entity or the other MAC entity”. So logically the circular reference in spec causes problem to implementation.  We would like to understand the point by MAC rapp that how this circular reference “helpful to understand conditions of SL prioritized transmission”. |

Summary 3:

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| Answer | Number of supporting companies |
| Yes |  |
| No |  |

**Recommendation 3:**

#### R2-2107186 (OPPO, Apple)

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Question 4: Do you agree to reflect the above change in 36.321?

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| Company | Yes/No | Comment |
| LG | No | The same issue was already discussed in the last meeting (R2-2104834) and the results was noted.  Rapporteur thinks that this CR seems not to be needed. Although the sentence is not needed in MAC specification, there is no technical impact. Moreover, current sentence is helpful to understand conditions of SL prioritized transmission. |
| Ericsson | Yes | The change seems to be ok. |
| OPPO | proponent | We wonder what is the point to leave the typo (two “simultaneously” in the same sentence) as it is. |

Summary 4:

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| Answer | Number of supporting companies |
| Yes |  |
| No |  |

**Recommendation 4:**

#### R2-2107187 (OPPO)

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Question 5: Do you agree to reflect the above change in 38.321?

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| Company | Yes/No | Comment |
| LG | No | Rapporteur thinks this CR seems not to be needed. Even if the pointed description is missing, there is no technical impact. |
| Ericsson | Yes | We agree with the intention of the CR. It is better to have a clear definition of the term. |
| OPPO | proponent | In section 5.4.4, it mentioned that “**the priority of the MAC PDU** determined as specified in **clause 5.22.1.3.1a** for the SL-SCH resource”, but yet in section **5.22.1.3.1a**, there is **no definition of the term “priority of the MAC PDU”**. Therefore, the definition for the term “priority of the MAC PDU” should be added in 5.22.1.3.1a.  We wonder how to understand the point by MAC rapp that “there is no technical impact” even if a referred definition is not provided. |

Summary 5:

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| Answer | Number of supporting companies |
| Yes |  |
| No |  |

**Recommendation 5:**

#### R2-2108707 (ASUSTeK)

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Question 6: Do you agree to reflect the above change in 38.321?

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| Company | Yes/No | Comment |
| LG |  | Rapporteur thinks that this CR seems not to be needed. Even if this description is missing, current text is enough to work. |
| Ericsson | Yes | Agree with the changes, to adopt the same rules/behaviours as in Uu |
| OPPO |  | We are fine to go for the majority’s view. |

Summary 6:

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| Answer | Number of supporting companies |
| Yes |  |
| No |  |

**Recommendation 6:**

#### R2-2107189 (OPPO)

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| [Proposal 1 RAN2 confirm the WA that “UE assumes that next retransmission(s) of the MAC PDU is required when FB is disabled, for CG, if sl-CG-MaxTransNumList is configured with a value not larger than the number of CG resources, when sl-CG-MaxTransNum is not reached”.](#_Toc75349935)  [Proposal 2 When FB is disabled, for CG, if sl-CG-MaxTransNumList is configured with a value larger than the number of CG resources, when sl-CG-MaxTransNum is reached, UE assumes that next retransmission(s) of the MAC PDU is not required.](#_Toc75349936)  [Proposal 3 When FB is disabled, for CG, if sl-CG-MaxTransNumList is configured with a value larger than the number of CG resources, when sl-CG-MaxTransNum is not reached, UE assumes that next retransmission(s) of the MAC PDU is required.](#_Toc75349937) |

Question 7: Do you have any views on the proposals?

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| Company | Comment |
| Ericsson | P1 is ok,  P2 is not ok, since in this case, sl-CG-MaxTransNum will never be reached.  P3 is ok, meaning that the retransmission using further DG grants will be fully up to gNB scheduling. |
| OPPO | For Proposal 1, according to the discussion in RAN1#105, **RAN1 concluded as no LS back**, so the WA can be confirmed by RAN2.  For P2 and P3, we actually suggest to disc together with the proposal by vivo below together, since the key Q is to conclude on the UE behaviour of reporting A/N in different cases.  For Proposal 2 and Proposal 3, from OPPO perspective, considering it may not start transmission from the first CG resource, in this case “sl-CG-MaxTransNumList is configured with **a value larger than** the number of CG resources” may end up with the **same result** as the case where “sl-CG-MaxTransNumList is configured with a value **NOT larger than** the number of CG resources”. Therefore, we propose the **same UE behaviour** these two cases. |
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**Recommendation 7:**

#### R2-2108221 (VIVO)

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| Proposal 1: Besides the WA, RAN2 to clarify that the UE will decide whether the next retransmission(s) of the MAC PDU is required based on implementation when SL HARQ FB is disabled and when *sl-MaxTransNum* is not reached, in case that sl-CG-MaxTransNumList is configured with a value larger than the number of CG resources. |

Question 8: Do you have any views on the proposals?

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| Company | Comment |
| Ericsson | P1 is not ok, we more prefer P3 in OPPO contribution R2-2107189 |
| OPPO | For P2 and P3, we actually suggest to disc together with the proposal by vivo below together, since the key Q is to conclude on the UE behaviour of reporting A/N in different cases.  Otherwise, see our reply to Q7 above. |
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**Recommendation 8:**

# Conclusion and recommendation

In conclusion, Rapporteur proposes the following recommendations as the outcome of this email discussion: