**3GPP TSG RAN WG1 #110 R1-220xxxx**

**Toulouse, France, Aug 22nd – 26th, 2022**

**Agenda item:** 7.2.1

**Source:** Moderator(ZTE)

**Title:** Summary of draft CR on parallel MsgA and other channels

**Document for:** Discussion

# Background

This document contains the summary of draft CR on parallel MsgA and other channels using the following email thread:

[110-R16-NR] To be used for sharing updates on online/offline schedule, details on what is to be discussed in online/offline sessions, tdoc number of the moderator summary for online session, etc – RAN1 Chair

1. Discussion

In Rel-15, the parallel transmission of SRS and other channels, PRACH and other channels for inter-band CA is conducted by the following UE capabilities respectively in TS 38.306.

| ***parallelTxSRS-PUCCH-PUSCH***  Indicates whether the UE supports parallel transmission of SRS and PUCCH/ PUSCH across CCs in an inter-band CA band combination. | BC | No | N/A | N/A |
| --- | --- | --- | --- | --- |
| ***parallelTxPRACH-SRS-PUCCH-PUSCH***  Indicates whether the UE supports parallel transmission of PRACH and SRS/PUCCH/PUSCH across CCs in an inter-band CA band combination. | BC | No | N/A | N/A |

Meanwhile, the UE’s behaviors of above UE capabilities are also captured in TS 38.214 as shown below:

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| 6.2.1 UE sounding procedure **<Unchanged parts are omitted>**  In case of intra-band carrier aggregation or in inter-band CA band combination if simultaneous SRS and PUCCH/PUSCH transmissions are not supported by UE, the UE is not expected to be indicated with a SRS transmission from a carrier and to be configured or scheduled with a PUSCH/UL DM-RS/UL PT-RS/PUCCH transmission from a different carrier in the same symbol.  In case of intra-band carrier aggregation or in inter-band CA band combination if simultaneous SRS and PRACH transmissions are not supported by UE, the UE shall not transmit simultaneously SRS resource(s) from a carrier and PRACH from a different carrier.  **<Unchanged parts are omitted>** |

In Rel-16, a similar UE capability is introduced for parallel transmission of MsgA and other channels in TS 38.306

| ***parallelTxMsgA-SRS-PUCCH-PUSCH-r16***  Indicates whether the UE supports parallel transmission of MsgA and SRS/ PUCCH/ PUSCH across CCs in an inter-band CA band combination. A UE supporting this feature shall also indicate support of *parallelTxPRACH-SRS-PUCCH-PUSCH*. | BC | No | N/A | N/A |
| --- | --- | --- | --- | --- |

However, although such UE capability is similar as previous ones, the corresponding UE’s behaviors are not reflected in TS 38.214, so the draft CR shown below is to capture the following changes in TS 38.214 v16.10.0 to avoid potential ambiguity on UE’s behavior.

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| 6.2.1 UE sounding procedure **<Unchanged parts are omitted>**  In case of intra-band carrier aggregation or in inter-band CA band combination if simultaneous SRS and PUCCH/PUSCH transmissions are not supported by UE, the UE is not expected to be indicated with a SRS transmission from a carrier and to be configured or scheduled with a PUSCH/UL DM-RS/UL PT-RS/PUCCH transmission from a different carrier in the same symbol.  In case of intra-band carrier aggregation or in inter-band CA band combination if simultaneous SRS and PRACH/MsgA PUSCH transmissions are not supported by UE, the UE shall not transmit simultaneously SRS resource(s) from a carrier and PRACH/MsgA PUSCH from a different carrier.  **<Unchanged parts are omitted>** |

Any comments on the draft CR?

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| Company | Comment |
| vivo | In our understanding, for MsgA PUSCH, it can be treated in the same way as a normal PUSCH covered in the paragraph (copied below) before the paragraph changed in the CR. Therefore, there's no need to include MsgA PUSCH as proposed by the CR.   |  | | --- | | In case of intra-band carrier aggregation or in inter-band CA band combination if simultaneous SRS and PUCCH/PUSCH transmissions are not supported by UE, the UE is not expected to be indicated with a SRS transmission from a carrier and to be configured or scheduled with a PUSCH/UL DM-RS/UL PT-RS/PUCCH transmission from a different carrier in the same symbol. | |
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1. Summary

TBD

1. Reference
2. R1-2206089 Correction on parallel transmission of MsgA and other channels in TS 38.214, ZTE, Sanechips