**3GPP TSG RAN WG1 #117 R1-240xxxx**

**Fukuoka City, Fukuoka, Japan, May 20th – 24th, 2024**

**Agenda item:** 7

**Source:** Moderator (Samsung)

**Title:** Summary of discussion on intra-UE multiplexing and prioritization

**Document for:** Discussion and Decision

# Introduction

This contribution aims to collect and summarize company views on the remaining issue of intra-UE multiplexing and prioritization as discussed in [1] ~ [3]. The following two issues were also discussed in RAN1#116bis without consensus.

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| Whether MAC generates a MAC PDU for a CG PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority?  If MAC does not generate a MAC PDU for a CG PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority, whether the CG PUSCH is included in the “candidate PUSCHs” for UCI multiplexing? |

Please consider entering the contact information below for better coordination for this discussion.

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| **Company** | **Contact(s)** | **Email address(es)** |
| Samsung (Moderator) | Sa Zhang | sa.zhang@samsung.com |
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# Background

Regarding whether MAC generates a MAC PDU for a CG PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority, or whether a UE transmits a CU PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority, it seems the current spec is not clear. A follow up question is if MAC does not generate a MAC PDU for a CG PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority, whether the CG PUSCH is included in the “candidate PUSCHs” for UCI multiplexing? Companies are encouraged to provide views on these issues and potential spec impact.

# Discussion

## 1st round discussion

**Q1: Do you think the spec is clear on “Whether MAC generates a MAC PDU for a CG PUSCH overlapping with a PUSCH with SP-CSI reports without UL-SCH on a same serving cell?” or “whether a UE transmits a CG PUSCH overlapping with a PUSCH with SP-CSI reports on a same serving cell for a same priority” ? If YES, please clarify the details.**

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**Q2: What is your view on the intended UE behaviour for the questions in Q1?**

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**Q3: Do you think the spec is clear on “whether a CG PUSCH is included in the “candidate PUSCHs” when the CG PUSCH overlaps with a PUSCH with SP-CSI reports without UL-SCH on a same serving cell” If YES, please clarify the details.**

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**Q4: What is your view on “whether a CG PUSCH is included in the “candidate PUSCHs” when the CG PUSCH overlaps with a PUSCH with SP-CSI reports without UL-SCH on a same serving cell”?**

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# Conclusion

# Reference

1. R1-2404065 Discussion on intra-UE multiplexing and prioritization Samsung
2. R1-2404066 Correction on UCI multiplexing in a PUSCH transmission Samsung
3. R1-2404227 Discussion on the multiplexing prioritization for a PUSCH without a TB ZTE