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

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

**Source: Moderator (ZTE)**

**Title: FL summary of PDSCH reception for MBS**

**Agenda item: 8.1**

**Document for:** **Discussion and Decision**

# Introduction

This document provides the summary of PDSCH reception for MBS proposed by [1].

R1-2404812 Draft CR on PDSCH reception for MBS ZTE, CBN

# Discussion

For multicast reception in RRC\_INACTIVE, it was agreed to introduce a new UE capability on intra-slot TDMed unicast/broadcast/multicast PDSCHs. The UE can report whether it supports intra-slot TDMed PDSCH reception for unicast/broadcast/multicast in RRC\_INACITIVE. Therefore, the number of PDSCH for multicast in RRC\_INACTIVE that can be scheduled in a slot may not be the same as the indication for unicast. The corresponding specification should be changed to exclude the PDSCH reception for multicast in RRC\_INACTIVE. The following CR is proposed.

|  |
| --- |
| **<Unchanged parts are omitted>**  The maximum number of PDSCHs scheduled per slot per component carrier with C-RNTI/CS-RNTI and G-RNTI for broadcast or multicast in RRC\_CONNECTED state/G-CS-RNTI/MCCH-RNTI that the UE shall be able to decode is the same as the indicated UE capability for the number of unicast PDSCHs per slot per component carrier. If the UE is capable of receiving FDMed unicast and multicast PDSCH per slot per carrier, the UE shall be able to decode a PDSCH scheduled by a DCI format with C-RNTI or a PDSCH scheduled for a retransmission of a TB by a DCI format with CS-RNTI and a PDSCH scheduled by a DCI format with G-RNTI for multicast or a PDSCH scheduled for a retransmission of a TB by a DCI format with G-CS-RNTI that partially or fully overlap in time in non-overlapping PRBs. If the UE is capable of receiving FDMed unicast and broadcast PDSCH per slot per carrier, the UE shall be able to decode a PDSCH scheduled by a DCI format with C-RNTI or a PDSCH scheduled for a retransmission of a TB by a DCI format with CS-RNTI and a PDSCH scheduled with G-RNTI for broadcast/MCCH-RNTI that partially or fully overlap in time in non-overlapping PRBs. For a reduced capability UE that indicates *supportOfRedCap-r18* but not indicating FG 48-2, if the UE is capable of receiving FDMed unicast and multicast/broadcast PDSCH per slot, the UE can decode the two PDSCHs, with the two PDSCHs partially or fully overlapping in time in non-overlapping PRBs,  - if the total number of PRBs allocated is no more than 25 PRBs when configured with SCS  = 0 or no more than 12 PRBs when configured with SCS  = 1,  - otherwise, the UE may skip decoding one of the two PDSCHs.  If the UE is configured by higher layers to decode a PDCCH with its CRC scrambled by a CS-RNTI or G-CS-RNTI, the UE shall receive PDSCH transmissions without corresponding PDCCH transmissions using the higher-layer-provided PDSCH configuration for those PDSCHs.  **<Unchanged parts are omitted>** |

Companies are invited to provide their views on the proposed CR in the following table.

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Huawei, HiSilicon | For readability, can we reword the first sentence like:  The maximum number of PDSCHs scheduled per slot per component carrier with C-RNTI/CS-RNTI, and with MCCH-RNTI/G-RNTI for broadcast, and with G-RNTI/ G-CS-RNTI for multicast in RRC\_CONNECTED state that the UE shall be able to decode is the same as the indicated UE capability for the number of unicast PDSCHs per slot per component carrier. |
| CMCC | Generally fine, but we still need to capture “intra-slot TDM unicast PDSCH and group-common PDSCH for multicast in RRC\_INACTIVE state”in TS 38.214. |
|  |  |
|  |  |
|  |  |

# Conclusion

# References

1. R1-2404812 Draft CR on PDSCH reception for MBS ZTE, CBN