**3GPP TSG RAN WG1 #118 R1-240xxxx**

**Maastricht, NL, August 19th – 23rd, 2024**

Source: Moderator (CMCC)

Title: FL summary on R18 MBS intra-slot TDM PDSCH reception

Agenda item: 8.1

Document for: Discussion & Decision

# Introduction

This summary is about maintenance of R18 MBS about intra-slot TDM PDSCH reception[1].

# Discussion

**Reason for change**

FG 57-2 about intra-slot TDM-ed unicast PDSCH and group-common PDSCH for multicast reception in RRC\_INACTIVE mode is introduced in RAN1 UE features list, but the corresponding description of intra-slot PDSCHs reception is missed in TS 38.214.

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| 57-2 | Intra-slot TDM-ed unicast PDSCH and group-common PDSCH for multicast in RRC\_INACTIVE state | 1. Support TDM between one unicast PDSCH (e.g., small data transmission PDSCH) and one group-common PDSCH for multicast in a slot.  2. For any two consecutive slots n and n+1, if there are more than 1 multicast/unicast PDSCH in either slot, whether to require the minimum time separation between starting time of any two multicast/unicast PDSCHs within the duration of these slots is 4 OFDM symbol for 30kHz and 7 OFDM symbol for 60kHz | 57-1 |  | Per band | N/A | N/A | Candidate value for component 2: require the minimum time separation time {yes, no}  Note: UE indicating this FG shall support multicast reception and unicast reception e.g., SDT in RRC\_INACTIVE state. | Optional with capability signalling |

**Proposed TP on TS 38.214**

## 5.1 UE procedure for receiving the physical downlink shared channel

< Unchanged parts are omitted >

In RRC\_CONNECTED state, the maximum number of PDSCHs scheduled per slot per component carrier with C-RNTI/CS-RNTI and G-RNTI/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. In RRC\_INACTIVE state, UE shall be able to decode one PDSCH scheduled with C-RNTI and one PDSCH scheduled with G-RNTI/Multicast MCCH-RNTI 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.

< Unchanged parts are omitted >

**Discussion**

Companies provide your views in the following table:

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| --- | --- |
| **Company** | **Comments** |
| Qualcomm | The CR does not correctly capture the intra-slot TDM UE capability.  We suggest to change the TP as:  In RRC\_INACTIVE state, if UE is capable of receiving TDMed unicast and multicast per slot per component carrier, UE shall be able to decode one PDSCH scheduled with C-RNTI and one PDSCH scheduled with G-RNTI/Multicast MCCH-RNTI per slot per component carrier. |
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# References

1. R1-2405974 Draft CR on intra-slot TDM-ed unicast PDSCH and multicast PDSCH in RRC\_INACTIVE mode CMCC