**3GPP TSG RAN WG1 #106-e R1-210xxxx**

**e-Meeting, August 16th – 27th, 2021**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **16.6.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | CR on number of received PDSCHs for multi-TRP transmission |
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| ***Source to WG:*** | ZTE |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | NR\_eMIMO-Core |  | ***Date:*** | 19 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | 6 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)Rel-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | In Rel-15 for Type-I HARQ-ACK codebook determination, Z bits of HARQ-ACK feedback are assumed for a group of candidate PDSCHs which overlap in time domain. For example, Z=1 for non-CBG based transmission with <=4 layers. For the same group of candidate PDSCHs, the UE does not expect to actually receive more than one PDSCH in a same DL slot since only Z HARQ-ACK bits for one PDSCH are fed back to gNB. The corresponding description in 38.213 is as follows

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| If the UE indicates a capability to receive more than one PDSCH per slot, for occasions of candidate PDSCH receptions corresponding to rows of $R$ associated with a same value of , where , the UE does not expect to receive more than one PDSCH in a same DL slot |

In the above text, candidate PDSCHs with a same value  refer to the same group of candidate PDSCHs which overlap in time domain. However, in Rel-16, multi-DCI based MTRP is introduced where two PDSCHs from two TRPs corresponding two *coresetPoolIndex* values are scheduled independently, and can be multiplexed at the same time. Z HARQ-ACK bits will be fed back for the same group of candidate PDSCH for each TRP. Thus, the above description text should be updated so that the restriction of number of PDSCHs is applicable for each TRP rather than across two TRPs for multi-DCI based MTRP.  |
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| ***Summary of change:*** | Clarifying that for a same group of candidate PDSCHs corresponding to a same  value, the UE does not expect to receive more than one PDSCH in a same DL slot per TRP rather than across two TRPs for multi-DCI based MTRP.  |
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| ***Consequences if not approved:*** | Two PDSCHs scheduled by two TRPs cannot be transmitted at the same time for multi-DCI based MTRP.  |
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| ***Clauses affected:*** | 9.1.2.1 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** | **Isolated impact analysis:**This is just a correction, so there is no isolated impact. |
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| ***This CR's revision history:*** | This is the first version for this CR. |

#### 9.1.2.1 Type-1 HARQ-ACK codebook in physical uplink control channel

**<Unchanged parts are omitted>**

If the UE indicates a capability to receive more than one PDSCH per slot, for occasions of candidate PDSCH receptions corresponding to rows of $R$ associated with a same value of , where , the UE does not expect to receive more than one PDSCH in a same DL slot associated with a same *coresetPoolIndex* value if provided, or if *coresetPoolIndex* is not provided.

**<Unchanged parts are omitted>**