**3GPP TSG-RAN WG1 Meeting #104-e *R1-210xxxx***

**e-Meeting, January 25th – February 5th, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.214** | **CR** | **-** | **rev** | **-** | **Current version:** | **16.4.0** |  |
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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:***  | Correction on Part 2 CSI dropping for UCI multiplexing on PUSCH repetition Type B |
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| ***Source to WG:*** | Moderator (Apple Inc.) |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_L1enh\_URLLC-Core |  | ***Date:*** | 2021-02-03 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-16 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | The following agreement was made in RAN1#101-e:***Agreement*** *For UCI multiplexed on PUSCH repetition Type B with UL-SCH, the number of coded modulation symbols per layer for HARQ-ACK, CSI part 1, and CSI part 2 is calculated by modifying the Rel-15 formula as follows:** ***Option 1a****: The calculation is based on the nominal repetition, with the additional limit that the total number of coded modulation symbols per layer for UCI is no more than the resources available in the actual repetition.*

Necessary changes were made for UCI multiplexing in TS 38.212, but the corresponding handling of Part 2 CSI dropping for UCI multiplexing on PUSCH repetition Type B is not captured in TS 38.214 Clause 5.2.3. |
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| ***Summary of change:*** | Handling of part 2 CSI dropping for UCI multiplexing on PUSCH repetition Type B is captured in TS 38.214. |
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| ***Consequences if not approved:*** | It may result in incorrect UE behavior on the handling of part 2 CSI dropping for UCI multiplexing on PUSCH repetition Type B. |
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| ***Clauses affected:*** | 6.1.4 |
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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 CR has isolated impact on the handling of part 2 CSI dropping for UCI multiplexing on PUSCH repetition Type B.If the gNB implements the CR but the UE does not, the UE may have incorrect/unknown behavior.If the UE implements the CR but the gNB does not, the gNB may not understand the UE behavior. |
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| ***This CR's revision history:*** |  |

### 5.2.3 CSI reporting using PUSCH

<unchanged part is omitted>

When the UE is scheduled to transmit a transport block on PUSCH not using repetition type B multiplexed with a CSI report(s), Part 2 CSI is omitted only when  is larger than , where parameters , , , , , , , , and are defined in Clause 6.3.2.4 of [5, TS 38.212].

Part 2 CSI is omitted level by level, beginning with the lowest priority level until the lowest priority level is reached which causes the  to be less than or equal to .

When the UE is scheduled to transmit a transport block on PUSCH using repetition type B multiplexed with a CSI report(s), Part 2 CSI is omitted only when

is larger than

,

where parameters , , , , , , , , , , , and are defined in Clause 6.3.2.4 of [5, TS 38.212].

Part 2 CSI is omitted level by level, beginning with the lowest priority level until the lowest priority level is reached which causes

to be less than or equal to

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When part 2 CSI is transmitted on PUSCH with no transport block, lower priority bits are omitted until Part 2 CSI code rate, which is given by where , , are given in clause 6.3.2.4 of [5, 38.212] before HARQ-ACK puncturing part 2 CSI if any, is below a threshold code rate lower than one, where

 

- is the CSI offset value from Table 9.3-2 of [6, TS 38.213]

- *R* is signaled code rate in DCI

<unchanged part is omitted>