**3GPP TSG-RAN WG1 Meeting #103-e *R1-20xxxxx***

**e-Meeting, October 26–November 13, 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** |  | **rev** |  | **Current version:** | **16.3.0** |  |
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| *For* [***HELP***](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 PDCCH monitoring on cell(s) configured with Rel-15 PDCCH monitoring capability  |
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| ***Source to WG:*** | Moderator (Huawei) |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | NR\_L1enh-URLLC-Core |  | ***Date:*** | 2020-11-02 |
|  |  |  |  |  |
| ***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-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:*** | Based on the discussion of issue B-2 in [103-e-NR-L1enh-URLLC-01], the following conclusion was agreed and corresponding corrections should be captured:**Conclusion:** M-DCI based M-TPR in Rel-16 MIMO is not applied to the Rel-15 cell(s) in CA case 3 (i.e. both cell(s) with Rel-15 monitoring capability and cell(s) with Rel-16 monitoring capability are configured).  |
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| ***Summary of change:*** | Capture the correction on PDCCH monitoring on cell(s) configured with Rel-15 PDCCH monitoring capability based on the outcome of issue B-2 in [103-e-NR-L1enh-URLLC-01]. |
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| ***Consequences if not approved:*** | The specification is incomplete. |
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| ***Clauses affected:*** | 10.1 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

## 10.1 UE procedure for determining physical downlink control channel assignment

< Unchanged parts are omitted >

If a UE is configured with $N\_{cells,0}^{DL,μ}+N\_{cells,1}^{DL,μ}$ downlink cells for which the UE is not provided *monitoringCapabilityConfig-r16* or is provided *monitoringCapabilityConfig-r16* = *r15monitoringcapability*, with associated PDCCH candidates monitored in the active DL BWPs of the scheduling cells using SCS configuration $μ$ where $\sum\_{μ=0}^{3}\left(N\_{cells,0}^{DL,μ}+γ∙N\_{cells,1}^{DL,μ}\right)\leq N\_{cells}^{cap}$, the UE is not required to monitor, on the active DL BWPs of the scheduling cells,

- more than $M\_{PDCCH}^{total,slot,μ}=M\_{PDCCH}^{max,slot,μ}$ PDCCH candidates or more than $C\_{PDCCH}^{total,slot,μ}=C\_{PDCCH}^{max,slot,μ}$ non-overlapped CCEs per slot for each scheduled cell when the scheduling cell is from the $N\_{cells,0}^{DL,μ}$ downlink cells, or

- more than $M\_{PDCCH}^{total,slot,μ}=γ∙M\_{PDCCH}^{max,slot,μ}$ PDCCH candidates or more than $C\_{PDCCH}^{total,slot,μ}=γ∙C\_{PDCCH}^{max,slot,μ}$ non-overlapped CCEs per slot for each scheduled cell when the scheduling cell is from the $N\_{cells,1}^{DL,μ}$ downlink cells

- more than $M\_{PDCCH}^{max,slot,μ}$ PDCCH candidates or more than $C\_{PDCCH}^{max,slot,μ}$ non-overlapped CCEs per slot for CORESETs with same *CORESETPoolIndex* value for each scheduled cell when the scheduling cell is from the $N\_{cells,1}^{DL,μ}$ downlink cells

If a UE

- is configured with $N\_{cells,0}^{DL,μ}+N\_{cells,1}^{DL,μ}$ downlink cells for which the UE is not provided *monitoringCapabilityConfig-r16* or is provided *monitoringCapabilityConfig-r16* = *r15monitoringcapability*,

- with associated PDCCH candidates monitored in the active DL BWPs of the scheduling cell(s) using SCS configuration $μ$, where $\sum\_{μ=0}^{3}\left(N\_{cells,0}^{DL,μ}+γ∙N\_{cells,1}^{DL,μ}\right)>N\_{cells}^{cap}$, and

- a DL BWP of an activated cell is the active DL BWP of the activated cell, and a DL BWP of a deactivated cell is the DL BWP with index provided by *firstActiveDownlinkBWP-Id* for the deactivated cell,

the UE is not required to monitor more than $M\_{PDCCH}^{total,slot,μ}=\left⌊N\_{cells}^{cap}⋅M\_{PDCCH}^{max,slot,μ}⋅{\left(N\_{cells,0}^{DL,μ}+γ∙N\_{cells,1}^{DL,μ}\right)}/{\sum\_{j=0}^{3}\left(N\_{cells,0}^{DL,j}+γ∙N\_{cells,1}^{DL,j}\right)}\right⌋$ PDCCH candidates or more than $C\_{PDCCH}^{total,slot,μ}=\left⌊N\_{cells}^{cap}⋅C\_{PDCCH}^{max,slot,μ}⋅{\left(N\_{cells,0}^{DL,μ}+γ∙N\_{cells,1}^{DL,μ}\right)}/{\sum\_{j=0}^{3}\left(N\_{cells,0}^{DL,j}+γ∙N\_{cells,1}^{DL,j}\right)}\right⌋$ non-overlapped CCEs per slot on the active DL BWP(s) of scheduling cell(s) from the $N\_{cells,0}^{DL,μ}+N\_{cells,1}^{DL,μ}$ downlink cells. $N\_{cells}^{cap}$ is replaced by $N\_{cells,r15}^{cap-r16}$, if a UE is not provided *CORESETPoolIndex* and configured with downlink cells for which the UE is provided both *monitoringCapabilityConfig-r16* = *r15monitoringcapability* and *monitoringCapabilityConfig-r16* = *r16monitoringcapability*.

< Unchanged parts are omitted >