**3GPP TSG RAN WG1 #116bis R1-24xxxxx**

**Changsha, Hunan Province, China, April 15th – 19th, 2024**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.213** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **18.2.0** |  |
|  |
| *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 prioritizations for transmission power reductions in LTM for 38.213 |
|  |  |
| ***Source to WG:*** | Moderator (Fujitsu), ZTE, Nokia |
| ***Source to TSG:*** | R1 |
|  |  |
| ***Work item code:*** | NR\_Mob\_enh2-Core |  | ***Date:*** | 15 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | 8 |
|  | *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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | A PRACH transmission on a candidate cell has been added in clause 7.5 to the list of priority order of prioritizations for transmission power reductions; however, the main description before the priority order list only mentions the “transmissions on serving cells” and does not include a “transmission on a candidate cell” |
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| ***Summary of change:*** | A transmission on a candidate cell is added in clause 7.5 in the description before the priority order list |
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| ***Consequences if not approved:*** | The prioritization rules for transmission power reductions with a transmission on candidate cell will be ambiguous. |
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| ***Clauses affected:*** | 7.5 |
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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 no isolated impact on network and UE behavior.  |
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| ***This CR's revision history:*** | This is the first version of this CR. |

## 7.5 Prioritizations for transmission power reductions

For single cell operation with two uplink carriers or for operation with carrier aggregation or for operation with a candidate cell configured by *LTM-Config*, if a total UE transmit power for PUSCH or PUCCH or PRACH or SRS transmissions on serving cells or on a candidate cell, if any, in a frequency range in a respective transmission occasion $i$ would exceed $\hat{P}\_{CMAX}(i)$, where $\hat{P}\_{CMAX}(i)$ is the linear value of $P\_{CMAX}(i)$ in transmission occasion $i$ as defined in [8-1, TS 38.101-1] for FR1 and [8-2, TS 38.101-2] for FR2, the UE allocates power to PUSCH/PUCCH/PRACH/SRS transmissions according to the following priority order (in descending order) so that the total UE transmit power for transmissions on serving cells or on a candidate cell, if any, in the frequency range is smaller than or equal to $\hat{P}\_{CMAX}(i)$ for that frequency range in every symbol of transmission occasion $i$. If the UE transmits SRS on multiple SRS resources according the *XYZ* [6, TS 38.214], the UE allocates power so that all REs of the SRS transmission have same power.

For the purpose of power allocation in this clause, if a UE is provided *uci-MuxWithDiffPrio* and the UE multiplexes HARQ-ACK information in a PUSCH, a priority index of the PUSCH is the larger of (a) the priority index of the PUSCH according to clause 9 and (b) the larger priority index of the HARQ-ACK information. When determining a total transmit power for serving cells or a candidate cell, if any, as described in Clause 21 in a frequency range in a symbol of transmission occasion $i$, the UE does not include power for transmissions starting after the symbol of transmission occasion $i$. The total UE transmit power in a symbol of a slot is defined as the sum of the linear values of UE transmit powers for PUSCH, PUCCH, PRACH, and SRS in the symbol of the slot.

- PRACH transmission on a candidate cell, if any, as described in Clause 21

- PRACH transmission on the PCell

- PUCCH or PUSCH transmissions with larger priority index

- For PUCCH or PUSCH transmissions with same priority index

- PUCCH transmission with HARQ-ACK information, and/or SR, and/or LRR, or PUSCH transmission with HARQ-ACK information of the priority index

- PUCCH transmission with CSI or PUSCH transmission with CSI

- PUSCH transmission without HARQ-ACK information of the priority index or CSI and, for Type-2 random access procedure, PUSCH transmission on the PCell

- If the UE is configured with prioSCellPRACH-OverSP-PeriodicSRS-r17

- Aperiodic SRS transmission or PRACH transmission on a serving cell other than the PCell

- Semi-persistent and/or periodic SRS transmission

- otherwise,

- SRS transmission, with aperiodic SRS having higher priority than semi-persistent and/or periodic SRS, or PRACH transmission on a serving cell other than the PCell

In case of same priority order and for operation with carrier aggregation, the UE prioritizes power allocation for transmissions on the primary cell of the MCG or the SCG over transmissions on a secondary cell. In case of same priority order and for operation with two UL carriers, the UE prioritizes power allocation for transmissions on the carrier where the UE is configured to transmit PUCCH. If PUCCH is not configured for any of the two UL carriers, the UE prioritizes power allocation for transmissions on the non-supplementary UL carrier.