**3GPP TSG RAN WG1 #118bis R1-24xxxxx**

**Hefei, China, October 14th – 18th, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.213** | **CR** | **-** | **rev** | **-** | **Current version:** | **18.4.0** |  |
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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 SSB-RO mapping for LTM | | | | | | | | | |
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| ***Source to WG:*** | Moderator (Fujitsu), Samsung, Nokia | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_enh2-Core | | | | |  | ***Date:*** | | | 2024-10-14 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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 can be 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | For RACH-based LTM cell switch and for RACH-less LTM cell switch, before a new indicated TCI state can be actually applied – subject to a beam application time – on the candidate cell, the indicated *CandidateTCI-State* or the *CandidateTCI-UL-State* is applied on the candidate cell.  However, based on the current descriptions in the specification, as soon as a new TCI state is indicated on the candidate cell, the indicated *CandidateTCI-State* or the *CandidateTCI-UL-State* can no longer be applied, which is incorrect. | | | | | | | | |
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| ***Summary of change:*** | | Clarify that, for both RACH-based LTM cell swith and RACH-less LTM cell switch, the indicated *CandidateTCI-State* or the *CandidateTCI-UL-State* is applied on the candidate cell before a new TCI state can actually be applied. | | | | | | | | |
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| ***Consequences if not approved:*** | | Correct UE’s behaviors of TCI state application on candidate cell are not supported. | | | | | | | | |
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| ***Clauses affected:*** | | 21 | | | | | | | | |
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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. | | | | | | | | |

21 L1/L2-triggered mobility procedures

< Unchanged parts are omitted >

A UE can be provided by a LTM Cell Switch Command MAC CE in a PDSCH reception on the serving cell [11, TS 38.321] a TCI state ID and/or an UL TCI state ID indicating a *CandidateTCI-State* and/or *CandidateTCI-UL-State* from *ltm-DL-OrJointTCI-StateToAddModList* and/or *ltm-UL-TCI-StateToAddModList* [6, TS 38.214] for applicable receptions or transmissions on a candidate cell from the number of candidate cells. The UE may assume that DM-RS antenna ports for PDCCH receptions and for PDSCH receptions are quasi co-located with the SS/PBCH block or the TRS in the TCI state with respect to quasi co-location 'typeA' and 'typeD' properties, when applicable. The UE does not expect to be indicated quasi co-location 'typeA' properties when a SS/PBCH block is configured as a source RS of the TCI state. The UE applies the *CandidateTCI-State* and/or *CandidateTCI-UL-State,* if indicated by the MAC CE, no later than after the last symbol of a PUCCH or PUSCH with HARQ-ACK information for the PDSCH providing the MAC CE, where , , and are defined in [10, TS 38.133]*.* For RACH-based LTM cell switch [19, TS 38.300], the UE applies the *CandidateTCI-State* for receptions on the candidate cell, and applies a spatial domain filter corresponding to the *CandidateTCI-State* or the *CandidateTCI-UL-State* for transmissions on the candidate cell, that are after the completion of the random access procedure associated with the PRACH transmission on the candidate cell and before a new TCI state is applied for the candidate cell. For RACH-less LTM cell switch [19, TS 38.300], the UE applies the *CandidateTCI-State* for receptions on the candidate cell and applies a spatial domain filter corresponding to the *CandidateTCI-State* or the *CandidateTCI-UL-State* for transmissions on the candidate cell before a new TCI state is applied for the candidate cell.

< Unchanged parts are omitted >