**3GPP TSG RAN WG1 #118R1-2407453**

**Maastricht, Netherlands, August 19th – 23rd, 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.213** | **CR** | **0665** | **rev** | **-** | **Current version:** | **18.3.0** |  |
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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 the UL/SUL indication for CFRA | | | | | | | | | |
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| ***Source to WG:*** | Moderator (Fujitsu), Huawei, HiSilicon, Ericsson, Nokia, ZTE, Lenovo, Apple | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_enh2-Core | | | | |  | ***Date:*** | | | 2024-08-20 |
|  |  | | | |  | |  | | |  |
| ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The description of UL/SUL indicator in PDCCH order to trigger PRACH transmission on candidate cell is not captured in TS38.213.  RAN2 agree to include S/U field in LTM Cell Switch Command to indicate whether the PRACH of CFRA is transmitted the UL or SUL. However, RAN1 specification does not reflect the corresponding behaviour. | | | | | | | | |
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| ***Summary of change:*** | | Clarify that UL/SUL indicator in a PDCCH order can also be applied to a candidate cell.  Clarify that UE can determine the UL carrier based on the S/U field in LTM Cell Switch Command MAC CE when it triggers a CFRA. | | | | | | | | |
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| ***Consequences if not approved:*** | | PRACH transmission on UL/SUL can not be triggered by LTM Cell Switch Command or by PDCCH order for PRACH transmisson on candidate cell. | | | | | | | | |
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| ***Clauses affected:*** | | 8 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | **Isolated Impact Analysis:**  This CR has no isolated impact on network and UE behavior. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | This is the first version of this CR | | | | | | | | |

< Unchanged parts are omitted >

# 8 Random access procedure

Prior to initiation of the physical random access procedure, Layer 1 receives from higher layers a set of SS/PBCH block indexes and provides to higher layers a corresponding set of RSRP measurements.

Prior to initiation of the physical random access procedure, Layer 1 may receive from higher layers an indication to perform a Type-1 random access procedure, as described in clauses 8.1 through 8.4, or a Type-2 random access procedure as described in clauses 8.1 through 8.2A.

Prior to initiation of the physical random access procedure, Layer 1 receives the following information from the higher layers:

- Configuration of physical random access channel (PRACH) transmission parameters (PRACH preamble format, time resources, and frequency resources for PRACH transmission).

- Parameters for determining the root sequences and their cyclic shifts in the PRACH preamble sequence set (index to logical root sequence table, cyclic shift (), and set type (unrestricted, restricted set A, or restricted set B)).

From the physical layer perspective, the Type-1 L1 random access procedure includes the transmission of random access preamble (Msg1) in a PRACH, random access response (RAR) message with a PDCCH/PDSCH (Msg2), and when applicable, the transmission of a PUSCH scheduled by a RAR UL grant, and PDSCH for contention resolution.

From the physical layer perspective, the Type-2 L1 random access procedure includes the transmission of random access preamble in a PRACH and of a PUSCH (MsgA) and the reception of a RAR message with a PDCCH/PDSCH (MsgB), and when applicable, the transmission of a PUSCH scheduled by a fallback RAR UL grant, and PDSCH for contention resolution.

If a random access procedure is initiated by a PDCCH order to the UE, a PRACH transmission is with a same SCS as a PRACH transmission initiated by higher layers.

If a UE is configured with two UL carriers for a serving cell or a candidate cell and the UE detects a PDCCH order, the UE uses the UL/SUL indicator field value from the detected PDCCH order to determine the UL carrier for the corresponding PRACH transmission. If a UE is configured with two UL carriers for a candidate cell and the UE detects an LTM Cell Switch Command MAC CE [11, TS 38.321] that initiated a CFRA, the UE uses the S/U field value from the MAC CE to determine the UL carrier for the corresponding PRACH transmission.

< Unchanged parts are omitted >