**3GPP TSG-RAN WG4 Meeting #104-e *R4-2213134***

**Electronic Meeting, 15 - 26 August, 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | **DraftCR** | **rev** | **-** | **Current version:** | **15.18.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network |  |

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| ***Title:*** | Draft CR for 38.101-1 to improve the wording for simultaneousRxTx clarification | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2022-07-11 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | For the simultaneousRxTx clarification for CA and SUL in clause 5.2A.2 and 5.2C, there are two kinds of band combinations, i.e. lower order and higher order band combinations. But it’s very hard to distinguish them in these clarification. That’s why the wording for simultaneousRxTx clarification need to be improved. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The wording for simultaneousRxTx clarification is improved to distinguish lower and higher order band combinations. | | | | | | | | |
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| ***Consequences if not approved:*** | | There are some ambiguities in simultaneousRxTx clarification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2A.2, 5.2C | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.521-1 | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## **<<Start of Change>>**

### 5.2A.2 Inter-band CA

NR inter-band carrier aggregation is designed to operate in the operating bands defined in Table 5.2A.2.1-1, where all operating bands are within FR1.

If the mandatory simultaneous Rx/Tx capability applies for a lower order band combination, the mandatory simultaneous Rx/Tx capability also applies for the lower order band combination when the applicable lower order band combination is a subset of a higher order band combination.

Table 5.2A.2-1: Void

#### 5.2A.2.1 Inter-band CA (two bands)

Table 5.2A.2.1-1: Inter-band CA operating bands involving FR1 (two bands)

|  |  |
| --- | --- |
| NR CA Band | NR Band  (Table 5.2-1) |
| CA\_n3-n771 | n3, n77 |
| CA\_n3-n781 | n3, n78 |
| CA\_n3-n791 | n3, n79 |
| CA\_n8-n751 | n8, n75 |
| CA n8-n781 | n8, n78 |
| CA\_n8-n791 | n8, n79 |
| CA\_n28-n752 | n28, n75 |
| CA\_n28-n781 | n28, n78 |
| CA\_n41-n78 | n41, n78 |
| CA\_n75-n781 | n75, n78 |
| CA\_n76-n781 | n76, n78 |
| CA\_n77-n79 | n77, n79 |
| CA\_n78-n793 | n78, n79 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability.  NOTE 2: The frequency range in band n28 is restricted for this band combination to 703-733 MHz for the UL and 758-788 MHz for the DL.  NOTE 3: For UEs supporting band n77, the minimum requirements apply only when there is non-simultaneous Rx/Tx operation between n78-n79 NR carriers. This restriction applies also for these carriers when applicable NR CA configuration is part of a higher order configuration.  NOTE 4: The minimum requirements apply only when there is non-simultaneous Rx/Tx operation between n77-n79 NR carriers. This restriction applies also for these carriers when applicable NR CA configuration is part of a higher order configuration. | |

## **<<End of Change>>**

## **<<Start of Change>>**

## 5.2C Operating band combination for SUL

NR operation is designed to operate in the operating band combination defined in Table 5.2C-1, where all operating bands are within FR1.

If the mandatory simultaneous Rx/Tx capability applies for a lower order band combination, the mandatory simultaneous Rx/Tx capability also applies for the lower order band combination when the applicable lower order band combination is a subset of a higher order band combination.

Table 5.2C-1: Operating band combination for SUL in FR1

|  |  |
| --- | --- |
| NR Band combination for SUL | NR Band  (Table 5.2-1) |
| SUL\_n78-n802 | n78, n80 |
| SUL\_n78-n812 | n78, n81 |
| SUL\_n78-n822 | n78, n82 |
| SUL\_n78-n832 | n78, n83 |
| SUL\_n78-n842 | n78, n84 |
| SUL\_n78-n862 | n78, n86 |
| SUL\_n79-n802 | n79, n80 |
| SUL\_n79-n812 | n79, n81 |
| NOTE 1: If a UE is configured with both NR UL and NR SUL carriers in a cell, the switching time between NR UL carrier and NR SUL carrier is 0 us.  NOTE 2: For UE supporting SUL band combination simultaneous Rx/Tx capability is mandatory.  NOTE 3: For UE supporting SUL band combination, UL MIMO is not configured on SUL carrier. | |

## **<<End of Change>>**