**3GPP TSG-RAN WG4 Meeting #100-e R4-2113556**

**Electronic Meeting, 16 August – 27 August 2021**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **-1** | **CR** | **0903** | **rev** |  | **Current version:** |  |  |
|  |
| *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 |  |

|  |
| --- |
|  |
| ***Title:***  | CR to add NR intra-band FR1 in TS 38.101-1 |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_CA\_R17\_Intra |  | ***Date:*** | 2021-08-30 |
|  |  |  |  |  |
| ***Category:*** | B |  | ***Release:*** |  |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Adding approved NR Intra-band FR1 combinations |
|  |  |
| ***Summary of change:*** | Addition of missing CA Band and removal of bracket for CA\_n71(2A) |
|  |  |
| ***Consequences if not approved:*** | Approved NR Intra-band FR1 combinations are not added |
|  |  |
| ***Clauses affected:*** | 5.2, 7.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS 38.521-3 |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

---Start of changes---

### 5.2A.1 Intra-band CA

NR intra-band carrier aggregation is designed to operate in the operating bands defined in Table 5.2A.1-1 and Table 5.2A.1-2, where all operating bands are within FR1.

Table 5.2A.1-1: Intra-band contiguous CA operating bands in FR1

|  |  |
| --- | --- |
| NR CA Band | NR Band(Table 5.2-1) |
| CA\_n1 | n1 |
| CA\_n7 | n7 |
| CA\_n40 | n40 |
| CA\_n41 | n41 |
| CA\_n46 | n46 |
| CA\_n48 | n48 |
| CA\_n66 | n66 |
| CA\_n71 | n71 |
| CA\_n77 | n77 |
| CA\_n78 | n78 |
| CA\_n79 | n79 |
| NOTE 1: The minimum requirements only apply for non simultaneous Tx/Rx between all carriers for TDD combinations. |

Table 5.2A.1-2: Intra-band non-contiguous CA operating bands in FR1

|  |  |
| --- | --- |
| NR CA Band | NR Band(Table 5.2-1) |
| CA\_n3(\*) | n3 |
| CA\_n7(\*) | n7 |
| CA\_n25(\*) | n25 |
| CA\_n41(\*) | n41 |
| CA\_n48(\*) | n48 |
| CA\_n66(\*) | n66 |
| CA\_n71(\*) | n71 |
| CA\_n77(\*) | n77 |
| CA\_n78(\*) | n78 |
| NOTE 1: The minimum requirements only apply for non simultaneous Tx/Rx between all carriers for TDD combinations.NOTE 2: The notation CA\_nX(\*) in this table indicates intra-band non-contiguous CA for band nX. The configurations for each band are in 5.5A.2.  |

---Text Omitted---

Table 7.3A.2.2-1: Intra-band non-contiguous CA with one uplink configuration for reference sensitivity in FDD bands.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CA configuration | SCS(PCC/SCC)(kHz) | Aggregated channel bandwidth (PCC+SCC) | Wgap / [MHz] | UL PCC allocation(LCRB) | ΔRIBNC (dB) | Duplex mode |
| CA\_n2(2A) | 15/15 | 5MHz + 5MHz | Wgap = 55.0 | 105 | 5.0 | FDD |
|  |  |  | Wgap = 30.0 | 25 | 0.0 |  |
| CA\_n3(2A) | 15/15 | 5MHz + 5MHz | Wgap = 65.0 | 125 | 4.7 | FDD |
|  |  |  | Wgap = 45.0 | 255 | 0.0 |  |
| CA\_n5(2A) | 15/15 | 15MHz + 5MHz | Wgap = 5.0 | 55 | 6.3 | FDD |
| CA\_n7(2A) | 15/15 | 10MHz + 5MHz | Wgap = 55 | 325 | 0.0 | FDD |
|  |  |  | Wgap = 30 | 505 | 0.0 |  |
| CA\_n25(2A) | 15/15 | 5MHz + 5MHz | Wgap = 55.0 | 105 | 5.0 | FDD |
|  |  |  | Wgap = 30.0 | 25 | 0.0 |  |
| CA\_n66(2A)CA\_n66(3A) | N/A | NOTE 1 | NOTE 2 | NOTE 3, NOTE 4 | 0.0 | FDD |
| CA\_n71(2A) | 15/15 | 5MHz + 5MHz | Wgap = 25.0 | 5 | 4.0 | FDD |
|  |  |  | Wgap = 5.0 | 20 | 0.0 |  |
|  |  | 10MHz + 5MHz | Wgap = 20.0 | 5 (RBstart = 9) | 4.6 |  |
|  |  |  | Wgap = 5.0 | 20 (RBstart = 9) | 2.3 |  |
|  |  | 15MHz + 10MHz | Wgap = 10.0 | 5 (RBstart = 2) | 22.2 |  |
|  |  |  | Wgap = 5.0 | 20 (RBstart = 19) | 5.2 |  |
| NOTE 1: All combinations of channel bandwidths defined in Table 5.5A.2-1.NOTE 2: All applicable sub-block gap sizes.NOTE 3: The PCC allocation is same as Transmission bandwidth configuration NRB as defined in Table 5.3.2-1. NOTE 4: The carrier center frequency of PCC in the DL operating band is configured closer to the UL operating band.NOTE 5: Refers to the UL resource blocks shall be located as close as possible to the downlink operating band but confined within the transmission.NOTE 6: Wgap is the sub-block gap between the two sub-blocks.NOTE 7: The carrier centre frequency of SCC in the DL operating band is configured closer to the UL operating band.NOTE 8: Void.NOTE 9: Void.NOTE 10: Void. |

---End of changes---