**3GPP TSG-RAN4 Meeting #116 *REV\_***

**, India, August 25th - August 29th 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.101-1** | **CR** | 2995 | **rev** | **-** | **Current version:** | **15.28.0** |  |
|  | | | | | | | | |
| *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:*** | CR on clarification of maximum number of RB’s for n50 asymmetric UL/DL BW’s | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm, Nokia, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | RAN4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Maximum number of RB’s cannot be used when UE is configured with 60MHz UL and 80MHz DL, as Point A must be common and UL/DL must have same center frequency as per TS38.331 and TS38.213. For case 60MHz UL and 80MHz DL, the number of RB’s for both UL and DL must be even or odd numbers. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | A condition on the “center frequencies” of the UL and DL w r t Point A is introduced: *offsetToCarrier* + FLOOR(NRB/2) is the same for the UL and DL. NOTE 1 and NOTE 2 are removed, the center frequencies (the mapping to the channel raster) of the carrier bandwidths cannot be the same when mod(NRB/2) is not the same for the UL and DL. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | n50 asymmetric BW with 60MHz UL and 80MHz DL cannot be operated | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 changes---**

### 5.3.6 Asymmetric channel bandwidths

The UE channel bandwidth can be asymmetric in downlink and uplink. In asymmetric channel bandwidth operation, the narrower carrier shall be confined within the frequency range of the wider channel bandwidth.

In FDD, the confinement is defined as a deviation to the default Tx-Rx carrier center frequency separation (defined in table 5.4.4-1) as following:

ΔFTX-RX = | (BWDL – BWUL)/2 |

The operating bands and supported asymmetric channel bandwidth combinations are defined in table 5.3.6-1.

Table 5.3.6-1: FDD asymmetric UL and DL channel bandwidth combinations

|  |  |  |  |
| --- | --- | --- | --- |
| NR Band | Channel bandwidths for UL (MHz) | Channel bandwidths for DL (MHz) | Asymmetric channel bandwidth combination set |
| n66 | 5, 10 | 20, 40 | 0 |
| 20 | 40 |
| n70 | 5, 10 | 15 | 0 |
| 5, 10, 15 | 20, 25 |
| n71 | 5 | 10 | 0 |
| 10 | 15 |
| 15 | 20 |

In TDD, the operating bands and supported asymmetric channel bandwidth combinations are defined in table 5.3.6-2.

Table 5.3.6-2: TDD asymmetric UL and DL channel bandwidth combinations

|  |  |  |  |
| --- | --- | --- | --- |
| NR Band | Channel bandwidths for UL (MHz) | Channel bandwidths for DL (MHz) | Asymmetric channel bandwidth combination set |
| n50 | 60 | 80 | 0 |
| NOTE 1: Void.  NOTE 2: Void.  NOTE 3: The UL and DL carriers are configured such that the respective *offsetToCarrier* + FLOOR(NRB/2) for the UL and DL is the same with *offsetToCarrier* as configured in *SCS-SpecificCarrier* and NRB the transmission bandwidth configuration as specified in Table 5.3.2-1. | | | |

**---End of changes---**