**3GPP TSG-RAN WG4 Meeting #106 *R4-2302040***

**Athens, Greece, 27 February– 3 March, 2023**

**Source:** Huawei, HiSilicon

**Title:** TP for TR 38.718-03-01 to introduce CA\_n3A-n7A-n79A\_BCS0

**Agenda item:** 8.11.2

**Document for:** Approval

# 1 Background

This contribution provides text proposal on the NR CA band combination CA\_n3A-n7A-n79A as defined in Revised WID: Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2) [1].

# 2 Text Proposal

##### ---Start of changes---

## 5.X CA\_n3-n7-n79

### 5.x.1 Common for 1 band UL and 2 bands UL CA

#### 5.x.1.1 Operating bands for CA

**Table 5.X.1.1-1: 3DL Inter-band CA operating bands**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **NR CA Band** | **NR Band** | **Uplink (UL) operating band** | | | **Downlink (DL) operating band** | | | **Duplex Mode** |
| **BS receive / UE transmit** | | | **BS transmit / UE receive** | | |
| **FUL\_low – FUL\_high** | | | **FDL\_low – FDL\_high** | | |
| CA\_n3-n7-n79 | n3 | 1710 MHz | – | 1785 MHz | 1805 MHz | – | 1880 MHz | FDD |
| n7 | 2500 MHz | – | 2570 MHz | 2620 MHz | – | 2690 MHz | FDD |
| n79 | 4400 MHz | – | 5000 MHz | 4400 MHz | – | 5000 MHz | TDD |

#### 5.x.1.2 Channel bandwidths per operating band for CA

**Table 5.X.1.2-1: Supported channel bandwidths**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NR CA configuration** | **Uplink CA configuration**  **or single uplink carrier6** | **NR Band** | **Channel bandwidth (MHz) (NOTE 3)** | **Bandwidth combination set** |
| CA\_n3A-n7A-n79A | - | n3 | 5. 10, 15, 20, 25, 30, 40 | 0 |
|  |  | n7 | 5. 10, 15, 20, 25, 30, 40, 50 |  |
|  |  | n79 | 40, 50, 60, 70, 80, 90, 100 |  |

#### 5.x.1.3 ∆TIB,c and ∆RIB,c values

For CA\_n3-n7-n79, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.x.1.3-1: ΔTIB,c due to NR CA (three bands)

|  |  |  |  |
| --- | --- | --- | --- |
| **Inter-band CA combination** | **ΔTIB,c for NR bands (dB)\*** | | |
| **Component band in order of bands in configuration\*\*** | | |
| CA\_n3-n7-n79 | 0.5 | 0.5 | 0.8 |
| NOTE \*: “-” denotes ΔTIB,c = 0.  NOTE \*\*: The component band order in the configuration should be listed by the order of NR bands, such as for CA\_n1-n3-n5 the band order from left to right is n1, n3 and n5. | | | |

Table 5.x.1.3-2: ΔRIB,c due to NR CA (three bands)

|  |  |  |  |
| --- | --- | --- | --- |
| **Inter-band CA combination** | **ΔRIB,c for NR bands (dB)\*** | | |
| **Component band in order of bands in configuration\*\*** | | |
| CA\_n3-n7-n79 | - | - | 0.5 |
| NOTE \*: “-” denotes ΔRIB,c = 0.  NOTE \*\*: The component band order in the configuration should be listed by the order of NR bands, such as for CA\_n1-n3-n8 the band order from left to right is n1, n3 and n8. | | | |

#### 5.x.1.4 MSD requirement

Since CA\_n7-n79 is a fallback combination of CA\_n3-n7-n79, and the MSD due to near-miss 2nd harmonic interference for CA\_n7-n79 can be specified as below referring to DC\_7\_n79 in TS 38.101-3.

Table 5.x.1.4-1: Reference sensitivity exceptions and uplink/downlink configurations due to UL harmonic from a PC3 aggressor NR UL band for NR DL CA FR1

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UL band | DL band | UL BW | SCS of UL band | UL RB Allocation | DL BW | MSD | UL/DL fc condition | UL/DL harmonic order |
| (MHz) | (kHz) | LCRB | (MHz) | (dB) |
| n7 | n79 | 5 | 15 | 25 (RBstart=0) | 10 | 1.1 | NOTE 6 | UL2/DL1  near-miss |
| NOTE 6: The requirements are only applicable to channel bandwidths no larger than 20 MHz and with a carrier frequency at  MHz offset from  in the victim (higher band) with , whereandare the channel bandwidths configured in the aggressor (lower) and victim (higher) bands in MHz, respectively. | | | | | | | | |

##### ---End of changes---

# Reference

[1] RP-222834, “Revised WID: Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2)”, ZTE Corporation