**3GPP TSG-RAN WG4 Meeting #98-e R4-2100984**

**Online, 25th Jan - 5th Feb, 2021**

**Source:** Samsung, TELUS, Bell mobility

**Title:** TP for TR 37.717-21-11: DC\_29-66\_n78

**Agenda item:** 9.4.2

**Document for:** Approval

1. Introduction

This contribution is a text proposal for TR 37.717-21-11 to include DC\_29A-66A\_n78A according to the request in [1].

# 2. Reference

1. RP-202613 WID revision: Dual Connectivity (DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL).

3. Text Proposal

**<Start of Text Proposal>**

## 5.x DC\_29-66\_n78

5.x.1 Operating bands for DC

Table 5.x.1-1: Band combinations EN-DC (three bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_29-66\_n78 | CA\_29-66 | n78 | DC\_66\_n78 |

5.x.2 Configurations for DC

Table 5.x.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_29A-66A\_n78A | DC\_66A\_n78A | CA\_29A-66A | n78 |

5.x.3 Co-existence studies

Based on co-existence studies of DC\_29A-66A\_n78A with 2UL, it can get that:

- no IMD of band 66 UL and band n78 UL falling to band 29 DL

Although DC\_29\_n78 is not defined, 5th order harmonic mixing is from the band n78 UL and DL on band 29 existed and need be considered here.

5.x.4 ∆TIB and ∆RIB values

For DC\_29A-66A\_n78A, the ΔTIB,c and ΔRIB,c values are reused from the LTE combination CA\_13-48-66, and are given in the tables below.

Table 5.x.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_29-66-n78 | 66 | 0.6 |
| n78 | 0.8 |

**Table 5.x.4-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_29-66-n78 | 66 | 0.2 |
| n78 | 0.5 |

5.x.5 REFSENS requirements

Although DC\_29\_n78 is not defined, 5th order harmonic mixing is from the band n78 UL and DL on band 29 existed and need be considered here. DC\_29\_n78’s MSD can refer to DC\_28-n78 values. Below table can be merged into 38.101-3 Table 7.3B.2.3.2-1 and Table 7.3B.2.3.2-2 respectively:

Table 5.x.5-1: Reference sensitivity exceptions (MSD) due to receiver harmonic mixing for EN-DC in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA or NR Band / Channel bandwidth of the affected DL band / MSD | | | | | | | | | | | | |
| UL band | DL band | 5  MHz  (dB) | 10 MHz  (dB) | 15 MHz  (dB) | 20 MHz  (dB) | 25 MHz  (dB) | 40 MHz  (dB) | 50 MHz  (dB) | 60 MHz  (dB) | 80 MHz  (dB) | 90 MHz  (dB) | 100 MHz  (dB) |
| n78 | 292 | 28 | 25 |  |  |  |  |  |  |  |  |  |
| NOTE 2: The requirements should be verified for DL EARFCN of the victim (lower) band (superscript LB) such that  with  the DL carrier frequency in the lower band and the UL carrier frequency in the higher band, both in MHz. | | | | | | | | | | | | |

Table 5.x.5-2: Uplink configuration for reference sensitivity exceptions due to receiver harmonic mixing for EN-DC in NR FR1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA or NR Band / SCS / Channel bandwidth of the affected DL band / UL RB allocation of the agressor band | | | | | | | | | | | | | |
| UL band | DL band | SCS of UL band  (kHz) | 5 MHz  (LCRB) | 10 MHz  (LCRB) | 15 MHz  (LCRB) | 20 MHz  (LCRB) | 25 MHz  (LCRB) | 40 MHz  (LCRB) | 50 MHz  (LCRB) | 60 MHz  (LCRB) | 80 MHz  (LCRB) | 90 MHz  (LCRB) | 100 MHz  (LCRB) |
| n78 | 29 | 15 | 25 | 50 |  |  |  |  |  |  |  |  |  |

<End of Text Proposal>