**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-DCconfiguration | Uplink EN-DCconfiguration(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 | 5MHz(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 $f\_{UL}^{HB}$ 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>