**3GPP TSG-RAN WG4 Meeting #100-e Rev 1 of R4-2111759**

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

**Source:** AT&T

**Title:** TP for TR 37.717-21-11 Addition of DC\_29-30\_n77

**Agenda item:** 8.15.2

**Document for:** Approval

# 1. Introduction

A text proposal for TR 37.717-21-11 to add DC\_29A-30A\_n77A.

# 2. Text Proposal

---Start of changes---

## 5.X DC\_29-30\_n77

### 5.X.1 Configurations for DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) |
| --- | --- |
| DC\_29A-30A\_n77A | DC\_30A\_n77A |

### 5.X.2 Co-existence studies

Co-existence studies of this 3DL/2UL DC configuration are already covered in the constituent fallback modes. It can be seen that:

- IMD3 and IMD5 products are produced by Band 30 and n77 that might fall in Rx of band 29.

Although DC\_29\_n77 is not defined, 5th order harmonic mixing is produced from band n77 UL that might fall in Rx of band 29.

### 5.X.3 ∆TIB and ∆RIB values

For DC\_29-30\_n77, the ΔTIB,c and ΔRIB,c values are given in the tables below. The values are proposed to be reused from the values for CA\_n12-n30-n77 with the exception that ΔTIB,c would not be applicable for band 29.

Table 5.X.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_29-30\_n77 | 30 | 0.3 |
| n77 | 0.5 |

Table 5.X.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_29-30\_n77 | 29 | 0.2 |
| 30 | 0 |
| n77 | 0.5 |

### 5.X.4 Reference sensitivity exceptions

Table 5.X.4-1 shows the required MSD levels for the DC configuration. The required MSD values are derived from CA-n12A-n30A-n77A.

Table 5.X.4-1: Reference sensitivity exceptions for Scell due to dual uplink operation for EN-DC in NR FR1 (three bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA and NR Band / Channel bandwidth / NRB / MSD | | | | | | | |
| EN-DC  Configuration | EUTRA / NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  LCRB | DL Fc (MHz) | MSD  (dB) | IMD order |
| DC\_29A-30A\_n77A | 29 | N/A | 5 | N/A | 722 | 15.2 | IMD34 |
| 30 | 2310 | 5 | 25 | 2355 | N/A | N/A |
| n77 | 3898 | 10 | 50 | 3898 | N/A | N/A |
| NOTE 4: This band is subject to IMD5 also which MSD is not specified. | | | | | | | |

DC\_29-30\_n77 5th order harmonic mixing impact to band 29 can be derived from DC\_12-n77 values.

Table 5.X.4-2: 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) |
| n77ZZ | 292 | 31 | 28 |  |  |  |  |  |  |  |  |  |
| 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.  NOTE ZZ: The MSD test points cannot be verified for the band combination in US due to the Band n77 frequency range restriction. | | | | | | | | | | | | |

Table 5.X.4-3: 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 aggressor 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) |
| n77 | 29 | 15 | 25 | 50 |  |  |  |  |  |  |  |  |  |

---End of changes---

# References