**3GPP TSG-RAN WG4 Meeting #94-e R4-2001301**

**Online, 24th Feb. 2020 – 6th Mar. 2020**

**Source:** Nokia, T-Mobile

**Title:** TP for 37.716-21-11 to introduce DC\_46-66\_n25

**Agenda Item:**  9.4.2 [DC\_R16\_2BLTE\_1BNR\_3DL2UL-Core]

**Document for:** Approval

# 1 Introduction

This contribution is a TP for TR 37.716-21-11 to introduce DC\_46-66\_n25.

# 2 Text Proposal

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of the TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 5.1.x DC\_46-66\_n25

5.1.x.1 Operating bands for DC

Table 5.1.x.1-1: Band combinations EN-DC (three bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_46-66\_n25 | CA\_46-66 | n25 | No |

5.1.x.2 Configuration for DC

Table 5.1.x.2-1: Inter-band EN-DC configurations (three bands)

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** |
| --- | --- |
| DC\_46A-66A\_n25A  DC\_46C-66A\_n25A  DC\_46D-66A\_n25A | DC\_66A\_n25A |

### 5.1.x.3 Coexistence studies

Co-existence analysis for DC\_66\_n25 in TR 37.716-11-11 shows that 3rd order harmonics and 3rd and 5th IMD might fall in Band 46.

### 5.1.x.4 ∆TIB and ∆RIB values

For DC\_46-66\_n25, the ΔTIB,c and ΔRIB,c values are derived from CA\_46-66 in TS 36.101 and DC\_66A\_n25A in TR 37.716-11-11.

Table 5.1.x.4-1: ΔTIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_46-66\_n25 | 46 | 0 |
| 66 | 0.5 |
| n25 | 0.5 |

Table 5.1.x.4-2: ΔRIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_46-66\_n25 | 46 | 0 |
| 66 | 0.3 |
| n25 | 0.3 |

5.1.x.5 REFSENS requirements

MSD is derived from DC\_66A\_n25A captured in TR 37.716-11-11. The values have also been aligned with the values proposed in R4-2002012 which are derived from Co-existence analysis for DC\_2\_n66 which shows that there is IMD3 and IMD5 impact from DC\_2\_n66 UL to Band 46 DL.

Table 5.1.x.5-1: Reference sensitivity exceptions due to dual uplink operation for EN-DC in NR FR1 (three bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| NR or E-UTRA Band / Channel bandwidth / NRB / MSD | | | | | | | |
| EN-DC  Configuration | EUTRA or NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  LCRB | DL Fc (MHz) | MSD  (dB) | IMD order |
| DC\_46A-66A\_n25A3  DC\_46C-66A\_n25A3  DC\_46D-66A\_n25A3 | 46 | 5505 | 10 | 50 | 5505 | 16.1 | IMD3 |
| 66 | 1775 | 5 | 25 | 2175 | N/A | N/A |
| n25 | 1855 | 5 | 25 | 1935 | 20 | IMD3 |
| 46 | 5505 | 10 | 50 | 5505 | 16.1 | IMD3 |
| 66 | 1750 | 5 | 25 | 2150 | 4 | IMD5 |
| n25 | 1883.3 | 5 | 25 | 1963.3 | N/A | N/A |
| 46 | 5505 | 10 | 50 | 5505 | 16.1 | IMD3 |
| 66 | 1712.5 | 5 | 25 | 2112.5 | 23 | IMD3 |
| n25 | 1912.5 | 5 | 25 | 1992.5 | N/A | N/A |
| NOTE 3: This band is subject to IMD5 also which MSD is not specified. | | | | | | | |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of the TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# 3 References