**3GPP T****SG-RAN WG4 Meeting#100 Rev. 1 of R4-2113700**

**E-meeting, 16th – 27th Aug, 2021**

**Title: TP for 37.717-11-21 to introduce DC\_8A\_n1A-n40A**

**Source: Nokia**

**Agenda item: 8.19.2**

**Document for: Approval**

# Introduction

This is a TP for 37.717-11-21 to introduce DC\_8A\_n1A-n40A

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

## 6.x DC\_8A\_n1A-n40A

### 6.x.1 Operating bands for DC

**Table 6.x.1-1: DC band combination of one LTE band + inter-band NR 2DL/1UL**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E-UTRA and NR DC Band combination | E-UTRA and NR DC Band | Uplink (UL) band | | | Downlink (DL) band | | | Duplex  mode |
| BS receive / UE transmit | | | BS transmit / UE receive | | |
| FUL\_low – FUL\_high | | | FDL\_low – FDL\_high | | |
| DC\_8\_n1-n40 | 8 | 880 MHz | – | 915 MHz | 925 MHz | – | 960 MHz | FDD |
| n1 | 1920 MHz | – | 1980 MHz | 2110 MHz | – | 2170 MHz | FDD |
| n40 | 2300 MHz | – | 2400 MHz | 2300 MHz | – | 2400 MHz | TDD |

### 6.x.2 Configuration for DC

Table 6.x.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_8A\_n1A-n40A | DC\_8A\_n1A  DC\_8A\_n40A | 8A | CA\_n1A-n40A |

### 6.x.3 Co-existence studies

Co-existence analysis for DC\_8\_n1 UL shows no impact to NR Band n40 DL.

Co-existence analysis for DC\_8\_n40 UL shows 5th IMD might fall in NR Band n1 DL.

### 6.x.4 ∆TIB and ∆RIB values

ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 6.x.4-1: ΔTIB,c**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB,c [dB]** |
| --- | --- | --- |
| DC\_8\_n1-n40 | 8 | 0.3 |
| n1 | 0.3 |
| n40 | 0.5 |

**Table 6.x.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_8\_n1-n40 | 8 | 0.2 |
| n1 | 0 |
| n40 | 0.5 |

### 6.x.5 MSD

Based on co-existence studies MSD is needed.

Table 6. x.5-1: MSD test points for Scell due to dual uplink operation for EN-DC in NR FR1 (three bands)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EN-DC  Configuration | EUTRA or NR band | UL Fc  (MHz) | UL/DL BW  (MHz) | UL  LCRB | DL Fc (MHz) | MSD  (dB) | IMD order |
| DC\_8A\_n1A-n40A | 8 | 885 | 5 | 25 | 930 | N/A | N/A |
| n1 | 1935 | 5 | 25 | 2125 | 3.3 | IMD5 |
| n40 | 2390 | 5 | 25 | 2390 | N/A | N/A |

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