3GPP TSG-RAN WG4 Meeting # 102-e R4-2205479 R4-22xxxxx

Electronic Meeting, February 21 – March 3, 2022

Source: ZTE Corporation

Title: TP for TS 38.108: Output power dynamics (6.3)

Agenda Item: 10.13.3.3

Document for: Approval

# **Introduction**

In terms of the work split in the approved WF[1]. This contribution provides a text proposal to TS38.108 [2] on sub-clause 6.3(Output power dynamics)

# **Reference**

[1] R4-2203080, Way Forward on NTN\_solutions\_Part1, THALES

[2] R4-2203086, Draft skeleton for TS 38.101-8, THALES

# Text Proposal

**----- Start of TP -----**

## 6.3 Output power dynamics

### 6.3.1 General

Transmitted signal quality (as specified in clause 6.5) shall be maintained for the output power dynamics requirements of this clause.

Power control is used to limit the interference level.

### 6.3.2 RE power control dynamic range

#### 6.3.2.1 General

The RE power control dynamic range is the difference between the power of an RE and the average RE power for a SAN at maximum output power (Pmax,c,TABC) for a specified reference condition.

For *SAN type 1-H* this requirement shall apply at each *TAB connector* supporting transmission in the *operating band*.

#### 6.3.2.2 Minimum requirement for *SAN type 1-H*

RE power control dynamic range:

Table 6.3.2.2-1: RE power control dynamic range

|  |  |
| --- | --- |
| Modulation scheme used | RE power control dynamic range (dB) |
| on the RE | (down) | (up) |
| QPSK (PDCCH) | -6 | +4 |
| QPSK (PDSCH) | -6 | +3 |
| 16QAM (PDSCH) | -3 | +3 |
| 64QAM (PDSCH) | 0 | 0 |
| NOTE: The output power per carrier shall always be less or equal to the maximum output power of the satellite access node. |

### 6.3.3 Total power dynamic range

#### 6.3.3.1 General

The SAN total power dynamic range is the difference between the maximum and the minimum transmit power of an OFDM symbol for a specified reference condition.

For *SAN type 1-H* this requirement shall apply at each *TAB connector* supporting transmission in the *operating band*.

NOTE 1: The upper limit of the dynamic range is the OFDM symbol power for a SAN when transmitting on all RBs at maximum output power. The lower limit of the total power dynamic range is the average power for single RB transmission. The OFDM symbol shall carry PDSCH and not contain RS or SSB.

#### 6.3.3.2 Minimum requirement for *SAN type 1-H*

The downlink (DL) total power dynamic range for each SAN carrier shall be larger than or equal to the level in table 6.3.3.2-1.

Table 6.3.3.2-1: Total power dynamic range

|  |  |
| --- | --- |
| *SAN channel*  | Total power dynamic range (dB) |
| *bandwidth* (MHz) | 15 kHz SCS | 30 kHz SCS | 60 kHz SCS |
| 5 | 13.9 | 10.4 | N/A |
| 10 | 17.1 | 13.8 | 10.4 |
| 15 | 18.9 | 15.7 | 12.5 |
| 20 | 20.2 | 17 | 13.8 |

**----- End of TP -----**