3GPP TSG-RAN WG4 Meeting # 102-e R4-2205984

Electronic Meeting, 21 Feb – 03 Mar, 2022

**Source:** Huawei

**Title:** TP to TS 38.108: section 6.7 (Tx IMD)

**Agenda Item:** 10.13.3.3

**Document for:** Approval

# Introduction

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 section 6.7 (Tx IMD) is provided for approval.

TS 38.108 skeleton in [2] was used as the starting point.

# Conclusions

**Proposal 1**: Approve the attached TP to TS 38.108.

# References

[1] R4-2203080 Way Forward on NTN\_solutions\_Part1, RAN4#101bis-e

[2] R4-2203087 Skeleton for TS 38.108 NR Satellite Access Node radio transmission and reception v0.0.1, RAN4#101bis-e

# Annex A: TP to TS 38.108

*------------------------------ Modified sections ------------------------------*

## 6.7 Transmitter intermodulation

### 6.7.1 General

The transmitter intermodulation requirement is a measure of the capability of the transmitter unit to inhibit the generation of signals in its non-linear elements caused by presence of the wanted signal and an interfering signal reaching the transmitter unit via the antenna, RDN and antenna array.

[For *SAN type 1-H* there is an intra-system transmitter intermodulation requirement defined in which the interfering signal is from other transmitter units within the *SAN type 1-H*.]

### 6.7.2 Minimum requirements for *SAN type 1-H*

#### 6.7.2.1 Co-location minimum requirements

The requirement is not applicable in this version of the specification.

#### 6.7.2.2 Intra-system minimum requirements

The transmitter intermodulation level shall not exceed the unwanted emission limits in clauses 6.6.3 and 6.6.4 in the presence of an NR interfering signal according to table 6.7.2.2-1.

Table 6.7.2.2-1: Interfering and wanted signals for  
intra-system transmitter intermodulation requirement

| Parameter | Value |
| --- | --- |
| Wanted signal type | NR signal |
| Interfering signal type | NR signal of the same *SAN channel bandwidth* and SCS as the wanted signal (Note 1). |
| Interfering signal level | Power level declared by the SAN manufacturer (Note 2). |
| Frequency offset between interfering signal and wanted signal | 0 MHz |
| NOTE 1: The interfering signal shall be incoherent with the wanted signal.  NOTE 2: The declared interfering signal power level at each *TAB connector* is the sum of the co-channel leakage power coupled via the combined RDN and Antenna Array from all the other *TAB connectors*, but does not comprise power radiated from the Antenna Array and reflected back from the environment. The power at each of the interfering *TAB connectors* is Prated,c,TABC. | |

*------------------------------ End of modified section ------------------------------*