**3GPP TSG-RAN WG4 Meeting #102-e R4-2205866**

**Electronic Meeting, 21st of February - 3rd of March, 2022**

**Agenda item:** 10.13.3.4

**Source:** THALES

**Title:** Draft text proposal for Clause 7.5 Out-of-band blocking - TS 38.108

**Document for:** Approval

# Introduction

Draft TS skeleton for Non-terrestrial networks (NTN) related to NR; Satellite Access Node radio transmission and reception (TS 38.108) has been approved in R4-2203087 [1] and the work split has been summarized in R4-2203080 Way Forward on NTN\_solutions\_Part1 [2] approved in RAN4 101-bis-e meeting. For further information, please also follow the discussions in R4-2203111 [3].

In this document, following changes have been proposed as a TP to update TS 38.108:

* **Section 7.5: Out-of-band blocking**
* **Section 7.5.1: General**
* **Section 7.5.2: Minimum requirements for Satellite Access Node**

# Reference

[1] R4-2203087 Skeleton for TS 38.108 NR Satellite Access Node radio transmission and reception v0.0.1, THALES.

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

[3] R4-2203111 Email discussion summary for [101-bis-e][306] NTN\_Solutions\_Part1, THALES.

# Text proposals for TS 38.108

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## 7.5 Out-of-band blocking

### 7.5.1 General

The out-of-band blocking characteristics is a measure of the receiver ability to receive a wanted signal at its assigned channel at the *TAB connector* for *SAN type 1-H* in the presence of an unwanted interferer out of the *operating band*, which is a CW signal for out-of-band blocking.

### 7.5.2 Minimum requirements for Satellite Access Node

The throughput shall be ≥ 95% of the maximum throughput of the reference measurement channel, with a wanted and an interfering signal coupled to *SAN type 1-H* *TAB connector* using the parameters in table 7.5.2-1.

The reference measurement channel for the wanted signal is identified in clause 7.2.2 for each *SAN channel bandwidth* and further specified in annex A.1.

The out-of-band blocking requirement apply from 1 MHz to FUL,low - ΔfOOB and from FUL,high + ΔfOOB up to 12750 MHz, including the downlink frequency range of the FDD *operating band* for SAN. The ΔfOOB for *BS type 1-H* is defined in table 7.4.2.2-0.

Minimum conducted requirement is defined at the *antenna connector* at the *TAB connector* for *SAN type 1-H.*

**Table 7.5.2-1: Out-of-band blocking requirement for NR**

|  |  |  |
| --- | --- | --- |
| **Wanted Signal mean power (dBm)** | **Interfering Signal mean power (dBm)** | **Type of Interfering Signal** |
| PREFSENS +6 dB(Note) | -44  | CW carrier |
| NOTE 1: For SAN, PREFSENS depends on the *SAN channel bandwidth*.  |

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