**3GPP TSG-RAN WG4 Meeting #102-e R4-2205813**

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

**Agenda item:** 10.13.3.3

**Source:** THALES

**Title:** Draft text proposal for Clause 6.1 and 6.2 Satellite Access Node output power - 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 6.1: General**
* **Section 6.2: Satellite Access Node output power**

# 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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# 6 Conducted transmitter characteristics

## 6.1 General

Unless otherwise stated, the conducted transmitter characteristics are specified at the *TAB connector* for *SAN type 1-H*, with a full complement of transceiver units for the configuration in normal operating conditions.

For *SAN type 1-H* the manufacturer shall declare the minimum number of supported geographical cells (i.e. geographical areas covered by beams). The minimum number of supported geographical cells (Ncells) relates to the SAN setting with the minimum amount of cell splitting supported with transmission on all *TAB connectors* supporting the *operating band*, or with minimum amount of transmitted beams.

For *SAN type 1-H* manufacturer shall also declare *TAB connector TX min cell groups*. Every *TAB connector* of the *SAN type 1-H* supporting transmission in an *operating band* shall map to one *TAB connector* *TX min cell group* supporting the same *operating band*,where mapping of *TAB connector*s to cells/beams is implementation dependent.

## 6.2 Satellite Access Node output power

### 6.2.1 General

The SAN conducted output power requirement applies at *TAB connector* for *SAN type 1-H*.

The *rated carrier output power* of the *SAN type 1-H* shall be as specified in table 6.2.1-2.

**Table 6.2.1-2: *SAN type 1-H* rated output power limits for SAN classes**

| **SAN class** | **Prated,c,sys** | **Prated,c,TABC** |
| --- | --- | --- |
| SAN | (Note) | (Note) |
| NOTE: Prated,c,sys or Prated,c,TABC of SAN shall be based on manufacture declaration and comply with regulation requirement. | | |

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

In normal conditions, Pmax,c,TABC shall remain within +2 dB and -2 dB of the *rated carrier output power* Prated,c,TABC for each *TAB connector* as declared by the manufacturer.

In extreme conditions, Pmax,c,TABC shall remain within +2.5 dB and -2.5 dB of the *rated carrier output power* Prated,c,TABC for each *TAB connector* as declared by the manufacturer.

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