**3GPP TSG-RAN4 Meeting #102-e *R4-2205054***

Electronic meeting, February 21 – March 3, 2022

**Source:** Ericsson

**Title:** pCR to TS 38.108 – scope and general

**Agenda item:** 10.13.3

**Document for:** Approval

# Background

Based on the various agreements from past RAN4 meetings, the following test is proposed for TS 38.108:

* Scope
* Relationship between minimum requirements and test requirements
* Applicability of minimum requirements

Note the text highlighted in yellow is reference number which might be updated later by the Rapporteur of TS 38.108 when all pCRs will be agreed, to keep reference number consistent.

Also, based on [2]. a note is proposed to be added to the scope sub-clause but, as this was not previously agreed, the proposed note below is in [].

# Proposal

It is proposed that the proposed text related to scope, reference, relationship between minimum requirements and test requirements and applicability of minimum requirements here after is included in TS 38.108 [1].

# References

1. TS 38.108, Satellite Access Node radio transmission and reception
2. R4-2205051, NTN – General aspects, Ericsson

# Text proposal

*<Start of the change>*

# 1 Scope

The present document establishes the minimum RF characteristics and minimum performance requirements of NR NTN Satellite Access Network (SAN).

*<End of the change>*

*<Start of the change>*

# 2 References

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.181: "NR; Satellite Node conformance testing ".

[3] Recommendation ITU-R M.1545: "Measurement uncertainty as it applies to test limits for the terrestrial component of International Mobile Telecommunications-2000".

*<End of the change>*

*<Start of the change>*

## 4.2 Relationship between minimum requirements and test requirements

Conformance to the present specification is demonstrated by fulfilling the test requirements specified in the conformance specification TS 38.181 [2].

The minimum requirements given in this specification make no allowance for measurement uncertainty. The test specifications TS 38.181 [2] define test tolerances. These test tolerances are individually calculated for each test. The test tolerances are used to relax the minimum requirements in this specification to create test requirements. For some requirements, including regulatory requirements, the test tolerance is set to zero.

The measurement results returned by the test system are compared - without any modification - against the test requirements as defined by the shared risk principle.

The shared risk principle is defined in recommendation ITU‑R M.1545 [3].

*<End of the change>*

*<Start of the change>*

## 4.6 Applicability of minimum requirements

In table 4.6-1, the requirement applicability for each *requirement set* is defined. For each requirement, the applicable requirement clause in the specification is identified. Requirements not included in a *requirement set* is marked not applicable (NA).

Table 4.6-1: Requirement set applicability

|  |  |
| --- | --- |
| Requirement | Requirement set |
|  | *SAN type 1-H* | *SAN type 1-O* |
| Satellite Access Network output power | 6.2 |  |
| Output power dynamics  | 6.3 |  |
| Transmit ON/OFF power  | 6.4 |  |
| Transmitted signal quality | 6.5 |  |
| Occupied bandwidth | 6.6.2 |  |
| ACLR | 6.6.3 |  |
| Operating band unwanted emissions | 6.6.4 |  |
| Transmitter spurious emissions | 6.6.5 |  |
| Transmitter intermodulation  | FFS | NA |
| Reference sensitivity level | 7.2 |  |
| Dynamic range  | 7.3 |  |
| In-band selectivity and blocking  | 7.4 |  |
| Out-of-band blocking  | 7.5 |  |
| Receiver spurious emissions  | 7.6 |  |
| Receiver intermodulation | 7.7 |  |
| In-channel selectivity  | 7.8 |  |
| Performance requirements | 8 |  |
| Radiated transmit power | 9.2 | 9.2 |
| OTA Satellite Access Network output power |  | 9.3 |
| OTA output power dynamics |  | 9.4 |
| OTA transmit ON/OFF power |  | 9.5 |
| OTA transmitted signal quality |  | 9.6 |
| OTA occupied bandwidth |  | 9.7.2 |
| OTA ACLR | NA | 9.7.3 |
| OTA out-of-band emission |  | 9.7.4 |
| OTA transmitter spurious emission  |  | 9.7.5 |
| OTA transmitter intermodulation  |  | 9.8 |
| OTA sensitivity | 10.2 | 10.2 |
| OTA reference sensitivity level |  | 10.3 |
| OTA dynamic range |  | 10.4 |
| OTA in-band selectivity and blocking |  | 10.5 |
| OTA out-of-band blocking | NA | 10.6 |
| OTA receiver spurious emission  |  | 10.7 |
| OTA receiver intermodulation |  | 10.8 |
| OTA in-channel selectivity |  | 10.9 |
| Radiated performance requirements |  | 11 |

*<End of the change>*