**3GPP TSG-RAN WG4 Meeting #112 R4-2413401**

**Maastricht, Netherlands, 19th – 23rd August, 2024**

**Agenda item:** 4.1

**Source:** Moderator (Ericsson)

**Title:** Topic summary for [112][301] BSRF\_Maintenance

**Document for:** Information

# Introduction

The scope of this topic summary is BS RF maintenance agenda items. Topics are divided according to the agenda:

**Up to Rel-17 maintenance for LTE and NR:**

1. BS RF requirements and BS conformance testing (4.3)

UE/BS EMC requirements (4.4) ***(No Tdocs)***

**Rel-18 maintenance for LTE and NR closed work items:**

Air-to-ground network for NR:
BS RF requirements and conformance testing (5.8.2) ***(No Tdocs)***

NR support for dedicated spectrum less than 5MHz for FR1:
BS RF requirements and conformance testing (5.11.2) ***(No Tdocs)***

NB-IoT/eMTC core & perf. requirements for NTN:
SAN RF requirement and conformance testing (5.12.2) ***(No Tdocs)***

IoT (Internet of Things) NTN (non-terrestrial network) enhancements:
SAN RF requirements (5.30.1) ***(No Tdocs)***

Mobile IAB (Integrated Access and Backhaul) for NR:
RF core requirements (5.32.1) ***(No Tdocs)***

RF conformance testing (5.32.2) ***(No Tdocs)***

Other Rel-18 non-spectrum related WIs: BS RF requirements (5.34.2) ***(No Tdocs)***

# Topic #1: BS RF requirements and BS conformance testing (Rel-17) (4.3)

## Companies’ contributions summary

**Discussion papers**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title/Proposals** |
| R4-2413248 | Huawei, HiSilicon | (NR\_RAIL\_EU\_900MHz-Core) Analysis of the updated ECC/DEC/(20)02 decision**Proposal**: Reflect updates to ECC/DEC/(20)02 in the TR 38.853. |

**Submitted CRs (Cat A CRs not listed)**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2411050 | CATT | CR for TS 38.108, Correction on NTN SAN requirement reference points**Summary of change:** To modify the diagram of NTN SAN requirement reference points. |
| R4-2411051 | CATT | CR for TS 38.181, Correction on NTN SAN requirement reference points**Summary of change:** To modify the diagram of NTN SAN requirement reference points. |
| R4-2411223 | Ericsson | (NR\_6GHz\_unlic\_EU-Core) CR to 38.104 on ACLR and CACLR in non-contiguous spectrum**Summary of change:** It is clarified that either ACLR or CACLR shall apply, depending on the sub-block or Inter RF Bandwidth gap size (Wgap) where the limit applies.. |
| R4-2411225 | Ericsson | (NR\_6GHz\_unlic\_EU-Core) CR to 38.141-1 on ACLR and CACLR in non-contiguous spectrum**Summary of change:** It is clarified that either ACLR or CACLR shall apply, depending on the sub-block or Inter RF Bandwidth gap size (Wgap) where the limit applies. |
| R4-2412298 | Ericsson | (NR\_NTN\_solutions-Core) CR to 38.108 correction on FRC and naming alignment**Summary of change:** * Change “FR1” to “FR1-NTN” in all statements and tables.
* Correct some editorial errors and adjust table format.
 |
| R4-2412300 | Ericsson | (NR\_NTN\_solutions-Core) CR to 38.181 correction on FRC and naming alignment**Summary of change:** * Change “FR1” to “FR1-NTN” in all statements and tables.
* Correct some editorial errors and adjust table format.
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| R4-2412341 | NEC | (NR\_bands\_R17\_BWs-Core) CR to 38.104: Correction of regional requirement table**Summary of change:** Remove “when the narrowest channel bandwidth supported by the BS is 40MHz or wider”. |
| R4-2412342 | NEC | (NR\_bands\_R17\_BWs-Core) CR to 38.141-1: Correction of regional requirement table**Summary of change:** Remove “when the narrowest channel bandwidth supported by the BS is 40MHz or wider”. |
| R4-2412343 | NEC | (NR\_bands\_R17\_BWs-Core) CR to 38.141-2: Correction of regional requirement for tx intermodulation**Summary of change:** Remove “when the narrowest channel bandwidth supported by the BS is 40MHz or wider”.Regional Tx intermodulation requirements are move to correct place with table number and clause number, and interfering signal type corrections. |
| R4-2412344(Overlapping CR, See Sub-topic 1-1) | NEC | (NR\_IAB-Perf) CR to 38.176-2: Correction of ACLR absolute limit**Summary of change:** Remove the note 1 in ACLR absolute limit tables.Modify the ACLR absolute limit notation and the scaling factor.Change the MR IAB-DU ACLR absolute limit for IAB-MT to “NA”. |
| R4-2412580 | Nokia | (LTE410\_Europe\_PPDR-Perf) CR to TS 37.145-2 on correction of transmitter co-location requirements for bands 87 and 88**Summary of change:** Use uplink frequency range in the transmitter co-location requirements for bands 87 and 88. |
| R4-2412583 | Nokia, UIC, Vodafone | (NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104 on clarification on multiple carrier operation for bands n100 and n101**Summary of change:** Align the text related to multiple carrier operation in bands n100 and n101 with the approved LS to ECC WG FM in R4-2410001. |
| R4-2412585 | Nokia, UIC, Vodafone | (NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1 on clarification on multiple carrier operation for bands n100 and n101**Summary of change:** Align the text related to multiple carrier operation in bands n100 and n101 with the approved LS to ECC WG FM in R4-2410001. |
| R4-2412987(Overlapping CR, See Sub-topic 1-1) | Ericsson | (NR\_IAB-Perf) CR for TS 38.176-2, removal of scaling factor note 1 for IAB-MT type 1-O**Summary of change:** Removal the note 1 in some of the IAB-MT test requirments. |
| R4-2413249 | Huawei, HiSilicon | (NR\_RAIL\_EU\_900MHz-Core) Updated ECC/DEC/(20)02 decision**Summary of change:** Updates reflecting recent corrections in the ECC/DEC/(20)02 decision. |
| R4-2413250 | Huawei, HiSilicon | (NR\_SUL\_UL\_n24-Core) Missing reference to FCC Order DA 20-48**Summary of change:** Adding missing reference to the FCC Order DA 20-48.. |
| R4-2413252 | Huawei, HiSilicon | (NR\_newRAT-Core) Fixing notes numbering in Table 5.2-1**Summary of change:** Renumbering newly added notes in table 5.2-1 to avoid collision. |
| R4-2413253 | Huawei, HiSilicon | (NR\_newRAT-Core) Fixing notes numbering in Table 5.2-1**Summary of change:** Renumbering newly added notes in table 5.2-1 to keep consistency with Rel-17. |
| R4-2413256 | Huawei, HiSilicon | Clarification on extreme conditions**Summary of change:** * 6.1, 7.1: clarification saying that normal test conditions are default,
* 6.2.2, 7.2.2: clarifying on test conditions, to distinguish from “normal operating conditions” or “normal operation”,
* 6.9.2, 7.8.2: removal of unnecessary clarifications for normal test conditions, which were not used consistently for all the other requirement sections.
* Addition of sentence to clarify where normal and extreme test conditions are specified.

Other minor editorial corrections. |
| R4-2413257 | Huawei, HiSilicon | Clarification on extreme conditions**Summary of change:** * 6.1, 7.1: clarification saying that normal test conditions are default,
* 6.2, 7.2: clarifying on test conditions, to distinguish from “normal operating conditions” or “normal operation”,
* 6.9.2, 7.8.2: removal of unnecessary clarifications for normal test conditions, which were not used consistently for all the other requirement sections.
* Addition of sentence to clarify where normal and extreme test conditions are specified.

Other minor editorial corrections. |
| R4-2413285 | Huawei, HiSilicon | (TEI17) CR to TS 38.104 - BS spurious receiver protection note**Summary of change:** A new NOTE is added in Table 6.6.5.2.2. |
| R4-2413287 | Huawei, HiSilicon | (TEI17)CR to TS 38.141-1 - BS spurious receiver protection note**Summary of change:** A new NOTE is added in Table 6.6.5.5.1.2-1. |
| R4-2413289 | Huawei, HiSilicon | (TEI17)CR to TS 38.141-2 - BS spurious receiver protection note**Summary of change:** A new NOTE is added in Table 6.7.5.3.5.1-1. |

## Open issues summary

### Sub-topic 1-1: Overlapping CRs

Removal of scaling factor note for Absolute ACLR in TS 38.176-2:

* The CR in R4-2412344 removes all references to Note 1 and makes the note *Void* in Table 6.7.3.5.1-2.
* The CR in R4-2412987 removes one reference to Note 1 in Table 6.7.3.5.1-2 but leaves the note intact.

**Proposal:** The resolution for the two CRs needs to be coordinated by the proponents, possibly the CRs could be merged.