**3GPP TSG-RAN WG4 Meeting #115 R4-2507833**

**Malta, Malta, 19th May 2025 - 23rd May 2025**

**Agenda item:** 4.1.3

**Source:** Moderator (Ericsson)

**Title:** Topic summary for [115][301] BSRF\_Maintenance\_TEI

**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 and TEI:**

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

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

Rel-16/17 TEI (BS RF related) (4.8) ***(No Tdocs)***

**Rel-18 and Rel-19 maintenance for LTE and NR, TEI18 and TEI19:**

1. NR NTN enhancements:
System parameters and UE RF requirements (5.17.1)
2. Rel-18 and Rel-19 non-spectrum related Wis
BS/SAN/non-UE RF requirements (5.25.2)

Rel-18 TEI
BS RF, demodulation performance and other topics (5.26.3) ***(No Tdocs)***

Rel-19 TEI
BS RF, demodulation performance and other topics (5.27.3) ***(No Tdocs)***

# Topic #1: BS RF requirements and BS conformance testing

## Companies’ contributions summary

**Discussion papers**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title/Proposals** |
| R4-2507096 | NTT DOCOMO, INC, SoftBank Corp., Rakuten | Discussion on introducing additional EESS protection requirement for BS**Proposal 1:** In preparation for the next regulatory changes in Japan, so EESS protection requirements for 37 GHz – 40.5GHz is introduced.**Proposal 2:** This discussion is being addressed in maintenance WI. The workload is almost just about discussing EESS protection.**Proposal 3:** It will be introduced at least in Rel-19. Earlier releases can be discussed.(Draft CR text included as Annex) |

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

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2506078 | CATT | (NR\_IAB-Core)CR for 38.174, Correction on out-of-band blocking co-location requirement**Summary of change:** 1) Change “IAB Node” to “IAB-MT” in Table 7.5.6-1.2) Change “BS” to” IAB-DU and IAB-MT” or “IAB-DU” in Table 10.6.4-1. |
| R4-2506082 | CATT | (NR\_IAB-Perf)CR for 38.176-1, Correction on out-of-band blocking co-location requirement**Summary of change:** 1) Change “IAB” to “IAB-DU” in Table 7.5.5.2-1, since the requirement is for IAB-DU instead of IAB.2) Remove “for WA IAB-DU” for Wanted signal mean power in Table 7.5.5.2-1.3) Change “IAB node” to “IAB-MT” in Table 7.5.5.4-1, since the requirement is for IAB-MT instead of IAB node. |
| R4-2506086 | CATT | (NR\_IAB-Perf)CR for 38.176-2, Correction on out-of-band blocking co-location requirement**Summary of change:** 1) Change “IAB-Node” to” IAB-DU and IAB-MT” or “IAB-DU” in Table 7.6.5.1.2-1. |
| R4-2507074 | Nokia | (AAS\_BS\_LTE\_UTRA-Core) CR to TR 37.842 on correction of table reference**Summary of change:** Correct the table reference in clause 5.3.2. |
| R4-2507075 | Nokia | (NR\_newRAT-Core) CR to TR 38.817-02 on clarification on resource block size for receiver intermodulation requirements**Summary of change:** Clarify that ‘the modulated interfering signal channel bandwidth’ refers to those used in the requirement. |
| R4-2507088 | Ericsson | (NR\_newRAT-Core) CR to 37.104: Correction of co-existence and co-location requirements**Summary of change:** “E-UTRA BS” is changed to “BS” in the Notes column. |
| R4-2507089 | Ericsson | (NR\_newRAT-Perf) CR to 37.141: Correction of co-existence and co-location requirements**Summary of change:** “E-UTRA BS” is changed to “BS” in the Notes column and in the preamble to two tables. |
| R4-2507236 | Nokia | CR to 38.174 with clarification for channel bandwidths below 10 MHz**Summary of change:** Addition of clarification that CBWs below 10 MHz are not supported. |
| R4-2507240 | Nokia | CR to 38.176-1 with clarification for channel bandwidths below 10 MHz**Summary of change:** Addition of clarification that CBWs below 10 MHz are not supported. |
| R4-2507443 | Huawei, HiSilicon | (NR\_newRAT-Core) CR to TR 38.817-02: correction of the interferer bandwidth derivation for the ICS requirements**Summary of change:** Correction of ICS interfering signal derivation, based on RAN1 specification. |
| R4-2507452 | Huawei, HiSilicon | (NR\_newRAT-Core) CR to TS 38.104: correction of OTA Tx IMD wanted signal characteristics**Summary of change:** OTA Tx Intermodulation requirement correction and inconsistency removal. |
| R4-2507457 | Huawei, HiSilicon | (NR\_repeaters-Perf) CR to TS 38.115-2: Correction of the OTA input intermodulation test requirement**Summary of change:** MU and TT values correction.Input intermodulation test requirement limits correction. |
| R4-2507459 | Huawei, HiSilicon | (NR\_repeaters-Perf) CR to TS 38.115-2: Removal of TRP annex**Summary of change:** Removal of Annex G (TRP) and re-direction of references to related TRP annex in TS 38.141-2. |
| R4-2507461 | Huawei, HiSilicon | (NR\_repeaters-Perf) CR to TS 38.115-2: spec quality and consistency improvements**Summary of change:** - EVM requirement was corrected to explicitly list applicable MCS, - MU and TT values corrections, - Repeater stimulus signal was corrected, - missing references were added, - multiple cross-references to annexes were corrected, - [] were removed, - other minor editorial corrections. |
| R4-2507463 | Huawei, HiSilicon | (AAS\_BS\_LTE\_UTRA-Perf) CR to TS 37.145-2: removal of outstanding FFS**Summary of change:** Multiple outstanding FFS are removed.Missing Test Requirement derivations are added. |
| R4-2507614 | NTT DOCOMO, INC. | (NR\_newRAT-Perf) CR for correction on the unit of OTA ACLR (Rel-15)**Summary of change:** Correct the unit of BS type 2-O ACLR limit in non-contiguous spectrum.  |
| R4-2507874 | ROHDE & SCHWARZ | [37.941] Incorrect MU data for n104 band**Summary of change:** n104 band will not be represented in 37.941. These changes also need to be made in the excel MU tables, specifically in 37941 - Spreadsheet 1 - FR1 TX MU calculation tables.xlsx |
| R4-2507883 | ROHDE & SCHWARZ | [38.141-2] Incorrect MU data for n104 band**Summary of change:** Reduced frequency span of second clause to 6 GHz (from 7.125 GHz). That way the MU for n104 band is listed independent of the prior clause. |

# Topic #2: NR NTN enhancements; System parameters and UE RF requirements

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

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

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2506154 | Ericsson | (NR\_NTN\_enh-Core) CR to TS 38108 - Missing SAN type 2-O definition**Summary of change:** Add SAN type 2-O definition. |
| R4-2507078 | Nokia | (NR\_NTN\_enh-Perf) CR to TS 38.181 on corrections of notes in tables**Summary of change:** 1) Align reference to Note 2 in Table 4.7.2-1.2) Add Note ‘1’ in Table 10.3.5-2. |
| R4-2507469 | Qualcomm Incorporated, THALES, Ericsson | (NR\_NTN\_enh-Core) CR for TS 38.101-5 to clarify Doppler shift issues - Cat F CR**Summary of change:** To clarify Doppler shif issues in the sections of specturm emission mask with the same wording used in in section 6.5B.3.2 of TS 36.102. |

# Topic #3: Rel-18 and Rel-19 non-spectrum related WIs; BS/SAN/non-UE RF requirements

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

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

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2507894(revision of R4-2505338) | Union Inter. Chemins de Fer, Nokia | CR to TS 38.104: Transmit power for 3MHz CBW in band n100**Summary of change:** Addition of the output power restrictions for 3MHz CBW in band n100. |
| R4-2505404 | Apple | (FS\_NR\_IMT\_4400\_7125\_14800MHz) Editorial corrections in Annex A title**Summary of change:** "normative" is removed from the Annex A title. |
| R4-2506248 | ZTE Corporation, Sanechips | (NR\_FR1\_lessthan\_5MHz\_BW-Perf) CR to TS38.141-1 Introduction of 3MHz channel bandwidth for test configurations**Summary of change:** Add 3MHz channel bandwidth for test configurations. |
| R4-2506326 | ZTE Corporation, Sanechips | (NB\_IOTenh3-Core)CR to TS38.113: FRC correction for performance criteria for continuous phenomena for BS**Summary of change:** Correct the FRCs to be matched with the NR channel bandwidth, and aligned with that in TS 38.104. |
| R4-2506937 | NEC | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 on removal of undefined references**Summary of change:** Remove the removed reference numbers in the main text. |
| R4-2506938 | NEC | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 on BS spurious emissions for 4400 to 4800 MHz frequency range and spectral mask for 14800 to 15350 MHz frequency range**Summary of change:** “Basic limit” is replaced by “limit” in the tables for BS spurious emissions for 4400 to 4800 MHz frequency range and spectral mask for 14800 to 15350 MHz frequency range |
| R4-2506939 | NEC | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 on BS antenna pattern for 14800 to 15350 MHz frequency range**Summary of change:** Introduce table 6.5.1.2-2 which is copied from table 3 in LS reply to ITU-R WP 5D in R4-2420385. |
| R4-2506940 | NEC | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 on BS blocking response performance requirements for 4400 to 4800 MHz frequency range**Summary of change:** Add text “is re-used from TS 38.104 [9]” for out-of-band blocking requirement and blocking requirement for co-location with BS in other bands tables. |
| R4-2507077 | Nokia | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TS 38.922 on transmission power control model**Summary of change:** Transmission power control model is copied from TR 38.921 to the co-existence simulation assumption. |
| R4-2507079 | Nokia | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TS 38.922 on corrections and clarifications on IMT parameters**Summary of change:** 1) Remove the verbal form ‘shall’ from the TR and align the wordings for the BS blocking response in the three frequency ranges.2) Clarify only out-of-band blocking radiated requirements are listed in Table 6.3.2.3-1. |
| R4-2507730 | Ericsson | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 Addition of AAS BS spectral mask and spurious emissions for 14800 to 15350 MHz frequency range**Summary of change:** * Update on AAS BS spectral masks for WA BS of 14800 to 15350 MHz
* Addition of AAS BS spectral masks for Micro cell and small cell indoor of 14800 to 15350 MHz
* Clariicaiton on AAS BS spurious emissions for Micro cell and small cell indoor of 14800 to 15350 MHz
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| R4-2507731 | Ericsson | (FS\_NR\_IMT\_4400\_7125\_14800MHz) CR to TR 38.922 Removal of references to internal TRs and Tdocs**Summary of change:** Removal of references to Tdocs and internal 3GPP TRs |