**3GPP TSG-RAN WG4 Meeting # 116bis draftR4-2514424**

**Prague, CZ, October 13th – 17th, 2025**

**Agenda item:** 4.1.3

**Source:** Moderator (Ericsson)

**Title:** Topic summary for [116bis][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:

1. NR FR1 7 MHz Channel Bandwidth (4.9.2) ***(No Tdocs)***
2. Enhancements for Air-to-ground network for NR (4.12.2) ***(No Tdocs)***
3. Low-power wake-up signal and receiver for NR (LP-WUS/WUR) (4.22.2)
4. NR base station (BS) RF requirement evolution for FR1/FR2 and testing:  
   Expected EIRP mask for upper 6GHz (4.28.1.1)
5. NR base station (BS) RF requirement evolution for FR1/FR2 and testing:   
   OTA test enhancement (co-location reference antenna) (4.28.1.2) ***(No Tdocs)***
6. Other Rel-19 non-spectrum related WIs (4.29.2) ***(No Tdocs)***
7. Rel-19 TEI (4.30.3) ***(Move to 11.1)***
8. RAN task and other topics:  
   Framework simplification for co-location/co-existence requirements (RP-243288) (11.1)

# Topic #1: Low-power wake-up signal and receiver for NR (LP-WUS/WUR) (4.22.2)

## Companies’ contributions summary

**Submitted CRs**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2513242 | CATT | draftCR to TR 38.774 on transmitted signal quality (clause 7.2.4) for LP-WUS  Summary of change: The same change adapted to the latest approved TR RP-252465 is made |
| R4-2513933 | ZTE Corporation, Sanechips | Draft CR to TS38.104 on transmission bandwidth configuration for LP-WUS  Summary of change: Introduce LP-WUS transmission bandwidth configuration of LP-WUS for both FR1 and FR2-1. |
| R4-2513821 | Nokia, CATT, Ericsson | Draft CR to TR 38.774 on BS transmitted signal quality  Summary of change: Record the agreements and underlying reasons on BS transmitted signal quality into TR 38.774.  *NOTE: Moved from AI 6.16.2 to AI 4.22.2.* |
| R4-2513822 | Nokia | Draft CR to TS 38.141-1 on clarification of LP-WUS power boosting  Summary of change: Clarify the meaning of ‘LP-WUS power boosting’ in the manufacturer declarations.  *NOTE: Moved from AI 6.16.2 to AI 4.22.2.* |
| R4-2513823 | Nokia | Draft CR to TS 38.141-2 on clarification of LP-WUS power boosting  Summary of change: Clarify the meaning of ‘LP-WUS power boosting’ in the manufacturer declarations. Unintentional highlight in text is also corrected.  *NOTE: Moved from AI 6.16.2 to AI 4.22.2.* |

# Topic #2: NR BS RF requirement evolution for FR1/FR2 and testing: Expected EIRP mask for upper 6GHz (4.28.1.1)

## Companies’ contributions summary

**Submitted CRs**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| R4-2514111 | Ericsson | for band n104  Summary of change: corrections and text improvements |
| R4-2514449 | Nokia | CR to TS 38.106 with improvements for EIRP mask for NCR  Summary of change: Corrections and text improvements |
| R4-2514450 | Nokia | CR to TR 38.908 with aligment for definitions and test procedure  Summary of change: Corrections and text improvements |

# Topic #3: RAN task – Framework simplification for co-location/co-existence requirements (RP-243288) (11.1)

## Companies’ contributions summary

**Discussion papers**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| [R4-2514477](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514477.zip) | Huawei, HiSilicon | Proposal 1: Modifications presented in Track Changes shall be reflected in all Draft CRs which are part of this RAN task.  Proposal 2: Remove TS 36.143 from this RAN task and keep legacy tables. |
| [R4-2513158](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513158.zip) | CATT | **Proposal 1: Update the NOTE1 for co-existence requirement as the following to solve the deleting note in note column of original table.**  ***NOTE 1: As defined in the scope for spurious emissions in this clause, except for the cases where the noted requirements apply to a BS operating in Band n28, the co-existence requirements in table 6.6.5.5.1.3-1 do not apply for the frequency range extending ΔfOBUE immediately outside the downlink operating band (see TS 38.104 [2], table 5.2-1). Emission limits for this excluded frequency range may be covered by local or regional requirements.***  **Proposal 2: RAN4 to discuss whether to update the simplified table for co-location requirement in endorsed draft CR for TS 38,141-1 as below:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Frequency range of uplink operating band of the | System type to co-locate with | *Basic limits* (dBm/100kHz) | | | Notes | | co-located BS | WA BS | MR BS | LA BS | | 824 - 849 MHz | GSM850 or CDMA850 | -98 | -91 | -70 | NOTE 1 | | 876 - 915 MHz | GSM900 | -98 | -91 | -70 | | 1710 - 1785 MHz | DCS1800 | -98 | -91 | -80 | | 1850 - 1910 MHz | PCS1900 | -98 | -91 | -80 | | UL frequency range of n51, n91, n93, or UL frequency range of 51 | NR or E-UTRA | N/A | N/A | -88 | | UL frequency range of n46, n53, or UL frequency range of 46, 53 | NR or E-UTRA | N/A | -91 | -88 | | UL frequency range of n100, n101 | NR | -96 | N/A | N/A | | UL frequency range of n96, n102 | NR | N/A | -90 | -87 | | UL frequency range of n104 | NR | -95 | -90 | -87 | | Frequency range of uplink *operating band* of the co-located BS | Other (NOTE 4, 5) | -96 | -91 | -88 |   **Proposal 3: RAN4 to discuss whether to update the simplified table for co-location requirement in endorsed draft CR for TS 37.107 as below:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Frequency range of uplink operating band of the | System type to co-locate with | *Basic limits* (dBm/100kHz) | | | Notes | | co-located BS | WA BS | MR BS | LA BS | | 824 - 849 MHz | GSM850 or CDMA850 | -98 | -91 | -70 | NOTE 1 | | 876 - 915 MHz | GSM900 | -98 | -91 | -70 | | 1710 - 1785 MHz | DCS1800 | -98 | -91 | -80 | | 1850 - 1910 MHz | PCS1900 | -98 | -91 | -80 | | UL frequency range of n51, n91, n93, or UL frequency range of 49, 51 | NR, or E-UTRA | N/A | N/A | -88 | | UL frequency range of n46, n53, or UL frequency range of 46, 53 | NR, or E-UTRA | N/A | -91 | -88 | | UL frequency range of n100, n101 | NR | -96 | N/A | N/A | | UL frequency range of n96, n102 | NR | N/A | -90 | -87 | | UL frequency range of n104 | NR | -95 | -90 | -87 | | Frequency range of uplink *operating band* of the co-located BS | Other (NOTE 4, 5) | -96 | -91 | -88 |   *NOTE: Moved from AI 4.30.3 to AI 11.1.* |

**Submitted CRs**

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Title / Summary of change** |
| [R4-2513063](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513063.zip) | Nokia | (TEI19-BDaT\_simp\_improvement) CR to 36.141 on framework simplification for co-location/co-existence requirements  Summary of change: Relevant Clauses are updated. |
| [R4-2513064](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513064.zip) | Nokia | (TEI19-BDaT\_simp\_improvement) CR to 37.104 on framework simplification for co-location/co-existence requirements  Summary of change: Relevant Clauses are updated. |
| [R4-2513065](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513065.zip) | Nokia | (TEI19-BDaT\_simp\_improvement) CR to 38.141-1 on framework simplification for co-location/co-existence requirements  Summary of change: Relevant Clauses are updated. |
| [R4-2514033](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514033.zip) | ZTE Corporation | (TEI19-BDaT\_simp\_improvement) draftCR to TS 37.141: spec structure simplification for co-location/co-existence requirements  Summary of change: The table is simplified to include the general requirement level and exceptions. |
| [R4-2514034](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514034.zip) | ZTE Corporation | (TEI19-BDaT\_simp\_improvement) draftCR to TS 38.115-1 spec structure simplification for co-locationco-existence requirements  Summary of change: The table is simplified to include the general requirement level and exceptions. |
| [R4-2514035](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514035.zip) | ZTE Corporation | (TEI19-BDaT\_simp\_improvement) CR to TS 38.176-1: spec structure simplification for co-locationco-existence requirements  Summary of change: The table is simplified to include the general requirement level |
| [R4-2514036](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514036.zip) | ZTE Corporation | (TEI19-BDaT\_simp\_improvement) CR to TS 38.176-2: spec structure simplification for co-locationco-existence requirements  Summary of change: The table is simplified to include the general requirement level |
| [R4-2514108](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514108.zip) | Ericsson | CR to TS 38.104: Simplification of tables for additional spurious emission requirements for co-existence and co-location  Summary of change: The tables are restructured to include the general requirement level and exceptions. |
| [R4-2514109](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514109.zip) | Ericsson | CR to TS 37.105: Simplification of tables for additional requirements for co-existence and co-location  Summary of change: The tables are restructured to include the general requirement level and exceptions. |
| [R4-2514110](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514110.zip) | Ericsson | CR to TS 36.104: Simplification of tables for additional requirements for co-existence and co-location  Summary of change: The tables are restructured to include the general requirement level and exceptions. |
| [R4-2514478](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514478.zip) | Huawei, HiSilicon | (TEI19-BDaT\_simp\_improvement) Draft CR to TS 38-141-2: simplification of co-location and co-existence requirement tables  Summary of change: Placeholder introduction for the new simplified co-ex and co-location requirement tables. |
| [R4-2514479](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2514479.zip) | Huawei, HiSilicon | (TEI19-BDaT\_simp\_improvement) Draft CR to TS 37.145-2: simplification of co-location and co-existence requirement tables  Summary of change: Placeholder introduction for the new simplified co-ex and co-location requirement tables. |
| [R4-2513159](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513159.zip) | CATT | (TEI19)CR for 38.106, on framework simplification for co-location/co-existence requirement[BDaT\_simp\_improvement]  Summary of change:  1) Replace co-existence spurious requirement in Table 6.5.4.2.2-1 with new format table.  2) Replace co-location spurious requirement in Table 6.5.4.2.3-1 with new format table.  *NOTE: Moved from AI 4.30.3 to AI 11.1.* |
| [R4-2513160](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513160.zip) | CATT | (TEI19)CR for 38.174, on framework simplification for co-location/co-existence requirement[BDaT\_simp\_improvement]  Summary of change:  1) Replace co-existence spurious requirement in Table 6.6.5.2.2-1 with new format table.  2) Replace co-location spurious requirement in Table 6.6.5.2.3-1 with new format table.  *NOTE: Moved from AI 4.30.3 to AI 11.1.* |
| [R4-2513161](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513161.zip) | CATT | (TEI19)CR for 37.145-1, on framework simplification for co-location/co-existence requirement[BDaT\_simp\_improvement]  Summary of change:  1) Replace co-existence spurious requirement in Table 6.6.6.5.2.5-1 with new format table.  2) Replace co-location spurious requirement in Table 6.6.6.5.2.6-1 with new format table.  3) Replace blocking co-location requirement for MSR in Table 7.5.5.1.2-1 with new format table.  4) Replace blocking co-location requirement for single RAT UTRA FDD operation in Table 7.5.5.2-4 with new format table.  5) Replace blocking co-location requirement for single RAT UTRA TDD 1.28 Mcps option operation in Table 7.5.5.3.2-1 with new format table.  6) Replace blocking co-location requirement for single RAT E-UTRA operation in Table 7.5.5.4.2-1 with new format table.  *NOTE: Moved from AI 4.30.3 to AI 11.1.* |
| [R4-2513162](https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_116bis/Docs/R4-2513162.zip) | CATT | (TEI19)CR for 36.106, on framework simplification for co-location/co-existence requirement[BDaT\_simp\_improvement]  Summary of change:  1) Replace co-existence spurious requirement in Table 9.2.2.1-1 with new format table.  2) Replace co-location spurious requirement in Table 9.2.3.1-1 with new format table.  *NOTE: Moved from AI 4.30.3 to AI 11.1.* |

## Open issues summary

### Sub-topic 3-1

**Issue 2-1: Note 1 for “frequency range not applicable” for co-existence requirement**

* Proposals
  + Proposal 1: Update the NOTE1 for co-existence requirement to solve the deleting note in note column of original table. (CATT, R4-2513158)
* Recommended WF
  + TBA

**Issue 2-2: Missed co-location requirement in exemplified CR for TS 38.141-1 and TS 37.104**

* Proposals
  + Proposal 1: RAN4 to discuss whether to update the simplified table for co-location requirement in endorsed draft CR for TS 38.141-1 and TS 37.104. (CATT, R4-2513158)
* Recommended WF
  + TBA

**Issue 2-3: Further modifications based on the content captured in the WF in R4-2512581**

* Proposals
  + Proposal 1: Modifications presented in Track Changes shall be reflected in all Draft CRs which are part of this RAN task. (Huawei, R4-2514477)
* Recommended WF
  + TBA

**Issue 2-3: Further modifications based on the content captured in the WF in R4-2512581**

* Proposals
  + Proposal 1: Remove TS 36.143 from this RAN task and keep legacy tables. (Huawei, R4-2514477)
* Recommended WF
  + TBA