**3GPP TSG-RAN WG4 Meeting # 107 R4-23XXXXX**

**Incheon, KR, May 22nd – May 26th , 2023**

**Agenda item:** 5.4

**Source:** Moderator (Nokia, Nokia Shanghai Bell)

**Title:** Topic summary for [107][317] Demod\_Maintenance

**Document for:** Information

# Introduction

*Briefly introduce background, the scope of this email discussion (e.g. list of treated agenda items) and provide some guidelines for email discussion if necessary.*

The scope of this topic summary for demod maintenance is

4 Up to Rel-16 maintenance for LTE and NR

4.5 Demodulation and CSI requirements [WI code]

5 Rel-17 maintenance for LTE and NR

5.2 Rel-17 non-spectrum related WI maintenance

5.2.3 Further enhancements on MIMO for NR [NR\_feMIMO]

5.2.3.3 UE Demodulation and CSI requirements [NR\_feMIMO-Perf]

5.2.4 NR coverage enhancements [NR\_cov\_enh]

5.2.4.2 BS demodulation requirements [NR\_cov\_enh-Perf]

5.2.5 Support of reduced capability NR devices [NR\_redcap]

5.2.5.4 UE demodulation and CSI requirements [NR\_redcap-Perf]

5.2.6 Enhanced IIoT and URLLC support [NR\_IIOT\_URLLC\_enh]

5.2.6.3 Demodulation performance requirements [NR\_IIOT\_URLLC\_enh-Perf]

5.2.8 Solutions for NR to support non-terrestrial networks (NTN) [NR\_NTN\_solutions]

5.2.8.6 Demodulation requirements [NR\_NTN\_solutions-Perf]

5.2.8.6.1 SAN demodulation requirements [NR\_NTN\_solutions-Perf]

5.2.8.6.2 UE demodulation requirements [NR\_NTN\_solutions-Perf]

5.2.10 Other NR/LTE WIs [WI code]

5.2.10.4 Demodulation and CSI requirements [WI code]

Including additionally

“T-doc R4-2309452/9455/9457, R4-2309692/9694/9695/9697/9728/9730 moved to AI 4.5 from AI 4.2 and will be treated under thread [317]”.

# Topic #1: Up to Rel-16 maintenance for LTE and NR (4.5, selected 4.2)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| [**R4-2307051**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307051.zip) | QUALCOMM Europe Inc. - Italy | Correction CR for the Report Quantity for CQI Reporting Tests with 1TX | Changing Report Quantity for 1TX CQI Reporting Tests  Moderator: CR for 38.101-4. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2307052 | QUALCOMM Europe Inc. - Italy | Cat.A - Correction CR for the Report Quantity for CQI Reporting Tests with 1TX | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2307086**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307086.zip) | Anritsu Corporation | CR to Candidate CCEs of SDR SA DL-CA | Corrected test parameter Table 5.5A-1’s Candidate CCEs to enable simultaneous UL/DL grant.  Moderator: CR for 38.101-4. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2307087 | Anritsu Corporation | CR to Candidate CCEs of SDR SA DL-CA | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2307088 | Anritsu Corporation | CR to Candidate CCEs of SDR SA DL-CA | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2307452**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307452.zip) | Nokia, Nokia Shanghai Bell | CR for TS 38.141-2 UL TA Demod requirements relative TPUT addition (NR\_HST, Rel-16, CAT F) | Add defintion 70% relative TPUT level for performance requirements for UL timing adjustment, to align with 38.141-1/38.104 (“The throughput shall be ≥ 70% of the maximum throughput of…”). | [**NR\_HST-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840292) |
| [**R4-2307453**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307453.zip) | Nokia, Nokia Shanghai Bell | CR for TS 38.141-2 UL TA Demod requirements relative TPUT addition (NR\_HST, Rel-17, CAT A) | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_HST-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840292) |
| [**R4-2307457**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307457.zip) | Nokia, Nokia Shanghai Bell | CR for TS 38.141-2 UL TA Demod requirements relative TPUT addition (NR\_HST, Rel-18, CAT A) | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_HST-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840292) |
| [**R4-2308839**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308839.zip) | Huawei,HiSilicon | CR on 38.101-4: Update PDSCH and PDCCH codebook configurations in 4Tx tests | Added the parameter “Codebookmode” in common test parameters | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2308840 | Huawei,HiSilicon | CR on 38.101-4: Update PDSCH and PDCCH codebook configurations in 4Tx tests (Rel-16) | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2308841 | Huawei,HiSilicon | CR on 38.101-4: Update PDSCH and PDCCH codebook configurations in 4Tx tests (Rel-17) | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2308842**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308842.zip) | Huawei,HiSilicon | CR on 36.101: Updates to applicability rules for LTE 8Rx requirements | Remove the wording “CSI test” in the applicability of performance requirements for 8Rx capable UEs Add the test capability rules that ” The 8Rx capable UEs can skip 2Rx and 4Rx CSI reporting tests listed in clause 9”. | [**LTE\_8Rx\_AP\_DL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=780272) |
| R4-2308843 | Huawei,HiSilicon | CR on 36.101: Updates to applicabaility rules on PDSCH and CSI requirements for 8Rx capable UEs(Rel-16) | Cat-A | [**LTE\_8Rx\_AP\_DL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=780272) |
| R4-2308844 | Huawei,HiSilicon | CR on 36.101: Updates to applicabaility rules on PDSCH and CSI requirements for 8Rx capable UEs(Rel-17) | Cat-A | [**LTE\_8Rx\_AP\_DL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=780272) |
| R4-2308845 | Huawei,HiSilicon | CR on 36.101: Updates to applicabaility rules on PDSCH and CSI requirements for 8Rx capable UEs(Rel-18) | Cat-A | [**LTE\_8Rx\_AP\_DL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=780272) |
| [**R4-2308846**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308846.zip) | Huawei,HiSilicon | CR on 38.101-4: Introduction of channel model parameters definition specified for V2X requirements | Captured the definition of TDLA30-180, TDLA30-1400, TDLA30-2700 in Table B.2.2-1 | [**5G\_V2X\_NRSL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=830278) |
| R4-2308847 | Huawei,HiSilicon | CR on 38.101-4 Introduction of channel model paramters definition specified for V2X requirements (Rel-17) | Cat-A | [**5G\_V2X\_NRSL-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=830278) |
| [**R4-2308848**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308848.zip) | Huawei,HiSilicon | CR on 38.104: Updates to FRC of PUSCH requirements(Rel-16) | Correct the number of channel bits for FRC “G-FR2-A7-9” | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| R4-2308849 | Huawei,HiSilicon | CR on 38.104: Updates to FRC of PUSCH requirements(Rel-17) | Cat-A | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| R4-2308850 | Huawei,HiSilicon | CR on 38.104: Updates to FRC of PUSCH requirements(Rel-18) | Cat-A | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| [**R4-2308851**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308851.zip) | Huawei,HiSilicon | CR on 38.141-2: Updates to FRC of PUSCH requirements(Rel-16) | Correct the number of channel bits for FRC “G-FR2-A7-9” | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| R4-2308852 | Huawei,HiSilicon | CR on 38.141-2: Updates to FRC of PUSCH requirements(Rel-17) | Cat-A | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| R4-2308853 | Huawei,HiSilicon | CR on 38.141-2: Updates to FRC of PUSCH requirements(Rel-18) | Cat-A | [**NR\_perf\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840294) |
| R4-2308901 | Huawei,HiSilicon | Clean up for IAB demodulation requirements in TS 38.174 (Rel-17) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308902 | Huawei,HiSilicon | Clean up for IAB demodulation requirements in TS 38.174 (Rel-18) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308904 | Huawei,HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-1 (Rel-17) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308905 | Huawei,HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-1 (Rel-18) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308907 | Huawei,HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-2 (Rel-17) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308908 | Huawei,HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-2 (Rel-18) | Cat-A | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| R4-2308910 | Huawei,HiSilicon | Correction for HST test setup from Rel-16 (TS 38.101-4, Rel-17) | Cat-A | [**NR\_HST-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840292) |
| [**R4-2309146**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309146.zip) | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Correct values for “Binary Channel Bits Per Sub-Frame” and “Max. Throughput averaged over 1 frame” to align with Rel-12.  Moderator: CR for 36.101. | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| R4-2309147 | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Cat-A | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| R4-2309148 | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Cat-A | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| R4-2309149 | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Cat-A | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| R4-2309150 | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Cat-A | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| R4-2309151 | Rohde & Schwarz | Correction of RMCs for power imbalance TC | Cat-A | [**TEI12**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=560018) |
| [**R4-2309308**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309308.zip) | Huawei,HiSilicon | Clean up for IAB demodulation requirements in TS 38.174 (Rel-16) | Update clause 8, 11, I.2.4.3, add new clause I.2.4.3.5. | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| [**R4-2309309**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309309.zip) | Huawei, HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-1 (Rel-16) | Update clause F.2.4.3, add new clause 8.2.3.1.2, F.2.4.3.5. | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| [**R4-2309310**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309310.zip) | Huawei, HiSilicon | Clean up for IAB demodulation conformance testing in TS 38.176-2 (Rel-16) | Update clause 8.2.3.1.2, add new clause J.2.3.2.4. | [**NR\_IAB-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=820270) |
| [**R4-2309311**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309311.zip) | Huawei, HiSilicon | Correction for HST test setup from Rel-16 (TS 38.101-4, Rel-16) | Update clause 5.2.2.1.10, 5.2.2.2.10, 5.2.3.1.10, 5.2.3.2.10. Current configuration of CSI-RS for tracking leads to CSI-RS resources being mapped to the same slot and same symbol. | [**NR\_HST-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=840292) |
| **Selected tdocs from AI 4.2** | | | | |
| [**R4-2309452**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309452.zip) | ROHDE & SCHWARZ | Update to PUSCH performance test cases | Specification is not clear on whether the UL symbols from the special slot is needed for measurements. Similar changes were approved for 38.141-2 in RAN4-106 meeting  Moderator: CR for 38.141-1. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309455**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309455.zip) | ROHDE & SCHWARZ | Update to PUSCH performance test cases | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309457**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309457.zip) | ROHDE & SCHWARZ | Update to PUSCH performance test cases | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309692**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309692.zip) | ROHDE & SCHWARZ | Update to Test Case 8.2.13 (FDD case, PUSCH Aggregation Factor 8) | Adding NOTE 3: PUSCH Aggregation Factor of 8 required for FDD | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309694**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309694.zip) | ROHDE & SCHWARZ | Update to Test Case 8.2.13 (FDD case, PUSCH Aggregation Factor 8) | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2309695 | ROHDE & SCHWARZ | Update to PUSCH performance test cases | Moderator: Cat-F but not available. Please check and fix. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| R4-2309697 | ROHDE & SCHWARZ | Update to PUSCH performance test cases | Cat-A | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309728**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309728.zip) | ROHDE & SCHWARZ | Update to Test Case 8.2.13 (FDD case, PUSCH Aggregation Factor 8) | Adding NOTE 3: PUSCH Aggregation Factor of 8 required for FDD | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |
| [**R4-2309730**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309730.zip) | ROHDE & SCHWARZ | Update to Test Case 8.2.13 (FDD case, PUSCH Aggregation Factor 8) | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_newRAT-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=750267) |

## Open issues summary

*Before Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

N/A

# Topic #2: Further enhancements on MIMO for NR (5.2.3.3)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| [**R4-2307814**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307814.zip) | Samsung | correction CR on UE demodulation and CSI requirements for FeMIMO | The summary of changes in this CR as below: - Remove squre brackets for the requirments in Clause 5.2.2.1.20, 5.2.2.2.21  Moderator: CR for 38.101-4. | [**NR\_feMIMO-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860240) |

## Open issues summary

N/A

# Topic #3: NR coverage enhancements (5.2.4.2)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| [**R4-2307684**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307684.zip) | Ericsson | CR for TS38.104 on FRC table for PUSCH TBoMS\_Rel-17 | Correction on the OFDM symbol number in Table A.3.15 | [**NR\_cov\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900261) |
| [**R4-2307685**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307685.zip) | Ericsson | CR for TS38.141-2 on FRC table for PUSCH TBoMS\_Rel-17 | Correction on the OFDM symbol number in Table A.3.15 | [**NR\_cov\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900261) |
| [**R4-2307686**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307686.zip) | Ericsson | CR for TS38.104 on FRC table for PUSCH TBoMS\_Rel-18 | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_cov\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900261) |
| [**R4-2307687**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307687.zip) | Ericsson | CR for TS38.141-2 on FRC table for PUSCH TBoMS\_Rel-18 | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_cov\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900261) |

## Open issues summary

N/A

# Topic #4: Support of reduced capability NR devices (5.2.5.4)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

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| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| [**R4-2307238**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307238.zip) | QUALCOMM Europe Inc. - Italy | Clean up R17 RedCap Demod Requirements | Remove [.] from RedCap Demodulation requirements  Moderator: CR for 38.101-4. | [**NR\_redcap-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900262) |
| [**R4-2308421**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308421.zip) | Ericsson | CR: Editorial correction of PDCCH demodulation requirements for RedCap | Correction of the talbe number  Moderator: CR for 38.101-4. | [**NR\_redcap-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900262) |

## Open issues summary

N/A

# Topic #5: Enhanced IIoT and URLLC support (5.2.6.3)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| [**R4-2308855**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308855.zip) | Huawei,HiSilicon | CR on 38.104 Updates to the requirements for the PF0 requirements with sub-slot repetition | “Inter-slot frequency hopping” is enabled” in Table 8.3.14.1-1, but it is mistakenly specified “intra-slot frequency hopping is enabled.” in the text below Table 8.3.14.1-1 Corrected the typo | [**NR\_IIOT\_URLLC\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860245) |
| R4-2308856 | Huawei,HiSilicon | CR on 38.104: Updates to the test setup for the PF0 requirements with sub-slot repetition(Rel-18) | Cat-A | [**NR\_IIOT\_URLLC\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860245) |

## Open issues summary

N/A

# Topic #6: Solutions for NR to support non-terrestrial networks (5.2.8.6.1, 5.2.8.6.2)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

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| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| **SAN demodulation requirements (5.2.8.6.1)** | | | | |
| [**R4-2309315**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309315.zip) | Huawei, HiSilicon | CR on NTN SAN performance requirements (TS38.108, Rel-17) | For fixing some problems, update clause 2, 8, 11.1, D. | [**NR\_NTN\_solutions-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860246) |
| **UE demodulation requirements (5.2.8.6.2)** | | | | |
| [**R4-2307683**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307683.zip) | Ericsson | CR for TS38.108 to remove brackets of SNR | Following changes are added: 1. All SNR brackets of phyical channel requirements are removed.  Moderator: Submitted to wrong AI, this is SAN demod CR. Large overlap with R4-2309315.   * Propose to merge with R4-2309315 | [**NR\_NTN\_solutions-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860246) |

## Open issues summary

N/A.

# Topic #7: Other NR/LTE WIs (5.2.10.4)

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

## Companies’ contributions summary

Moderator’s note: Withdrawn CRs are not listed.

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| **T-doc number** | **Company** | **Title** | **Change / Moderator remark** | **Related WI** |
| **[R4-2307237](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307237.zip)** | QUALCOMM Europe Inc. - Italy | Correction CR for 1024QAM Demod Requirements applicability | Add back the applicability Rules for FR1 DL 1024QAM PDSCH requirements; Update UE Capability to include pdsch-1024QAM-2MIMO-FR1-r17, which was not present in the original version (UE supports either pdsch-1024QAM-2MIMO-FR1-r17 or pdsch-1024QAM-FR1-r17)  Moderator: CR for 38.101-4. | [**NR\_DL1024QAM\_FR1-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890256) |
| [**R4-2307458**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307458.zip) | Nokia, Nokia Shanghai Bell | CR for TS 38.141-2 UL TA Demod requirements relative TPUT addition (NR\_HST\_FR2, Rel-17, CAT F) | Add defintion 70% relative TPUT level for performance requirements for UL timing adjustment, to align with 38.141-1/38.104 (“The throughput shall be ≥ 70% of the maximum throughput of…”). | [**NR\_HST\_FR2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890260) |
| [**R4-2307459**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307459.zip) | Nokia, Nokia Shanghai Bell | CR for TS 38.141-2 UL TA Demod requirements relative TPUT addition (NR\_HST\_FR2, Rel-18, CAT A) | Cat-A  Moderator: Do not upload Cat-A before Cat-F agreed. | [**NR\_HST\_FR2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890260) |
| [**R4-2307633**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2307633.zip) | China Telecom | Removing square brackets for demodulation requirements | Remove the square brackets on the section numbering of MMSE-IRC requirements.  Moderator: For 38.307 B.3.3. Overlap with R4-2308854.   * Propose to merge with R4-2308854. | [**NR\_demod\_enh2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890255) |
| [**R4-2308854**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2308854.zip) | Huawei,HiSilicon | CR on 38.307: Cleanup the brackets of section number in UE PDSCH requirements with inter cell interference | The brackets in Table B.3.3-1 is existing  Remove the brackets Moderator: Overlap with ???. Propose to merge.  Moderator: Overlap with R4-R4-2307633.   * Propose to merge with R4-2307633. | [**NR\_demod\_enh2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890255) |
| **[R4-2309213](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309213.zip)** | Keysight Technologies UK Ltd | CR to 38.141-1: FRC number alignment back fill (A.10) | Added A.10 for FRC which is not used in TS38.141-1 but for making FRC numbering alighment purpose. Text in Annex is as agreed in WF. Because A.9 to be added by other CR, A.9 is not included in this CR but will be there.  Moderator: There may be alignment necessary with CRs in NR \_ENDC\_RF\_FR1\_enh2-Perf for 4Tx. Would NR \_ENDC\_RF\_FR1\_enh2-Perf WI code be more fitting? | [**NR\_HST\_FR2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890260) |
| **[R4-2309312](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309312.zip)** | Huawei, HiSilicon | Correction for HST FR1 test setup from Rel-17 (TS 38.101-4, Rel-17) | Current configuration of CSI-RS for tracking leads to CSI-RS resources being mapped to the same slot and same symbol Update clause 5.2A.2.5, 5.2A.3.5. | [**NR\_HST\_FR1\_enh-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890258) |
| [**R4-2309313**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309313.zip) | Huawei, HiSilicon | Correction for HST FR2 test setup from Rel-17 (TS 38.101-4, Rel-17) | Current configuration of CSI-RS for tracking leads to CSI-RS resources being mapped to the same slot and same symbol. Update clause 7.2.2.2.4. | [**NR\_HST\_FR2-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=890260) |
| [**R4-2309314**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_107/Docs/R4-2309314.zip) | Huawei, HiSilicon | Correction for HST SFN scheme A and B test setup from Rel-17 (TS 38.101-4, Rel-17) | Update clause 5.2.2.1.20, 5.2.2.1.21, 5.2.2.2.21, 5.2.2.2.22, 5.2.3.1.19, 5.2.3.1.20, 5.2.3.2.20, 5.2.3.2.21.  Moderator: Wrong WI code. | [**NR\_feMIMO-Perf**](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860240) |

## Open issues summary

N/A.