**3GPP TSG-RAN WG4 Meeting #103-e R4-22xxxxx**

**Online Meeting, 16 – 27 May 2022**

**Source: RAN4 vice chair (Samsung)**

**Title:** **RAN4#102-e BSRF\_Test\_Demod Session Chair notes**

**Agenda Item:** **2**

**Document for:** **Information**

## 4 Rel-15 and previous release maintenance for LTE and NR

### 4.1 NR WIs (up to Rel-15)

#### 4.1.2 UE EMC requirements

#### 4.1.3 BS RF requirements

##### 4.1.3.1 General

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**Email discussion for [102-e][301] BSRF\_Maintenance, AI 4.1.3, 5.1.5.1, 5.1.1.4 (except R4-2205787,5957), 4.2.2, 6.2.1– Johan Sköld**

**R4-2207144 Email discussion summary for [102-e][301] BSRF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207417 (from R4-2207144).**

**R4-2207417 Email discussion summary for [102-e][301] BSRF\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207314 | CR to TR 38.803: Addition of array antenna model extension in subclause 5.2.3 | Ericsson | Endorsed |  |
| R4-2207313 | Draft CR to 36.104: BS OBUE requirements clarification, rel-15 | NEC | Endorsed |  |
| R4-2204438 | Draft CR to 36.104: BS OBUE requirements clarification, rel-16 | NEC | Endorsed |  |
| R4-2204439 | Draft CR to 36.104: BS OBUE requirements clarification, rel-17 | NEC | Endorsed |  |
| R4-2207312 | Draft CR to 36.141: BS OBUE requirements clarification, rel-15 | NEC | Endorsed |  |
| R4-2204441 | Draft CR to 36.141: BS OBUE requirements clarification, rel-16 | NEC | Endorsed |  |
| R4-2204442 | Draft CR to 36.141: BS OBUE requirements clarification, rel-17 | NEC | Endorsed |  |
| R4-2205196 | Draft CR to 38.104 with addition of absolute values to NR-U masks and clarifications for NR-U bands | Nokia, Nokia Shanghai Bell | Endorsed |  |
| R4-2205197 | Draft CR to 38.104 with addition of absolute values to NR-U masks and clarifications for NR-U bands | Nokia, Nokia Shanghai Bell | Endorsed |  |
| R4-2205198 | Draft CR to 38.141-1 with addition of absolute values to NR-U masks and clarifications for NR-U bands | Nokia, Nokia Shanghai Bell | Endorsed |  |
| R4-2205199 | Draft CR to 38.141-1 with addition of absolute values to NR-U masks and clarifications for NR-U bands | Nokia, Nokia Shanghai Bell | Endorsed |  |
| R4-2207311 | Draft CR for TS 38.176-2: Update the co-existence and co-location tables to include missing bands | CATT | Endorsed |  |
| R4-2207310 | CR to TR 38.921: Update of information about interference management in subclause 6.1.4, 6.1.5, 8.1.2 and 9.2 | Ericsson | Endorsed |  |
| R4-2204562 | Updating fOOB and fOBUE for n41 and n90 1-C BS | CMCC | Noted |  |
| R4-2204563 | CR to TS 38.104 - fOOB and fOBUE for band n41 and n90 for 1-C BS | CMCC | Not pursued |  |
| R4-2207309 | Draft maintenance CR to TS36.141 | ZTE Corporation | Enodrsed |  |

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CR to TR 38.803

**R4-2203580 CR to TR 38.803: Addition of array antenna model extension in subclause 5.2.3**

*Type: CR For: Agreement  
 38.803 v14.2.0 CR-0017 rev Cat: F (Rel-14)  
  
 Source: Ericsson*

**Abstract:**

A new section (subclause 5.2.3.2.4) is created to capture the array antenna model extension. Information related to the parameter definition, array antenna model extension, parameter values applicable for 1710 to 4990 MHz is included in the CR.

**Decision: Revised to R4-2207314 (from R4-2203580).**

**R4-2207314 CR to TR 38.803: Addition of array antenna model extension in subclause 5.2.3**

*Type: CR For: Agreement  
 38.803 v14.2.0 CR-0017 rev Cat: F (Rel-14)  
  
 Source: Ericsson*

**Abstract:**

A new section (subclause 5.2.3.2.4) is created to capture the array antenna model extension. Information related to the parameter definition, array antenna model extension, parameter values applicable for 1710 to 4990 MHz is included in the CR.

**Decision: Endorsed.**

##### 4.1.3.2 TX/RX requirements (38.104)

##### 4.1.3.3 MSR specifications

Draft CR on MSR specifications for BS OBUE requirements clarifications

**R4-2204443 Draft CR to 37.104: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 37.104 v15.15.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204444 Draft CR to 37.104: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 37.104 v16.12.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204445 Draft CR to 37.104: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 37.104 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204449 Draft CR to 37.141: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 37.141 v15.16.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204450 Draft CR to 37.141: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 37.141 v16.12.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204451 Draft CR to 37.141: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 37.141 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: NEC*

**Abstract:**

In addtion to correct the NOTEs for OBUE requirements, it adds the missing table numbers for some tables. Therefore, this is a cat-F draft CR.

**Decision: Endorsed.**

*R4-2204446, 2204447, 2204448, 2204452, 2204453, 2204454, 2204455,2204456, 2204457 moved to this AI from 4.1.4.4.*

**R4-2204446 Draft CR to 37.105: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 37.105 v15.15.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204447 Draft CR to 37.105: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 37.105 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204448 Draft CR to 37.105: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 37.105 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204452 Draft CR to 37.145-1: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 37.145-1 v15.12.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204453 Draft CR to 37.145-1: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 37.145-1 v16.9.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204454 Draft CR to 37.145-1: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 37.145-1 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204455 Draft CR to 37.145-2: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 37.145-2 v15.13.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204456 Draft CR to 37.145-2: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 37.145-2 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204457 Draft CR to 37.145-2: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 37.145-2 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

#### 4.1.4 BS conformance testing

##### 4.1.4.1 General

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**Email discussion for [102-e][302] NR\_Conformance\_Maintenance, AI 4.1.4– Liehai Liu**

**R4-2207145 Email discussion summary for [102-e][302] NR\_Conformance\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207418 (from R4-2207145).**

**R4-2207418 Email discussion summary for [102-e][302] NR\_Conformance\_Maintenance**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207295 | Draft CR to 38.141-1: Clarification for unwanted emission testing | Huawei, HiSilicon | Endorsed |  |
| R4-2205151 | Draft CR to 38.141-1: Clarification for unwanted emission testing | Huawei, HiSilicon | Endorsed |  |
| R4-2205152 | Draft CR to 38.141-1: Clarification for unwanted emission testing | Huawei, HiSilicon | Endorsed |  |
| R4-2207296 | draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-15) | CATT | Endorsed |  |
| R4-2203982 | draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-16) | CATT | Endorsed |  |
| R4-2203983 | draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-17) | CATT | Endorsed |  |
| R4-2207297 | Correction on the test configuration for NC operation 37.141 R16 | Huawei, HiSilicon | Endorsed |  |
| R4-2205160 | Correction on the test configuration for NC operation 37.141 R17 | Huawei, HiSilicon | Endorsed |  |
| R4-2207299 | Correction on the test configuration for NC operation 37.145-1 R16 | Huawei, HiSilicon | Endorsed |  |
| R4-2205162 | Correction on the test configuration for NC operation 37.145-1 R17 | Huawei, HiSilicon | Endorsed |  |
| R4-2207298 | Correction on the test configuration for NC operation 37.145-2 R16 | Huawei, HiSilicon | Endorsed |  |
| R4-2205164 | Correction on the test configuration for NC operation 37.145-2 R17 | Huawei, HiSilicon | Endorsed |  |

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**Topic #1: Sweep time setting for unwanted emission testing**

**R4-2203562 Sweep time setting of spectrum analyzer for BS unwanted emission TCs**

*Type: discussion For: Approval  
 Source: Anritsu Corporation*

**Abstract:**

In this contribution we discuss suitable sweep time condition of the test equipment for BS unwanted emission TCs.

**Decision: Noted.**

**R4-2203977 Discussion on sweep time for unwanted emission testing**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204435 Discussion on the sweep time for unwanted emission testing**

*Type: discussion For: Approval  
 Source: NEC*

**Abstract:**

Keep current text for unwanted emission testing in BS conformance test specification, unless otherwise reasonable justifications are provided by the test equipment vendors to modify it.

**Decision: Noted.**

**R4-2204711 setting Sweep Time Requirement on Measuring BS Conformance Unwanted Emission testing**

*Type: discussion For: Agreement  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2205149 Clarification for unwanted emission testing**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

##### 4.1.4.2 Conducted conformance testing (38.141-1)

**Draft CR for TS 38.141-1 on sweep time**

**R4-2203978 draft CR for TS 38.141-1 On sweep time for unwanted emission testing (Rel-15)**

*Type: draftCR For: Endorsement  
 38.141-1 v15.11.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Decision: Merged (with R4-220xxxx).**

**R4-2203979 draft CR for TS 38.141-1 On sweep time for unwanted emission testing (Rel-16)**

*Type: draftCR For: Endorsement  
 38.141-1 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: CATT*

**Decision: Withdrawn.**

**R4-2203980 draft CR for TS 38.141-1 On sweep time for unwanted emission testing (Rel-17)**

*Type: draftCR For: Endorsement  
 38.141-1 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: CATT*

**Decision: Withdrawn.**

**R4-2205150 Draft CR to 38.141-1: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-1 v15.11.0 CR- rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207295 (from R4-2205150).**

**R4-2207295 Draft CR to 38.141-1: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-1 v15.11.0 CR- rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205151 Draft CR to 38.141-1: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-1 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205152 Draft CR to 38.141-1: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-1 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

##### 4.1.4.3 Radiated conformance testing (38.141-2)

**Draft CR for TS 38.141-2 on sweep time**

**R4-2203981 draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-15)**

*Type: draftCR For: Endorsement  
 38.141-2 v15.12.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Decision: Revised to R4-2207296 (from R4-2203981).**

**R4-2207296 draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-15)**

*Type: draftCR For: Endorsement  
 38.141-2 v15.12.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2203982 draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-16)**

*Type: draftCR For: Endorsement  
 38.141-2 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2203983 draft CR for TS 38.141-2 On sweep time for unwanted emission testing (Rel-17)**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2205153 Draft CR to 38.141-2: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-2 v15.12.0 CR- rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-220xxxx).**

**R4-2205154 Draft CR to 38.141-2: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-2 v16.10.0 CR- rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**R4-2205155 Draft CR to 38.141-2: Clarification for unwanted emission testing**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

##### 4.1.4.4 eAAS specifications

**Topic #: Test configuration for NC operation**

**R4-2205159 Correction on the test configuration for NC operation 37.141 R16**

*Type: draftCR For: Endorsement  
 37.141 v16.12.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207297 (from R4-2205159).**

**R4-2207297 Correction on the test configuration for NC operation 37.141 R16**

*Type: draftCR For: Endorsement  
 37.141 v16.12.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205160 Correction on the test configuration for NC operation 37.141 R17**

*Type: draftCR For: Endorsement  
 37.141 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205161 Correction on the test configuration for NC operation 37.145-1 R16**

*Type: draftCR For: Endorsement  
 37.145-1 v16.9.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207299 (from R4-2205161).**

**R4-2207299 Correction on the test configuration for NC operation 37.145-1 R16**

*Type: draftCR For: Endorsement  
 37.145-1 v16.9.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205162 Correction on the test configuration for NC operation 37.145-1 R17**

*Type: draftCR For: Endorsement  
 37.145-1 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205163 Correction on the test configuration for NC operation 37.145-2 R16**

*Type: draftCR For: Endorsement  
 37.145-2 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207298 (from R4-2205163).**

**R4-2207298 Correction on the test configuration for NC operation 37.145-2 R16**

*Type: draftCR For: Endorsement  
 37.145-2 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

**R4-2205164 Correction on the test configuration for NC operation 37.145-2 R17**

*Type: draftCR For: Endorsement  
 37.145-2 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

#### 4.1.5 BS EMC requirements

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**Email discussion for [102-e][303] NR\_EMC, AI 4.1.5, 5.1.5.1 (R4-2205852)  
10.5.4– Wubin Zhou**

**R4-2207146 Email discussion summary for [102-e][303] NR\_EMC**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207419 (from R4-2207146).**

**R4-2207419 Email discussion summary for [102-e][303] NR\_EMC**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2204458 | Draft CR to TS 38.113: Radiated emission measurement uncertainty (R15) | ZTE | Not Pursued |  |
| R4-2204459 | Draft CR to TS 38.113: Radiated emission measurement uncertainty (R16) | ZTE | Withdrawn | Mirror CR |
| R4-2207182 | TS 38.175: Corrections in clause 1 Scope and clause 9 Immunity | Ericsson | Postponed |  |
| R4-2205853 | TS 25.113: Corrections in clause 9 Immunity | Ericsson | Not treated |  |
| R4-2205854 | TS 25.113: Correction in clause 9 Immunity | Ericsson | Withdrawn | Mirror CR |
| R4-2205855 | TS 36.113: Corrections in clause 9 Immunity | Ericsson | Postponed |  |
| R4-2205857 | TS 37.113: Corrections in clause 9 Immunity | Ericsson | Postponed |  |
| R4-2205859 | TS 37.114: Corrections in clause 1 Scope and clause 9 Immunity | Ericsson | Postponed |  |
| R4-2205861 | TS 38.113: Corrections in clause 1 Scope and clause 9 Immunity | Ericsson | Postponed |  |
| R4-2204358 | TP to TS38.114:Definitions, symbols and abbreviations | ZTE Corporation | Approved |  |
| R4-2204494 | TS38.114V0.3.0 to capture RAN4#102-e agreements | ZTE Corporation | *For email approval* |  |
| R4-2207188 | WF on MU value for the radiated emission measurements | ZTE | Approved |  |
| R4-2207187 | WF on NR repeater EMC testing | Nokia | Approved |  |

**Topic #1: NR BS EMC**

**R4-2207188 WF on MU value for the radiated emission measurements**

*Type: other For: Approval  
 Source: ZTE*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204429 Further discussion on highest frequency and measurement uncertainty for NR BS radiated emission test**

*Type: discussion For: Approval  
 Source: ZTE*

**Abstract:**

Generally all companies agreed that MU value should align NR EMC spec. with NR RF spec., which the frequency range of MU should be extended above 12.75GHz, and it seems no companies object MU=6dB but more explanation would be needed.

**Decision: Noted.**

**R4-2204458 Draft CR to TS 38.113: Radiated emission measurement uncertainty (R15)**

*Type: discussion For: Endorsement  
 38.113 v15.15.0 CR- rev Cat: (Rel-15)  
  
 Source: ZTE*

**Decision: Not pursued.**

**R4-2204459 Draft CR to TS 38.113: Radiated emission measurement uncertainty (R16)**

*Type: discussion For: Endorsement  
 38.113 v16.5.0 CR- rev Cat: (Rel-16)  
  
 Source: ZTE*

**Decision: Withdrawn.**

**R4-2205853 TS 25.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 25.113 v15.0.0 CR-0067 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision:** The document was **not treated**.

**R4-2205854 TS 25.113: Correction in clause 9 Immunity**

*Type: CR For: Agreement  
 25.113 v16.0.0 CR-0068 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205855 TS 36.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 36.113 v15.4.0 CR-0082 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Postponed.**

**R4-2207183 TS 36.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 36.113 v15.4.0 CR-0082 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205856 TS 36.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 36.113 v16.2.0 CR-0083 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205857 TS 37.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 37.113 v15.11.0 CR-0114 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Postponed.**

**R4-2207184 TS 37.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 37.113 v15.11.0 CR-0114 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205858 TS 37.113: Corrections in clause 9 Immunity**

*Type: CR For: Agreement  
 37.113 v16.2.0 CR-0115 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205859 TS 37.114: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 37.114 v15.9.0 CR-0098 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Postponed.**

**R4-2207185 TS 37.114: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 37.114 v15.9.0 CR-0098 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205860 TS 37.114: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 37.114 v16.0.0 CR-0099 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205861 TS 38.113: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 38.113 v15.15.0 CR-0045 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

**Decision: Postponed.**

**R4-2207186 TS 38.113: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 38.113 v15.15.0 CR-0045 rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

**R4-2205862 TS 38.113: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 38.113 v16.5.0 CR-0046 rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Withdrawn.**

#### 4.1.8 Demodulation and CSI requirements (38.101-4/38.104)

##### 4.1.8.1 UE demodulation requirements

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**Email discussion for [102-e][317] Demod\_Maintenance\_UE, AI 4.1.8.1, 4.1.8.2, 5.1.2.2, 5.1.5.4.1, 5.1.5.4.2, 5.1.1.4 (R4-2205787), 4.2.4.1, 6.2.4 (R4-2205911)– Manasa Raghavan**

**R4-2207147 Email discussion summary for [102-e][317] Demod\_Maintenance\_UE**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207420 (from R4-2207147).**

**R4-2207420 Email discussion summary for [102-e][317] Demod\_Maintenance\_UE**

*Type: other For: Information  
 Source: Moderator (Apple)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Decision** | **Comments** |
| **Rel-15 NR** | | |  |  |
| R4-2205100 | Ericsson | draft CR: Correction of TBS for CQI reporting tests | Endorsed |  |
| R4-2207255 | Huawei,HiSilicon | CR:Updates to test setup for  PDSCH and PDCCH  requirements in TS 38.101-4 (Rel-15) | Endorsed |  |
| R4-2207256 | Huawei,HiSilicon | CR:Updates to test setup for CSI requirements in TS 38.101-4 (Rel-16) | Endorsed |  |
| **LTE** | | |  |  |
| R4-2203617 | Rohde & Schwarz | Correction to Cat1bis RMCs | Endorsed |  |
| R4-2207257 | Huawei,HiSilicon | CR: Updates to NPDSCH repetition number for LTE NPDSCH requirements with multi-TB interleaved transmission (Rel-16) | Endorsed | Content agreeable. TDoc reserved as discussion paper not draftCR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NR-U** | | |  |  |
| R4-2205957 | Apple | Editorial CR for NR-U demod requiremetns for 2RX | Endorsed |  |
| R4-2205911 | MediaTek inc. | Draft CR to TS38.101-4, Correction the misalignment for subsection 5.2.2.2.15 in Rel-16 and Rel-17 | Merged |  |
| **eMIMO** | | |  |  |
| R4-2205909 | MediaTek inc. | Draft CR to TS38.101-4, Correction to reference channels for PDSCH requirements with single-DCI based FDM Scheme A (Rel-16) | Endorsed |  |
| R4-2205746 | Huawei,HiSilicon | Draft CR on correction to eMIMO FRC (TS38.101-4, Rel-16) | Merged |  |
| **PDSCH CA** | | |  |  |
| R4-2205572 | China Telecom | Draft CR on removing square brakets for CA demodulation test requirements (Rel-16) | Endorsed |  |
| R4-2207258 | Huawei,HiSilicon | Draft CR on correction to test applicability reference for CA performance requirements (TS38.101-4, Rel-16) | Endorsed | Content agreeable. TDoc reserved as discussion paper not draftCR |
| R4-2206118 | Qualcomm Incorporated | Draft CR on PDSCH CA requirements | Merged |  |
| **HST-DPS** | | |  |  |
| R4-2205742 | Huawei,HiSilicon | Draft CR on update on HST DPS channel model (38.101-4, Rel16) | Merged |  |
| R4-2207259 | Qualcomm Incorporated | Draft CR on corrections for HST DPS channel model | Endorsed |  |
| **UE PS** | | |  |  |
| R4-2207260 | Huawei,HiSilicon | Draft CR on updating to power saving requirements (TS38.101-4, Rel-16) | Endorsed | Content agreeable. TDoc reserved as discussion paper not draftCR |

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**Correction on test set-up for PDSCH and PDCCH**

**R4-2205779 CR:Updates to test setup for PDSCH and PDCCH requirements in TS 38.101-4 (Rel-15)**

*Type: discussion For: Endorsement  
 38.101-4 v15.12.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207255 (from R4-2205779).**

**R4-2207255 CR:Updates to test setup for PDSCH and PDCCH requirements in TS 38.101-4 (Rel-15)**

*Type: discussion For: Endorsement  
 38.101-4 v15.12.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205780 CR:Updates to test setup for PDSCH and PDCCH requirements in TS 38.101-4 (Rel-16)**

*Type: discussion For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205781 CR:Updates to test setup for PDSCH and PDCCH requirements in TS 38.101-4 (Rel-17)**

*Type: discussion For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

##### 4.1.8.2 CSI requirements

**Correction on TBS for CQI**

**R4-2205100 draft CR: Correction of TBS for CQI reporting tests**

*Type: draftCR For: Endorsement  
 38.101-4 v15.12.0 CR- rev Cat: F (Rel-15)  
  
 Source: Ericsson*

**Abstract:**

This draft CR corrects TBS used for CQI reporting test.

**Decision: Endorsed.**

**R4-2205101 draft CR: Correction of TBS for CQI reporting tests**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: A (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

This draft CR corrects TBS used for CQI reporting test.

**Decision: Endorsed.**

**R4-2205102 draft CR: Correction of TBS for CQI reporting tests**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: A (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draft CR corrects TBS used for CQI reporting test.

**Decision: Endorsed.**

**R4-2205782 CR:Updates to test setup for CSI requirements in TS 38.101-4 (Rel-15)**

*Type: discussion For: Endorsement  
 38.101-4 v15.12.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207256 (from R4-2205782).**

**R4-2207256 CR:Updates to test setup for CSI requirements in TS 38.101-4 (Rel-16)**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

*Session chair Note: Please ensure required correct t-doc type as “draft CR’ for t-doc request!!*

**Decision: Endorsed.**

**R4-2205783 CR:Updates to test setup for CSI requirements in TS 38.101-4 (Rel-16)**

*Type: draft CR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Withdrawn.**

**R4-2205784 CR:Updates to test setup for CSI requirements in TS 38.101-4 (Rel-17)**

*Type: draft CR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

##### 4.1.8.3 BS demodulation requirements

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**Email discussion for [102-e][316] Demod\_Maintenance\_BS, AI 4.1.8.3, 5.1.1.4 (R4-2205787)– Aijun Cao**

**R4-2207148 Email discussion summary for [102-e][316] Demod\_Maintenance\_BS**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207421 (from R4-2207148).**

**R4-2207421 Email discussion summary for [102-e][316] Demod\_Maintenance\_BS**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| R4-2207261 | Draft CR on correction to multi-slot PUCCH performance requirements (TS38.141-1, Rel-15) | Huawei,HiSilicon | Endorsed | 0.01 -> 1% |
| R4-2205737 | Draft CR on correction to manufactor declaration reference for PRACH formats (TS38.141-2, Rel-15) | Huawei,HiSilicon | Endorsed |  |
| R4-2205787 | CR: Updates to interlace index for interlaced PF0 and PF1 requirements in TS 38.104 (Rel-16) | Huawei,HiSilicon | Endorsed |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
|  |  |  |  |  |

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**Correction on PUCCH**

**R4-2205734 Draft CR on correction to multi-slot PUCCH performance requirements (TS38.141-1, Rel-15)**

*Type: discussion For: Discussion  
 38.141-1 v15.11.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207261 (from R4-2205734).**

**R4-2207261 Draft CR on correction to multi-slot PUCCH performance requirements (TS38.141-1, Rel-15)**

*Type: discussion For: Discussion  
 38.141-1 v15.11.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205735 Draft CR on correction to multi-slot PUCCH performance requirements (TS38.141-1, Rel-16)**

*Type: discussion For: Discussion  
 38.141-1 v16.10.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205736 Draft CR on correction to multi-slot PUCCH performance requirements (TS38.141-1, Rel-17)**

*Type: discussion For: Discussion  
 38.141-1 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**Correction on PRACH**

**R4-2205737 Draft CR on correction to manufactor declaration reference for PRACH formats (TS38.141-2, Rel-15)**

*Type: draft CR For: Discussion  
 38.141-2 v15.12.0 CR- rev Cat: (Rel-15)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205738 Draft CR on correction to manufactor declaration reference for PRACH formats (TS38.141-2, Rel-16)**

*Type: draft CR For: Discussion  
 38.141-2 v15.12.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205739 Draft CR on correction to manufactor declaration reference for PRACH formats (TS38.141-2, Rel-17)**

*Type: draft CR For: Discussion  
 38.141-2 v15.12.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

#### 4.1.10 Testability (38.810)

### 4.2 LTE WIs (up to Rel-15)

#### 4.2.2 BS RF requirements

**Topic #2: BS RF maintenance for LTE Rel-15 (Refer to Email discussion for [102-e][301] BSRF\_Maintenance)**

**R4-2204437 Draft CR to 36.104: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 36.104 v15.14.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Revised to R4-2207313 (from R4-2204437).**

**R4-2207313 Draft CR to 36.104: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 36.104 v15.14.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204438 Draft CR to 36.104: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 36.104 v16.12.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204439 Draft CR to 36.104: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 36.104 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204440 Draft CR to 36.141: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 36.141 v15.15.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Revised to R4-2207312 (from R4-2204440).**

**R4-2207312 Draft CR to 36.141: BS OBUE requirements clarification, rel-15**

*Type: draftCR For: Endorsement  
 36.141 v15.15.0 CR- rev Cat: F (Rel-15)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204441 Draft CR to 36.141: BS OBUE requirements clarification, rel-16**

*Type: draftCR For: Endorsement  
 36.141 v16.12.0 CR- rev Cat: A (Rel-16)  
  
 Source: NEC*

**Decision: Endorsed.**

**R4-2204442 Draft CR to 36.141: BS OBUE requirements clarification, rel-17**

*Type: draftCR For: Endorsement  
 36.141 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: NEC*

**Decision: Endorsed.**

#### 4.2.4 Demodulation performance requirements

##### 4.2.4.1 UE demodulation and CSI requirements

**Refer to Email discussion for [102-e][317] Demod\_Maintenance\_UE**

**Correction on Cat1bis RMCs**

**R4-2203617 Correction to Cat1bis RMCs**

*Type: draftCR For: Endorsement  
 36.101 v14.21.0 CR- rev Cat: F (Rel-14)  
  
 Source: Rohde & Schwarz*

**Decision: Endorsed.**

**R4-2203618 Correction to Cat1bis RMCs**

*Type: draftCR For: Endorsement  
 36.101 v15.17.0 CR- rev Cat: A (Rel-15)  
  
 Source: Rohde & Schwarz*

**Decision: Endorsed.**

**R4-2203619 Correction to Cat1bis RMCs**

*Type: draftCR For: Endorsement  
 36.101 v16.12.0 CR- rev Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Decision: Endorsed.**

**R4-2203620 Correction to Cat1bis RMCs**

*Type: draftCR For: Endorsement  
 36.101 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Rohde & Schwarz*

**Decision: Endorsed.**

**Correction on NB-IoT**

**R4-2205785 CR: Updates to NPDSCH repetition number for LTE NPDSCH requirements with multi-TB interleaved transmission (Rel-16)**

*Type: discussion For: Endorsement  
 36.101 v16.12.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207257 (from R4-2205785).**

**R4-2207257 draftCR: Updates to NPDSCH repetition number for LTE NPDSCH requirements with multi-TB interleaved transmission (Rel-16)**

*Type: draft CR For: Endorsement  
 36.101 v16.12.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205786 draftCR: Updates to NPDSCH repetition number for LTE NPDSCH requirements with multi-TB interleaved transmission (Rel-17)**

*Type: draft CR For: Endorsement  
 36.101 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

##### 4.2.4.2 BS demodulation requirements

## 5 Rel-16 maintenance for LTE and NR

### 5.1 NR WIs and TEI

#### 5.1.1 NR-based access to unlicensed spectrum

##### 5.1.1.4 Others

**Topic #3: BS RF maintenance for NR-U Rel-16 (Refer to Email discussion for [102-e][301] BSRF\_Maintenance)**

**R4-2203643 Draft CR to TS 37.105 on correction of OTA blocking requirement for co-location with MR BS in NR band n96**

*Type: draftCR For: Endorsement  
 37.105 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Specify OTA blocking requirement for co-location with MR BS in NR band n96 in table 10.6.4.2-1.

**Decision: Endorsed.**

**R4-2203644 Draft CR to TS 37.105 on correction of OTA blocking requirement for co-location with MR BS in NR band n96**

*Type: draftCR For: Endorsement  
 37.105 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Specify OTA blocking requirement for co-location with MR BS in NR band n96 in table 10.6.4.2-1.

**Decision: Endorsed.**

**R4-2205196 Draft CR to 38.104 with addition of absolute values to NR-U masks and clarifications for NR-U bands**

*Type: draftCR For: Endorsement  
 38.104 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205197 Draft CR to 38.104 with addition of absolute values to NR-U masks and clarifications for NR-U bands**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205198 Draft CR to 38.141-1 with addition of absolute values to NR-U masks and clarifications for NR-U bands**

*Type: draftCR For: Endorsement  
 38.141-1 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205199 Draft CR to 38.141-1 with addition of absolute values to NR-U masks and clarifications for NR-U bands**

*Type: draftCR For: Endorsement  
 38.141-1 v17.4.0 CR- rev Cat: A (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205200 Draft CR to 38.141-2 with clarifications of BS type 1-O requirements for NR-U bands**

*Type: draftCR For: Endorsement  
 38.141-2 v16.10.0 CR- rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205201 Draft CR to 38.141-2 with clarifications of BS type 1-O requirements for NR-U bands**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**Email discussion for [102-e][316] Demod\_Maintenance\_BS**

**R4-2205787 CR: Updates to interlace index for interlaced PF0 and PF1 requirements in TS 38.104 (Rel-16)**

*Type: draft CR For: Endorsement  
 38.104 v16.10.0 CR- rev Cat:F (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2207454 CR: Updates to interlace index for interlaced PF0 and PF1 requirements in TS 38.104 (Rel-17)**

*Type: draft CR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat:A (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**Refer to Email discussion for [102-e][317] Demod\_Maintenance\_UE**

**R4-2205957 Editorial CR for NR-U demod requiremetns for 2RX**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: D (Rel-17)  
  
 Source: Apple*

**Decision: Endorsed.**

#### 5.1.2 Enhancements on MIMO for NR

##### 5.1.2.2 Demodulation performance requirements

**Refer to Email discussion for [102-e][317] Demod\_Maintenance\_UE**

**Correcrion on RMC for eMIMO PDSCH**

**R4-2205909 Draft CR to TS38.101-4, Correction to reference channels for PDSCH requirements with single-DCI based FDM Scheme A (Rel-16)**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: MediaTek inc.*

**Decision: Endorsed.**

**R4-2205910 Draft CR to TS38.101-4, Correction to reference channels for PDSCH requirements with single-DCI based FDM Scheme A (Rel-17)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: A (Rel-17)  
  
 Source: MediaTek inc.*

**Decision: Endorsed.**

**R4-2205746 Draft CR on correction to eMIMO FRC (TS38.101-4, Rel-16)**

*Type: discussion For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Merged (with R4-220xxxx).**

**R4-2205747 Draft CR on correction to eMIMO FRC (TS38.101-4, Rel-17)**

*Type: discussion For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Withdrawn.**

#### 5.1.5 Other NR WIs and Rel-16 NR TEI

##### 5.1.5.1 BS RF requirements

**Refer to Email discussion for [102-e][301] BSRF\_Maintenance**

**R4-2203645 Draft CR to TR 38.809 on clarification and correction of conformance testing aspects**

*Type: draftCR For: Endorsement  
 38.809 v16.5.0 CR- rev Cat: F (Rel-16)  
  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

**Abstract:**

1. Merge the texts about test models in clause 4.7 into table 13.1-1.

2. Correct the identified typos in table 13.1-1.

**Decision: Endorsed.**

**R4-2203933 Draft CR for TS 38.174: Update the co-existence and co-location tables to include missing bands**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2203934 Draft CR for TS 38.176-1: Update the co-existence and co-location tables to include missing bands**

*Type: draftCR For: Endorsement  
 38.176-1 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2203935 Draft CR for TS 38.176-2: Update the co-existence and co-location tables to include missing bands**

*Type: draftCR For: Endorsement  
 38.176-2 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Revised to R4-2207311 (from R4-2203935).**

**R4-2207311 Draft CR for TS 38.176-2: Update the co-existence and co-location tables to include missing bands**

*Type: draftCR For: Endorsement  
 38.176-2 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: CATT*

**Decision: Endorsed.**

**R4-2204577 Draft CR for clean-up to 38.176-1**

*Type: draftCR For: Endorsement  
 38.176-1 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2204578 Draft CR for clean-up to 38.176-2**

*Type: draftCR For: Endorsement  
 38.176-2 v16.2.0 CR- rev Cat: F (Rel-16)  
  
 Source: Samsung*

**Decision: Endorsed.**

**Refer to Email discussion for [102-e][303] NR\_EMC**

**R4-2205852 TS 38.175: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 38.175 v16.3.0 CR-0019 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Revised to R4-2207182 (from R4-2205852).**

**R4-2207182 TS 38.175: Corrections in clause 1 Scope and clause 9 Immunity**

*Type: CR For: Agreement  
 38.175 v16.3.0 CR-0019 rev Cat: F (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

Corrections to EMC specifications already approved for the NR Repeater specifications

**Decision: Postponed.**

##### 5.1.5.4 Demodulation and CSI requirements

###### 5.1.5.4.1 UE demodulation requirements

**Refer to Email discussion for [102-e][317] Demod\_Maintenance\_UE**

**Correction on PDSCH CA**

**R4-2205492 Draft CR on removing square brakets for CA demodulation test requirements (Rel-16)**

*Type: discussion For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: China Telecom*

**Decision:** The document was **withdrawn**.

**R4-2205493 Draft CR on removing square brakets for CA demodulation test requirements (Rel-17)**

*Type: discussion For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: China Telecom*

**Decision:** The document was **withdrawn**.

**R4-2205572 Draft CR on removing square brakets for CA demodulation test requirements (Rel-16)**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: China Telecom*

**Decision: Endorsed.**

**R4-2205573 Draft CR on removing square brakets for CA demodulation test requirements (Rel-17)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: A (Rel-17)  
  
 Source: China Telecom*

**Decision: Endorsed.**

**R4-2205740 Draft CR on correction to test applicability reference for CA performance requirements (TS38.101-4, Rel-16)**

*Type: discussion For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207258 (from R4-2205785).**

**R4-2207258 Draft CR on correction to test applicability reference for CA performance requirements (TS38.101-4, Rel-16)**

*Type: draft CR For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205741 Draft CR on correction to test applicability reference for CA performance requirements (TS38.101-4, Rel-17)**

*Type: draft CR For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2206118 Draft CR on PDSCH CA requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Merged (with R4-220xxxx).**

**R4-2206122 Draft CR on PDSCH CA requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Withdrawn.**

**Correction on HST DPS**

**R4-2206124 Draft CR on corrections for HST DPS channel model**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207259 (from R4-2206124).**

**R4-2207259 Draft CR on corrections for HST DPS channel model**

*Type: draftCR For: Endorsement  
 38.101-4 v16.7.0 CR- rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

**R4-2206128 Draft CR on corrections for HST DPS channel model**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

**R4-2205742 Draft CR on update on HST DPS channel model (38.101-4, Rel16)**

*Type: discussion For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Merged (with R4-220xxxx).**

**R4-2205743 Draft CR on update on HST DPS channel model (38.101-4, Rel17)**

*Type: discussion For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Withdrawn.**

**Correction on Power saving**

**R4-2205744 Draft CR on updating to power saving requirements (TS38.101-4, Rel-16)**

*Type: discussion For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207260 (from R4-2205744).**

**R4-2207260 Draft CR on updating to power saving requirements (TS38.101-4, Rel-16)**

*Type: draft CR For: Discussion  
 38.101-4 v16.7.0 CR- rev Cat: (Rel-16)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205745 Draft CR on updating to power saving requirements (TS38.101-4, Rel-17)**

*Type: discussion For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

###### 5.1.5.4.2 CSI requirements

###### 5.1.5.4.3 BS demodulation requirements

##### 5.1.5.5 NR MIMO OTA test methods (38.827)

**R4-2204946 Draft CR to TR38.827:DL power for FR1 and FR2 test procedure**

*Type: draftCR For: Endorsement  
 38.827 v16.5.0 CR- rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Revised to R4-2207305 (from R4-2204946).**

**R4-2207305 Draft CR to TR38.827:DL power for FR1 and FR2 test procedure**

*Type: draftCR For: Endorsement  
 38.827 v16.5.0 CR- rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Endorsed.**

**R4-2204947 Draft CR to TR38.827:power validation procedure correction**

*Type: draftCR For: Endorsement  
 38.827 v16.5.0 CR- rev Cat: F (Rel-16)  
  
 Source: vivo*

**Decision: Endorsed.**

### 5.2 LTE WIs and TEI

#### 5.2.1 BS RF requirements

#### 5.2.4 Demodulation and CSI requirements

## 6 Rel-17 maintenance for LTE and NR

### 6.1 Introduction of FR2 FWA UE with maximum TRP of 23dBm for band n259

#### 6.1.3 Demodulation

### 6.2 Other WIs and Rel-17 TEI

#### 6.2.1 BS RF requirements

**Topic #5 BS RF maintenance for NR/LTE Rel-17 (Refer to Email discussion for [102-e][301] BSRF\_Maintenance)**

**R4-2203583 CR to TR 38.921: Update of information about interference management in subclause 6.1.4, 6.1.5, 8.1.2 and 9.2**

*Type: CR For: Agreement  
 38.921 v17.0.0 CR-0002 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR will add some new essential information currently missing in the TR and correct some editorial errors.

**Decision: Revised to R4-2207310 (from R4-2203583).**

**R4-2207310 CR to TR 38.921: Update of information about interference management in subclause 6.1.4, 6.1.5, 8.1.2 and 9.2**

*Type: CR For: Agreement  
 38.921 v17.0.0 CR-0002 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR will add some new essential information currently missing in the TR and correct some editorial errors.

**Decision: Endorsed.**

**R4-2204562 Updating fOOB and fOBUE for n41 and n90 1-C BS**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204563 CR to TS 38.104 - fOOB and fOBUE for band n41 and n90 for 1-C BS**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0366 rev Cat: F (Rel-17)  
  
 Source: CMCC*

**Decision: Not pursued.**

**R4-2205487 Draft maintenance CR to TS38.104**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

[WI code] This draftCR should be TEI17 and not TEI in merged BIG CR

**Decision: Endorsed.**

**R4-2205488 Draft maintenance CR to TS36.141**

*Type: draftCR For: Endorsement  
 36.141 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

[WI code] This draftCR should be TEI17 and not TEI in merged BIG CR

**Decision: Revised to R4-2207309 (from R4-2205488).**

**R4-2207309 Draft maintenance CR to TS36.141**

*Type: draftCR For: Endorsement  
 36.141 v17.4.0 CR- rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

[WI code] This draftCR should be TEI17 and not TEI in merged BIG CR

**Decision: Endorsed.**

#### 6.2.4 Demodulation and CSI requirements

**Refer to Email discussion for [102-e][317] Demod\_Maintenance\_UE**

**Correction on NR-U**

**R4-2205911 Draft CR to TS38.101-4, Correction the misalignment for subsection 5.2.2.2.15 in Rel-16 and Rel-17**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: F (Rel-17)  
  
 Source: MediaTek inc.*

**Decision: Merged.**

## 7 LS response to ITU

### 7.1 Generic unwanted emission (IMT-2020)

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**Email discussion for [102-e][315] LS\_Response\_ITU-R, AI 7– Johan Sköld**

**R4-2207149 Email discussion summary for [102-e][315] LS\_Response\_ITU-R**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207422 (from R4-2207149).**

**R4-2207422 Email discussion summary for [102-e][315] LS\_Response\_ITU-R**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207262 | WF on LS response to ITU-R on Generic unwanted emission (IMT-2020 | Ericsson | Approved |  |

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**R4-2207262 WF on LS response to ITU-R on Generic unwanted emission (IMT-2020**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2203621 On the LS response to ITU-R on Generic unwanted emission (IMT-2020)**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

The following is proposed:

Proposal 1: RAN4 (and RAN5) will work on the response until RAN4#104 in August and submit the result to TSG RAN#97, targeting an input to WP 5D#42 in October.

Proposal 2: The response should only cover 5G NR aspects (38-series),

**Decision: Noted.**

**R4-2203622 Progress report from ITU-R WP5D (7-23 February) on unwanted emissions**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

Summary of the progress from ITU-R WP5D#40 on the unwanted emissions recommendations for IMT-Advanced and IMT-2020. Will be submitted as a late contribution after WP5D, i.e. after 23 February.

**Decision: Noted.**

### 7.2 Test methods for OTA total radiated power

## 9 Rel-17 spectrum related WIs for NR

### 9.4 Introduction of 900 MHz spectrum to 5G NR applicable for Rail Mobile Radio

#### 9.4.3 BS RF requirements

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**Email discussion for [102-e][314] RAIL\_900\_1900MHz\_BSRF, AI 9.4.3, 9.5.3– Michal Szydelko**

**R4-2207150 Email discussion summary for [102-e][314] RAIL\_900\_1900MHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207423 (from R4-2207150).**

**R4-2207423 Email discussion summary for [102-e][314] RAIL\_900\_1900MHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |
| --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** |
| R4-2207263 | CR to TS 38.104 - Tx requirements: RMR 900MHz and 1900MHz bands introduction | Ericsson | Endorsed |
| R4-2207264 | CR to TS 38.141-2: RMR 900MHz and 1900MHz bands introduction | Ericsson | Endorsed |
| R4-2207265 | CR to TS 36.104: RMR 900MHz and 1900MHz bands  introduction | Ericsson | Endorsed |
| R4-2207266 | CR to TS 36.141: RMR 900MHz and 1900MHz bands  introduction | Ericsson | Endorsed |
| R4-22072767 | TP BS RF conducted requirements for n100 | Union Inter. Chemins de Fer | Approved |
| R4-2207268 | CR to 37.104 on introduction of n100 and n101 co-existence requirements | Nokia, Nokia Shanghai Bell | Endorsed |
| R4-2207269 | CR to 37.141 on introduction of n100 and n101 co-existence requirements | Nokia, Nokia Shanghai Bell | Endorsed |
| R4-2207270 | CR to 38.104 on introduction of n100 and n101 (system parameters) | Nokia, Nokia Shanghai Bell | Endorsed |
| R4-2207271 | CR to 38.141-1 on introduction of n100 and n101 requirements | Nokia, Nokia Shanghai Bell | Endorsed |
| R4-2207272 | TP BS RF conducted requirements for n101 | Union Inter. Chemins de Fer | Approved |
| R4-2207273 | LS to ETSI TC RT on the interferer signal definition for the RMR900 BS Rx blocking requirement | Huawei, HiSilicon | Approved |
| R4-2207274 | CR to TS 37.105: RMR implementation | Huawei, HiSilicon | Endorsed |
| R4-2207275 | CR to TS 37.145-1: RMR implementation | Huawei, HiSilicon | Endorsed |
| R4-2207276 | CR to TS 37.145-2: RMR implementation | Huawei, HiSilicon | Endorsed |
| R4-2207277 | CR to TS 38.104: RX requirements | Huawei, HiSilicon | Endorsed |

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**R4-2207273 LS to ETSI TC RT on the interferer signal definition for the RMR900 BS Rx blocking requirement**

*Type: LS out For: Approval*

*To: ETSI TC RT; Cc: RAN  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207274 CR to TS 37.105: RMR implementation**

*Type: CR For: Agreement  
 37.105 v17.4.0 CR-? rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2207275 CR to TS 37.145-1: RMR implementation**

*Type: CR For: Agreement  
 37.145-1 v17.4.0 CR-? rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2207276 CR to TS 37.145-2: RMR implementation**

*Type: CR For: Agreement  
 37.145-2 v17.4.0 CR-? rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2207277 CR to TS 38.104: RX requirements**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-? rev Cat: B (Rel-17)  
  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2205064 CR to TS 38.104 - Tx requirements: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0367 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 38.104 - Tx requirements: RMR n100 and n101 bands introduction

**Decision: Revised to R4-2207263 (from R4-2205064).**

**R4-2207263 CR to TS 38.104 - Tx requirements: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0367 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 38.104 - Tx requirements: RMR n100 and n101 bands introduction

**Decision: Endorsed.**

**R4-2205065 CR to TS 38.141-2: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 38.141-2 v17.4.0 CR-0383 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 38.141-2: RMR n100 and n101 bands introduction

**Decision: Revised to R4-2207264 (from R4-2205065).**

**R4-2207264 CR to TS 38.141-2: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 38.141-2 v17.4.0 CR-0383 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 38.141-2: RMR n100 and n101 bands introduction

**Decision: Endorsed.**

**R4-2205066 CR to TS 36.104: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 36.104 v17.4.0 CR-4951 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 36.104: RMR n100 and n101 bands introduction

**Decision: Revised to R4-2207265 (from R4-2205066).**

**R4-2207265 CR to TS 36.104: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 36.104 v17.4.0 CR-4951 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 36.104: RMR n100 and n101 bands introduction

**Decision: Endorsed.**

**R4-2205067 CR to TS 36.141: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 36.141 v17.4.0 CR-1326 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 36.141: RMR n100 and n101 bands introduction

**Decision: Revised to R4-2207266 (from R4-2205067).**

**R4-2207266 CR to TS 36.141: RMR 900MHz and 1900MHz bands introduction**

*Type: CR For: Agreement  
 36.141 v17.4.0 CR-1326 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a CR to TS 36.141: RMR n100 and n101 bands introduction

**Decision: Endorsed.**

**R4-2205138 TP BS RF conducted requirements for n100**

*Type: pCR For: Approval  
 38.853 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Union Inter. Chemins de Fer*

**Decision: Revised to R4-2207267 (from R4-2205138).**

**R4-2207267 TP BS RF conducted requirements for n100**

*Type: pCR For: Approval  
 38.853 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Union Inter. Chemins de Fer*

**Decision: Approved.**

**R4-2205943 CR to 37.104 on introduction of n100 and n101 co-existence requirements**

*Type: CR For: Agreement  
 37.104 v17.4.0 CR-0957 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207268 (from R4-2205943).**

**R4-2207268 CR to 37.104 on introduction of n100 and n101 co-existence requirements**

*Type: CR For: Agreement  
 37.104 v17.4.0 CR-0957 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205945 CR to 37.141 on introduction of n100 and n101 co-existence requirements**

*Type: CR For: Agreement  
 37.141 v17.4.0 CR-0999 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207269 (from R4-2205945).**

**R4-2207269 CR to 37.141 on introduction of n100 and n101 co-existence requirements**

*Type: CR For: Agreement  
 37.141 v17.4.0 CR-0999 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205948 CR to 38.104 on introduction of n100 and n101 (system parameters)**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0371 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207270 (from R4-2205948).**

**R4-2207270 CR to 38.104 on introduction of n100 and n101 (system parameters)**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0371 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205949 CR to 38.141-1 on introduction of n100 and n101 requirements**

*Type: CR For: Agreement  
 38.141-1 v17.4.0 CR-0260 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207271 (from R4-2205949).**

**R4-2207271 CR to 38.141-1 on introduction of n100 and n101 requirements**

*Type: CR For: Agreement  
 38.141-1 v17.4.0 CR-0260 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

**R4-2205994 Interferer signal for the BS RF RX blocking requirement for RMR900**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution, we provide inputs to the discussion on the RX blocking interferer signal characteristic for the RMR 900.

**Decision: Noted.**

**R4-2205995 draft LS to ETSI TC RT on the interferer signal definition for the RMR900 BS Rx blocking requirement**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide draft LS to ETSI TC TR on the interferer signal definition for the RMR900 BS Rx blocking requirement.

**Decision: Noted.**

**R4-2205996 Draft CR to TS 38.104: RX requirements (revision)**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In this draft CR we provide further corrections to the blocking requirement, in order to better aligh with the structure of other blocking requirements in TS 38.104, and to capture further refinements to the blocker signal.

**Decision: Not pursued.**

### 9.5 Introduction of 1900 MHz spectrum to 5G NR applicable for Rail Mobile Radio

#### 9.5.3 BS RF requirements

**Refer to Email discussion for [102-e][314] RAIL\_900\_1900MHz\_BSRF**

**R4-2205139 TP BS RF conducted requirements for n101**

*Type: pCR For: Approval  
 38.852 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Union Inter. Chemins de Fer*

**Decision: Revised to R4-2207272 (from R4-2205139).**

**R4-2207272 TP BS RF conducted requirements for n101**

*Type: pCR For: Approval  
 38.852 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Union Inter. Chemins de Fer*

**Decision: Approved.**

## 10 Rel-17 non-spectrum related work items for NR

### 10.1 Multiple Input Multiple Output (MIMO) Over-the-Air (OTA) requirements for NR UEs

#### 10.1.1 General

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**Email discussion for [102-e][334] NR\_MIMO\_OTA, AI 5.1.1.5, 10.1– Xuan Yi**

**R4-2207151 Email discussion summary for [102-e][334] NR\_MIMO\_OTA**

*Type: other For: Information  
 Source: Moderator (CAICT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207424 (from R4-2207151).**

**R4-2207424 Email discussion summary for [102-e][334] NR\_MIMO\_OTA**

*Type: other For: Information  
 Source: Moderator (CAICT)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation** | **Comments** |
| R4-2204500 | Summary results for FR2 MIMO OTA | Qualcomm Incorporated | Noted | discussion |
| R4-2207301 | On preliminary MU assessment for FR2 MIMO OTA | Qualcomm Incorporated | Noted | discussion |
| R4-2207302 | Framework for FR1 MIMO OTA performance test campaign | CAICT, vivo | Approved | discussion |
| R4-2207303 | Views on PDP reference and pass/fail limits for FR1 MIMO OTA channel model validation | CAICT, SAICT | Noted | discussion |
| R4-2207304 | On FR1 Channel Model Validation | Keysight Technologies UK Ltd | Noted | discussion |
| R4-2204945 | 3GPP TS 38.151 v0.8.0 | vivo | Email approval | draft TS |
| R4-2207305 | Draft CR to TR38.827:DL power for FR1 and FR2 test procedure | vivo | Endorsed | draftCR |
| R4-2204947 | Draft CR to TR38.827:power validation procedure correction | vivo | Endorsed | draftCR |
| R4-2204572 | TP to TS 38.151 on FR1 MIMO OTA test parameter | Samsung | Approved | pCR |
| R4-2207306 | TP to TS38.151 on FR1 MPAC MU budget | vivo | Approved | pCR |
| R4-2207307 | TP to TS38.151 on channel model validation limits | vivo, CAICT, Spirent | Approved | pCR |
| R4-2207308 | TP to TS38.151 on FR1 Temporal Correlation Validation – Time domain technique | MVG Industries | Approved | pCR |
| R4-2207300 | WF on NR MIMO OTA | vivo, CAICT | Approved |  |

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**R4-2207300 WF on NR MIMO OTA**

*Type: other For: Approval  
 Source: vivo, CAICT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207455 3GPP NR FR1 MIMO OTA Lab Alignment Activity Template**

*Type: other For: Approval  
 Source: CAICT*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2203576 Our Status (SGS TW) for the 3GPP RAN4 5G FR1 SA MIMO OTA Lab Alignment Activity**

*Type: discussion For: Discussion  
 Source: SGS Wireless*

**Decision: Noted.**

**R4-2204945 3GPP TS 38.151 v0.8.0**

*Type: draft TS For: Approval  
 38.151 v0.8.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Abstract:**

[draft TS] TS 38.151

**Decision: Email approval**

**R4-2204951 Further views on framework for FR1 MIMO OTA lab alignment activity**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

#### 10.1.2 Performance requirements

##### 10.1.2.1 Performance Requirements for FR1

**R4-2204089 On pass or fail criteria for MIMO OTA lab alignment**

*Type: discussion For: (not specified)  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Noted.**

**R4-2204571 Discussion on mechanical mode of FR1 MIMO OTA performance**

*Type: discussion For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2204949 Further views on Pass/Fail limit for FR1 MIMO OTA lab alignment activity**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2204986 Views on how to avoid the same UE model measured in labs**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2204987 Views on Pass/Fail limit for lab alignment**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2205035 Framework for FR1 MIMO OTA performance test campaign**

*Type: discussion For: Approval  
 Source: CAICT, vivo*

**Decision: Revised to R4-2207302 (from R4-2205035).**

**R4-2207302 Framework for FR1 MIMO OTA performance test campaign**

*Type: discussion For: Approval  
 Source: CAICT, vivo*

**Decision: Approved.**

##### 10.1.2.2 Performance Requirements for FR2

**R4-2204499 On FR2 MIMO OTA requirements**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2204500 Summary results for FR2 MIMO OTA**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2205002 Discussion FR2 MIMO OTA performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.1.2.3 MU assessment for FR1 and FR2

**R4-2204501 On preliminary MU assessment for FR2 MIMO OTA**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207301 (from R4-2204501).**

**R4-2207301 On preliminary MU assessment for FR2 MIMO OTA**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2204948 TP to TS38.151 on FR1 MPAC MU budget**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2207306 (from R4-2204948).**

**R4-2207306 TP to TS38.151 on FR1 MPAC MU budget**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2205003 Discussion on preliminary MU assessment for FR2 MIMO OTA**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

#### 10.1.3 Testing methodologies

##### 10.1.3.1 Testing parameters for Performance

**R4-2204572 TP to TS 38.151 on FR1 MIMO OTA test parameter**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: Samsung*

**Decision: Approved.**

**R4-2205131 On FR1 lab alignment**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Decision: Noted.**

##### 10.1.3.2 Optimization of test methodologies

##### 10.1.3.3 Channel model validation

**R4-2203696 FR1 MIMO OTA Lab Alignment, Channel Model Validation update**

*Type: discussion For: Discussion  
 Source: Apple, MVG*

**Decision: Noted.**

**R4-2204570 PDP validation results for CDL-C UMa and reference values for Umi**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

**R4-2204950 TP to TS38.151 on channel model validation limits**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo, CAICT, Spirent*

**Decision: Revised to R4-2207307 (from R4-2204950).**

**R4-2207307 TP to TS38.151 on channel model validation limits**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo, CAICT, Spirent*

**Decision: Approved.**

**R4-2204985 PDP pass/fail limit for FR1**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2205036 Views on PDP reference and pass/fail limits for FR1 MIMO OTA channel model validation**

*Type: discussion For: Approval  
 Source: CAICT, SAICT*

**Decision: Revised to R4-2207303 (from R4-2205036).**

**R4-2207303 Views on PDP reference and pass/fail limits for FR1 MIMO OTA channel model validation**

*Type: discussion For: Approval  
 Source: CAICT, SAICT*

**Decision: Noted.**

**R4-2205130 On channel model validation**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2205181 TP to TS38.151 on FR1 Temporal Correlation Validation – Time domain technique**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: MVG Industries*

**Abstract:**

This contribution does provide the text for including in [1] the time domain technique when testing temporal correlation – doppler spectrum

**Decision: Revised to R4-2207308 (from R4-2205181).**

**R4-2207308 TP to TS38.151 on FR1 Temporal Correlation Validation – Time domain technique**

*Type: pCR For: Approval  
 38.151 v0.7.0 CR- rev Cat: (Rel-17)  
  
 Source: MVG Industries*

**Abstract:**

This contribution does provide the text for including in [1] the time domain technique when testing temporal correlation – doppler spectrum

**Decision: Approved.**

**R4-2205236 Channel Emulator BW Impact on PDP validation targets and pass/fail**

*Type: other For: Approval  
 Source: Spirent Communications*

**Abstract:**

Proposal 1. While RAN4 does not set the CE BW, use the PDP pass/fail limits in [3] and [4] Option 1.

Proposal 2. Take into account the CE BW when setting the PDP validation targets.

**Decision: Noted.**

**R4-2205621 On FR1 Channel Model Validation**

*Type: discussion For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Revised to R4-2207304 (from R4-2205621).**

**R4-2207304 On FR1 Channel Model Validation**

*Type: discussion For: Approval  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

### 10.2 Introduction of UE TRP (Total Radiated Power) and TRS (Total Radiated Sensitivity) requirements and test methodologies for FR1 (NR SA and EN-DC)

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**Email discussion for [102-e][335] FR1\_TRP\_TRS\_Part1, AI 10.2.1, 10.2.2.1, 10.2.2.2, 10.2.3, Ruixin Wang**

**R4-2207152 Email discussion summary for [102-e][335] FR1\_TRP\_TRS\_Part1**

*Type: other For: Information  
 Source: Moderator (vivo)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207425 (from R4-2207152).**

**R4-2207425 Email discussion summary for [102-e][335] FR1\_TRP\_TRS\_Part1**

*Type: other For: Information  
 Source: Moderator (vivo)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207315 | TP on environment Annex for TS38.161 | Huawei Tech.(UK) Co.. Ltd | Approved |  |
| R4-2207316 | TP to TS 38.161 on frequency bands | Huawei Tech.(UK) Co.. Ltd | Approved |  |
| R4-2204952 | 3GPP TS 38.161 v0.2.0 | vivo | For email approval |  |
| R4-2204954 | Rapporteur input to TR 38.834 | vivo | Approved |  |
| R4-2207317 | Updated Working procedure for TRP TRS requirement development | vivo | Approved |  |
| R4-2207318 | Workplan for altenative test methods | vivo | Approved |  |
| R4-2207319 | Test lab and device information for lab alignment activity | vivo | Approved |  |
| R4-2204959 | TP to TR 38.834 on Phantom Definition | vivo,CTIA Certification | Approved |  |
| R4-2207320 | TP to TR 38.834 on Environmental requirements | vivo | Approved |  |
| R4-2207321 | Discussion and TP on performance metrics | OPPO | Approved |  |
| R4-2207322 | TP to TS 38.161 on Annex A: Test methodology | OPPO | Approved |  |
| R4-2205174 | TP to 38.161 on general aspects | Apple, vivo | Approved |  |
| R4-2207323 | TP to 38.161 on TRP aspects | Apple, Huawei, HiSilicon, OPPO, vivo | Approved |  |
| R4-2205234 | TP to TR 38.834: addition of RC in test methodology | SRTC, Bluetest | Postponed |  |
| R4-2205491 | TR 38.834 v0.4.0 | OPPO | For email approval |  |
| R4-2207324 | TP to TR 38.834 on Ripple test procedure | ETS-Lindgren Europe | Approved |  |
| R4-2205731 | TP to TR 38.834 on TRP-TRS test procedure | ROHDE & SCHWARZ, vivo | Approved |  |
| R4-2207325 | TP to TR 38.834 on Measurement distance | ROHDE & SCHWARZ, vivo | Approved |  |
| R4-2205826 | TP to TR 38.834 on contents for Annex B | ROHDE & SCHWARZ | Approved |  |
| R4-2207326 | WF on FR1 TRP TRS | vivo | Approved |  |
| R4-2207327 | TRP/TRS Lab Alignment Campaign Template | vivo |  |  |

**R4-2207326 WF on FR1 TRP TRS**

*Type: other For: Approval  
 Source: vivo*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207327 TRP/TRS Lab Alignment Campaign Template**

*Type: other For: Approval  
 Source: vivo*

**Abstract:**

**Discussion:**

**Decision: Approved.**

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**Email discussion for [102-e][336] FR1\_TRP\_TRS\_Part2, AI 10.2.2.3, 10.2.2.4- Qifei Liu**

**R4-2207153 Email discussion summary for [102-e][336] FR1\_TRP\_TRS\_Part2**

*Type: other For: Information  
 Source: Moderator (OPPO)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207426 (from R4-2207153).**

**R4-2207426 Email discussion summary for [102-e][336] FR1\_TRP\_TRS\_Part2**

*Type: other For: Information  
 Source: Moderator (OPPO)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207329 | TP to TR 38.834 on multi-antenna UE | OPPO | Approved |  |
| R4-2207328 | WF on FR1 TRP TRS for UE with multi-antenna and test time reduction | OPPO | Approved |  |

**R4-2207328 WF on FR1 TRP TRS for UE with multi-antenna and test time reduction**

*Type: other For: Information  
 Source: OPPO*

**Abstract:**

**Discussion:**

**Decision: Approved.**

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**R4-2205491 TR 38.834 v0.4.0**

*Type: draft TR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Abstract:**

[draft TR] TR 38.834

**Decision:** Email approval

#### 10.2.1 General and work plan

**R4-2203641 on number of test devices**

*Type: discussion For: (not specified)  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Noted.**

**R4-2204952 3GPP TS 38.161 v0.2.0**

*Type: draft TS For: Approval  
 38.161 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Abstract:**

[draft TS] TS 38.161

**Decision:** Email approval

**R4-2204953 Proposals for concluding the core part work of TRP TRS WI**

*Type: other For: Approval  
 Source: vivo, Apple, CAICT*

**Decision: Noted.**

**R4-2204954 Rapporteur input to TR 38.834**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2204988 Discussion and TP on performance metrics**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Revised to R4-2207321 (from R4-2204988).**

**R4-2207321 Discussion and TP on performance metrics**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Approved.**

**R4-2205174 TP to 38.161 on general aspects**

*Type: pCR For: Approval  
 38.161 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple, vivo*

**Decision: Approved.**

**R4-2205175 TP to 38.161 on TRP aspects**

*Type: pCR For: Approval  
 38.161 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple, Huawei, HiSilicon, OPPO, vivo*

**Decision: Revised to R4-2207323 (from R4-2205175).**

**R4-2207323 TP to 38.161 on TRP aspects**

*Type: pCR For: Approval  
 38.161 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple, Huawei, HiSilicon, OPPO, vivo*

**Decision: Approved.**

**R4-2205826 TP to TR 38.834 on contents for Annex B**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ*

**Abstract:**

This contribution provides the Text Proposals endorsed by RAN5 during RAN5#94-e on general section, MU contribution descriptions and MU tables to be included in Annex B of TR 38.834.

**Decision: Approved.**

#### 10.2.2 Test methodology

**R4-2205234 TP to TR 38.834: addition of RC in test methodology**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: SRTC, Bluetest*

**Abstract:**

In this contribution, we propose the text descriptions of RC based methodology.

**Decision: Postponed.**

**R4-2205237 Discussion on the addition of RC in test methodology**

*Type: discussion For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: SRTC, Bluetest*

**Abstract:**

Discussion on the addition of RC in test methodology.

**Decision: Noted.**

##### 10.2.2.1 SA test methodology

**R4-2203639 TP on environment Annex for TS38.161**

*Type: pCR For: Approval  
 38.161 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Revised to R4-2207315 (from R4-2203639).**

**R4-2207315 TP on environment Annex for TS38.161**

*Type: pCR For: Approval  
 38.161 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Approved.**

**R4-2203640 TP to TS 38.161 on frequency bands**

*Type: other For: Approval  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Revised to R4-2207316 (from R4-2203640).**

**R4-2207316 TP to TS 38.161 on frequency bands**

*Type: other For: Approval  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Approved.**

**R4-2204956 Workplan for altenative test methods**

*Type: Work Plan For: Approval  
 Source: vivo*

**Decision: Revised to R4-2207318 (from R4-2204956).**

**R4-2207318 Workplan for altenative test methods**

*Type: Work Plan For: Approval  
 Source: vivo*

**Decision: Approved.**

**R4-2204959 TP to TR 38.834 on Phantom Definition**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo,CTIA Certification*

**Decision: Approved.**

**R4-2205645 TP to TR 38.834 on Ripple test procedure**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ETS-Lindgren Europe*

**Decision: Revised to R4-2207324 (from R4-2205645).**

**R4-2207324 TP to TR 38.834 on Ripple test procedure**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ETS-Lindgren Europe*

**Decision: Approved.**

**R4-2205731 TP to TR 38.834 on TRP-TRS test procedure**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ, vivo*

**Decision: Approved.**

**R4-2205814 TP to TR 38.834 on Measurement distance**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ, vivo*

**Decision: Revised to R4-2207325 (from R4-2205814).**

**R4-2207325 TP to TR 38.834 on Measurement distance**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: ROHDE & SCHWARZ, vivo*

**Decision: Approved.**

##### 10.2.2.2 EN-DC test methodology

**R4-2203638 On ENDC selection**

*Type: discussion For: (not specified)  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Noted.**

**R4-2203694 Remaining issues with EN-DC configuration for TRP/TRS**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204573 Discussion on ENDC combination and measurement parameters**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2204960 TP to TR 38.834 on Environmental requirements**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Revised to R4-2207320 (from R4-2204960).**

**R4-2207320 TP to TR 38.834 on Environmental requirements**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Approved.**

**R4-2204982 On EN-DC combinations**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

##### 10.2.2.3 UE with multiple antennas test methodology

**R4-2203637 on tests with TAS on**

*Type: discussion For: (not specified)  
 Source: Huawei Tech.(UK) Co.. Ltd*

**Decision: Noted.**

**R4-2203695 On TRP for TxD UEs**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204508 TRP test method for UEs with Tx diversity**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2204981 Downlink Rx signal impact on TAS test method**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2204989 TP to TR 38.834 on multi-antenna UE**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Revised to R4-2207329 (from R4-2204989).**

**R4-2207329 TP to TR 38.834 on multi-antenna UE**

*Type: pCR For: Approval  
 38.834 v0.3.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Approved.**

##### 10.2.2.4 Test time reduction

**R4-2204958 Further discussion on Single Point Offset test method for EN-DC testing time reduction**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2204984 On test time reduction**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

#### 10.2.3 Performance requirements

##### 10.2.3.1 Framework for lab alignment and requirements

**R4-2203693 Remaining issues with the performance framework**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204574 Discussion on FR1 TRP TRS performance requirement derivation**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2204955 Updated Working procedure for TRP TRS requirement development**

*Type: other For: Approval  
 Source: vivo*

**Decision: Revised to R4-2207317 (from R4-2204955).**

**R4-2207317 Updated Working procedure for TRP TRS requirement development**

*Type: other For: Approval  
 Source: vivo*

**Decision: Approved.**

**R4-2204983 On Framework for lab alignment activity**

*Type: discussion For: Approval  
 Source: OPPO*

**Decision: Noted.**

**R4-2205037 On TRP TRS Lab Alignment Campaign**

*Type: discussion For: Approval  
 Source: CAICT, SAICT*

**Decision: Noted.**

**R4-2205132 on On Performance test campaign**

*Type: discussion For: (not specified)  
 Source: Xiaomi*

**Decision: Noted.**

##### 10.2.3.2 SA requirements

**R4-2204957 Test lab and device information for lab alignment activity**

*Type: other For: Approval  
 Source: vivo*

**Decision: Revised to R4-2207319 (from R4-2204957).**

**R4-2207319 Test lab and device information for lab alignment activity**

*Type: other For: Approval  
 Source: vivo*

**Decision: Approved.**

**R4-2204990 TP to TS 38.161 on Annex A: Test methodology**

*Type: pCR For: Approval  
 38.161 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Revised to R4-2207322 (from R4-2204990).**

**R4-2207322 TP to TS 38.161 on Annex A: Test methodology**

*Type: pCR For: Approval  
 38.161 v0.1.0 CR- rev Cat: (Rel-17)  
  
 Source: OPPO*

**Decision: Approved.**

##### 10.2.3.3 EN-DC requirements

### 10.5 NR repeater

#### 10.5.1 General

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**Email discussion for [102-e][304] NR\_Repeater\_General, AI 10.5.1-- Valentin Gheorghiu**

**R4-2207154 Email discussion summary for [102-e][304] NR\_Repeater\_General**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207427 (from R4-2207154).**

**R4-2207427 Email discussion summary for [102-e][304] NR\_Repeater\_General**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

-------------Agreement for Topic #1 co-location requirements-----------

**Issue 1-1: Repeater co-location**

Agreement: Introducing Repeater co-location requirements covering BS-repeater co-location and repeater co-location.

**Issue 1-2: Spurious requirements for co-location**

Agreement: Reuse the co-location spurious requirements defined for gNBs , differentiate requirements based on classes (reuse WA BS)

**Issue 1-3: Co-location blocking requirements**

Agreement:

Co-location blocking levels are based on the class of the transmission side of the repeater.

* + UE side (DL transmission) : use the same class based levels as the BS spec so the repeater BS co-location requirements are sufficient.
  + BS side (UL transmission) :
    - For WA class: use BS co-location requirements
    - For LA class: use the repeater class power limits – 30dB

**Issue 1-4: Co-location requirement declaration**

Agreement: If the BS side is declared to meet co-location requirements, then it should meet TX co-location requirements for the uplink and RX co-location requirements for the downlink.

**Issue 1-5:**

Agreement: If the UE side is declared to meet co-location requirements, then it should meet TX co-location requirements for the downlink and RX co-location requirements for the uplink.

**Issue 1-6: Requirement applicability**

Agreement: NO need to link co-location requirements ~~applicability~~ among backhaul and access links on repeater

**Issue 1-7: Output IMD**

Agreement:

DL output IMD: The unwanted emission with output IMD applied should not exceed corresponding unwanted emission limits of repeater DL.

UL output IMD: The unwanted emission with output IMD applied should not exceed corresponding unwanted emission limits of repeater UL.

-----------------End ----------------------

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207279 | TP for TS 38.106：Clause 4 general | CATT | Approved |  |
| R4-2207280 | TP for TS 38.106：ON/OFF mask | CATT | Approved |  |
| R4-2207281 | TP to TS 38.106 clause 6.8 | ZTE | Approved |  |
| R4-2207282 | TP to TS 38.106 for Sections 1,2, and | Qualcomm | Approved |  |
| R4-2207278 | WF on TDD Repeater Switching | Qualcomm | Approved |  |

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**R4-2207278 WF on TDD Repeater Switching**

*Type: other For: Approval  
 Source: Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205105 TP to TS 38.106 clause 6.8**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207281 (from R4-2205105).**

**R4-2207281 TP to TS 38.106 clause 6.8**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205128 TP to TS 38.106 Sections 1,2, and 3**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm CDMA Technologies*

**Decision: Revised to R4-2207282 (from R4-2205128).**

**R4-2207282 TP to TS 38.106 Sections 1,2, and 3**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm CDMA Technologies*

**Decision: Approved.**

##### 10.5.1.1 System parameters

**R4-2203942 TP for TS 38.106:Clause 4 general**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207279 (from R4-2203942).**

**R4-2207279 TP for TS 38.106:Clause 4 general**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**Topic #1 Co-location requirements**

**R4-2205031 Repeater co-location requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on issues for co-location requirements

**Decision: Noted.**

**R4-2205106 Discussion on co-location requirement for multi-band repeaters**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2206050 System Parameters: Co-location requirements of repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2205969 Repeater co-location issues**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Looks at the open issues for the WF, specifically repeater to repeater co-location and BS to repeater co-location IMD requirements in the UL.

**Decision: Noted.**

**R4-2205969 Repeater co-location issues**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Looks at the open issues for the WF, specifically repeater to repeater co-location and BS to repeater co-location IMD requirements in the UL.

**Decision: Noted.**

**R4-2204555 Discussion on repeater co-located requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

##### 10.5.1.2 Repeater Class/Type

##### 10.5.1.3 TDD repeater switching requirements

**Topic #2 TDD repeater switching requirements**

**R4-2203943 TP for TS 38.106:ON OFF mask**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207280 (from R4-2203943).**

**R4-2207280 TP for TS 38.106:ON OFF mask**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2203944 Discussion on TDD repeater switching requirements**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204556 Discussion on switching related requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205024 Repeaters TDD aspects**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Remaining aspects for TDD switching

**Decision: Noted.**

**R4-2205107 Discussion on TDD repeater switching requirements**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205968 TDD Repeater switching**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discuss the repeater switching open issues and how the requirement is captured in spec.

**Decision: Noted.**

**R4-2206042 TDD repeater switching requirements**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

##### 10.5.1.4 Others

**Topic #3: Others**

**R4-2205108 Discussion on specification drafting: OTA output intermodulation**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

#### 10.5.2 Conductive RF core requirements

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**Email discussion for [102-e][305] NR\_Repeater\_RF\_Part1, AI 10.5.2- Chunxia Guo**

**R4-2207155 Email discussion summary for [102-e][305] NR\_Repeater\_RF\_Part1**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207428 (from R4-2207155).**

**R4-2207428 Email discussion summary for [102-e][305] NR\_Repeater\_RF\_Part1**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207285 | TP to TS 38.106 clause 6.1 and 6.2 | Huawei | Approved |  |
| R4-2207286 | TP to TS 38.106 clause 6.5 Unwanted emissions conducted | Nokia, Nokia Shanghai Bell | Approved |  |
| R4-2207287 | TP to TS 38.106 conducted EVM and input IMD | CMCC | Approved |  |
| R4-2207288 | Draft TP to TS 38.106: Frequency stability and out of band gain requirements | Ericsson | Approved |  |
| R4-2207289 | TP to TS 38.106 clause 6.9 ACRR requirement | ZTE Corporation | Approved |  |
| R4-2207283 | WF on other conducted RF requirements | Ericsson | Approved |  |
| R4-2207284 | WF on OOB gain and ACRR | CMCC | Approved |  |

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**R4-2207283 WF on other conducted RF requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207284 WF on OOB gain and ACRR**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 10.5.2.1 Transmitted power related requirements

**Topic #1: power related conducted requirements**

**R4-2205971 TP to TS 38.106 clause 6.1 and 6.2**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei*

**Abstract:**

TP to TS 38.106 for the conducted output power requirement (allocated section for authoring)

**Decision: Revised to R4-2207285 (from R4-2205971).**

**R4-2207285 TP to TS 38.106 clause 6.1 and 6.2**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei*

**Abstract:**

TP to TS 38.106 for the conducted output power requirement (allocated section for authoring)

**Decision: Approved.**

##### 10.5.2.2 Emission requirements

**Topic #2: Emission related conducted requirements**

**R4-2204557 Discussion on repeater emission related conducted requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205026 Repeater conducted emissions requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Open issues for emissions requirements

**Decision: Noted.**

**R4-2205203 TP to TS 38.106 clause 6.5 Unwanted emissions conducted**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207286 (from R4-2205203).**

**R4-2207286 TP to TS 38.106 clause 6.5 Unwanted emissions conducted**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

##### 10.5.2.3 Others

**Topic #3: Others (NF, inside OBUE, ACRR, OOB gain, and input IMD)**

**R4-2205967 Repeater FR1 noise equivalent requirements**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discuss the FR1 noise equivalent requirements, minimum EVM power and inside passband OBUE

**Decision: Noted.**

**R4-2203947 Discussion on NF requirement related issues**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2206045 EVM, OOB gain and ACRR for FR1 NR Repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2204558 Discussion on other conducted requirements for NR repeater**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205025 Repeater conducted requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Open issues for ACRR, OOB gain requirement

**Decision: Noted.**

**R4-2205464 Further discussions on other requirements of conducted repeater**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205970 Repeater FR1 OOB gain and ACRR**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discuss the OOB gain and ACRR open issues for conducted requirement

**Decision: Noted.**

**R4-2204559 TP to TS 38.106 conducted EVM and input IMD**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Revised to R4-2207287 (from R4-2204559).**

**R4-2207287 TP to TS 38.106 conducted EVM and input IMD**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Approved.**

**R4-2205027 Draft TP to TS 38.106: Frequency stability and out of band gain requirements**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Draft spec text according to work split

**Decision: Revised to R4-2207288 (from R4-2205027).**

**R4-2207288 Draft TP to TS 38.106: Frequency stability and out of band gain requirements**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Draft spec text according to work split

**Decision: Approved.**

**R4-2205465 TP to TS 38.106 clause 6.9 ACRR requirement**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207289 (from R4-2205465).**

**R4-2207289 TP to TS 38.106 clause 6.9 ACRR requirement**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

#### 10.5.3 Radiated RF core requirements

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**Email discussion for [102-e][306] NR\_Repeater\_RF\_Part2，AI 10.5.3- Richard Kybett**

**R4-2207156 Email discussion summary for [102-e][306] NR\_Repeater\_RF\_Part2**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207429 (from R4-2207156).**

**R4-2207429 Email discussion summary for [102-e][306] NR\_Repeater\_RF\_Part2**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207293 | TP to TS 38.106 radiated EVM and input IMD | CMCC | Approved |  |
| R4-2207292 | TP to TS 38.106 clause 7.5 Unwanted emissions radiated | Nokia, Nokia Shanghai Bell | Approved |  |
| R4-2207294 | TP to TS 38.106 clause 9.9 ACRR requirement | ZTE Corporation | Approved |  |
| R4-2207291 | TP to TS 38.106 clause 9.1 and 9.2 | Huawei | Approved |  |
| R4-2207290 | WF on repeater RF requirements | Huawei | Approved |  |

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**R4-2207290 WF on repeater RF requirements**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 10.5.3.1 Transmitted power related requirements

**Topic #1: Tx power**

**R4-2205030 Repeater radiated power requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Open issues for power requirements

**Decision: Noted.**

**R4-2205974 TP to TS 38.106 clause 9.1 and 9.2**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei*

**Abstract:**

TP to TS 38.106 for the radiated output power requirement (allocated section for authoring)

**Decision: Revised to R4-2207291 (from R4-2205974).**

**R4-2207291 TP to TS 38.106 clause 9.1 and 9.2**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei*

**Abstract:**

TP to TS 38.106 for the radiated output power requirement (allocated section for authoring)

**Decision: Approved.**

##### 10.5.3.2 Emission requirements

**Topic #2: Emission**

**R4-2204549 Views on the ACLR requirements for NR repeater for FR2**

*Type: other For: Approval  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2204561 Discussion on repeater emission related radiated requirements**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205029 Repeaters radiated emissions requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Open issues for power requirement

**Decision: Noted.**

**R4-2205204 TP to TS 38.106 clause 7.5 Unwanted emissions radiated**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207292 (from R4-2205204).**

**R4-2207292 TP to TS 38.106 clause 7.5 Unwanted emissions radiated**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

##### 10.5.3.3 Others

**Topic #3: Others (ACRR, OOB gain, EVM, IMD)**

**R4-2203946 Discussion on out of band gain and ACRR requirements for FR2**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2205028 Repeaters radiated requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Propoals for other radiated requirements

**Decision: Noted.**

**R4-2205466 Further discussions on other requirements of radiated repeater**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205972 Repeater FR2 OOB gain and ACRR**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discuss the OOB gain and ACRR open issues for radiated requirement

**Decision: Noted.**

**R4-2205973 Repeater FR2 other RF**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discuss other radiated requirement RF issues, including

**Decision: Noted.**

**R4-2206046 EVM, OOB gain and ACRR for FR2 NR Repeaters**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2204560 TP to TS 38.106 radiated EVM and input IMD**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Revised to R4-2207293 (from R4-2204560).**

**R4-2207293 TP to TS 38.106 radiated EVM and input IMD**

*Type: pCR For: Approval  
 38.106 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Approved.**

**R4-2205467 TP to TS 38.106 clause 9.9 ACRR requirement**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207294 (from R4-2205467).**

**R4-2207294 TP to TS 38.106 clause 9.9 ACRR requirement**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

#### 10.5.4 EMC core requirements

**Refer to Email discussion for [102-e][303] NR\_EMC**

**Topic # 2 Repeater EMC**

**R4-2207187 WF on NR repeater EMC testing**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204358 TP to TS38.114:Definitions, symbols and abbreviations**

*Type: pCR For: Approval  
 38.114 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

In RAN4#101-bis-e meeting, the TS38.114v0.2.0 for NR repeater EMC was approved. However, the definitions, symbols and abbreviations part is still empty. In this contribution, we provide a TP to TS38.114 for the Definitions, symbols and abbreviations issue

**Decision: Approved.**

**R4-2204494 TS38.114V0.3.0 to capture RAN4#102-e agreements**

*Type: draft TS For: Approval  
 38.114 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: ZTE Corporation*

**Abstract:**

[draft TS] TS 38.114

**Decision:** For email approval

**R4-2205451 Discussion on TDD NR repeater**

*Type: other For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution discusses TDD switching and performance assessment for NR repeaters.

**Decision: Noted.**

### 10.6 Introduction of DL 1024QAM for NR FR1

#### 10.6.1 General

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**Email discussion for [102-e][307] NR\_DL1024QAM\_RF, AI 10.6 except AI 10.6.5-Thomas Chapman**

**R4-2207157 Email discussion summary for [102-e][307] NR\_DL1024QAM\_RF**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207430 (from R4-2207157).**

**R4-2207430 Email discussion summary for [102-e][307] NR\_DL1024QAM\_RF**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2203969 | CR for 37.145-1 on BS RF conformance testing for 1024QAM for NR FR | CATT | Agreed |  |
| R4-2203970 | CR for 37.141 on BS RF conformance testing for 1024QAM for NR FR1 (CATT) | CATT | Agreed |  |
| R4-2207189 | CR to TS 38.141-2: Introduction of 1024 QAM in FR1 (Ericsson) | Ericsson | Agreed |  |
| R4-2205195 | CR to TS 37.145-2 with 1024QAM introduction (Nokia) | Nokia | Agreed |  |
| R4-2205463 | CR to TS 38.141-1: Introduction of 1024 QAM in FR1 (ZTE) | ZTE | Agreed |  |

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#### 10.6.2 UE RF requirements maintenance

#### 10.6.3 BS TX RF requirements maintenance

#### 10.6.4 BS RF conformance testing

**R4-2203969 CR for 37.145-1 on BS RF conformance testing for 1024QAM for NR FR1**

*Type: CR For: Agreement  
 37.145-1 v17.4.0 CR-0279 rev Cat: B (Rel-17)  
  
 Source: CATT*

**Decision: Agreed.**

**R4-2205195 CR to TS 37.145-2 with 1024QAM introduction**

*Type: CR For: Agreement  
 37.145-2 v17.4.0 CR-0321 rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

**R4-2203970 CR for 37.141 on BS RF conformance testing for 1024QAM for NR FR1**

*Type: CR For: Agreement  
 37.141 v17.4.0 CR-0997 rev Cat: B (Rel-17)  
  
 Source: CATT*

**Decision: Agreed.**

**R4-2205463 CR to TS 38.141-1: Introduction of 1024 QAM in FR1**

*Type: CR For: Agreement  
 38.141-1 v17.4.0 CR-0258 rev Cat: B (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**R4-2205019 CR to TS 38.141-2: Introduction of 1024 QAM in FR1**

*Type: CR For: Agreement  
 38.141-2 v17.4.0 CR-0381 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Formal CR from endorsed draft CR: R4-2202998

**Decision: Revised to R4-2207189 (from R4-2205019).**

**R4-2207189 CR to TS 38.141-2: Introduction of 1024 QAM in FR1**

*Type: CR For: Agreement  
 38.141-2 v17.4.0 CR-0381 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Formal CR from endorsed draft CR: R4-2202998

**Decision: Agreed.**

#### 10.6.5 Demodulation and CSI requirements

**R4-2204332 Discussion on limitation of the measurement interval for the determination of the averaged EVM for FR2-2, test time improvements and possible impact on measuring uncertainties (minimal)**

*Type: discussion For: Agreement  
 Source: ROHDE & SCHWARZ*

**Abstract:**

Discussion on limitation of the measurement interval for the determination of the averaged EVM for FR2-2, test time improvements and possible impact on measuring uncertainties (minimal)

See original R4-2111749

**Decision:** The document was **withdrawn**.

##### 10.6.5.1 General

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**Email discussion for [102-e][318] NR\_DL1024QAM\_Demod, AI 10.6.5-Jiakai Shi**

**R4-2207158 Email discussion summary for [102-e][318] NR\_DL1024QAM\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207431 (from R4-2207158).**

**R4-2207431 Email discussion summary for [102-e][318] NR\_DL1024QAM\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207254 | Way forward for NR  DL1024QAM demodulation  and CQI reporting  requirements | Ericsson | Approved |  |

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**R4-2207254 Way forward for NR DL1024QAM demodulationand CQI reporting requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205085 Update work plan for UE demodulation requirements for DL 1024QAM for NR FR1**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This work plan includes the CR work split

**Decision: Noted.**

**R4-2206075 PDSCH Impairment results and other requirements for 1024QAM FR1 UE Demod Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 10.6.5.2 PDSCH requirements

**R4-2203760 Discussion on PDSCH demod requirements with 1KQAM**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2205087 UE demodulation requirements for DL 1024QAM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issue of UE demodulation requirements for DL 1024QAM WI.

**Decision: Noted.**

**R4-2205748 Discussion and simulation results on 1024QAM PDSCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205905 Discussion on the PDSCH requirements for 1024QAM**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2206001 Simulation results for 1024QAM PDSCH**

*Type: other For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205086 Summary of PDSCH simulation results for DL 1024QAM in FR1**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This spread sheet summarizes the simulation results of PDSCH demodulation with DL 1024QAM.

**Decision: Noted.**

**R4-2205904 Draft CR to TS38.101-4, PDSCH requirements for 1024QAM in FR1 FDD**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: MediaTek inc.*

**Decision: Noted.**

##### 10.6.5.3 SDR requirements

**R4-2203761 Discussion on SDR requirements with 1KQAM**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2205088 SDR requirements for DL 1024QAM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues on SDR for DL 1024QAM.

**Decision: Noted.**

**R4-2205749 Discussion and simulation results on 1024QAM SDR**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206002 Discussion on SDR requirements for 1024QAM**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 10.6.5.4 CQI requirements

**R4-2205089 CQI reporting requirements for DL 1024QAM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of CQI reporting requirements for DL 1024QAM.

**Decision: Noted.**

**R4-2205750 Discussion and simulation results on 1024QAM CSI**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205906 Discussion on the CQI requirements for 1024QAM**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2205751 Draft CR on FDD CQI reporting cases for 1024QAM and CSI RMC (TS38.101-4)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Postponed.**

### 10.8 Enhancement for NR high speed train scenario in FR1

#### 10.8.3 UE demodulation requirements (38.101-4)

##### 10.8.3.1 General

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**Email discussion for [102-e][319] NR\_HST\_FR1\_Demod, AI 10.8.3-Xiaoran Zhang**

**R4-2207159 Email discussion summary for [102-e][319] NR\_HST\_FR1\_Demod**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207432 (from R4-2207159).**

**R4-2207432 Email discussion summary for [102-e][319] NR\_HST\_FR1\_Demod**

*Type: other For: Information  
 Source: Moderator (CMCC)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**GTW discussion on Feburary 24th**

**Issue 1-1: UE capability for HST-SFN CA**

* + Option 1 (CMCC, Ericsson, ZTE, Qualcomm): Per band combination
  + Option 2 (Intel, Huawei, Apple): per FSPC

Agreement:

* + Per band combination granularity (option 1).

Huawei/Intel: we have concern on above agreement.

**Issue 1-2: Release independents**

* + HST-SFN CA requirements are release independent from Rel-15 (CMCC)
  + For Rel-17 FR1 HST PDSCH SFN CA demodulation requirements
    - * Option 1: Applicable from Rel-17
      * Option 2: Aligned with RRM agreement (Apple)
      * Option 3: Release independent from Rel-15 /16
        + Option 3a: Release independent from Rel-16 (Ericsson, Huawei, Intel, Qualcomm, CMCC, ZTE)

Agreement:

* + From demodulation perspective, release independent from Rel-16.

**Issue 1-3: FDD BW**

* + Option 1 (Apple, Qualcomm): Do not introduce FDD requirements with additional CBW for HST CA unless there is need to support these CBW in HST deployments.
  + Option 2 (CMCC, Huawei, Qualcomm, Intel, Ericsson, China Telecom): For FDD 15KHz SCS, specify PDSCH requirements on single carrier of BW of {35, 45} MHz for HST scenario.

Agreement: Option 2

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207194 | WF on FR1 HST demodulation | CMCC | Approved |  |
| R4-2207195 | LS on release independent of FR1 HST demodulation | CMCC | Approved |  |
| R4-2207190 | Draft CR on HST DPS CA requirements for 4Rx | Apple | Endorsed |  |
| R4-2207191 | Draft CR on PDSCH requirements for HST-SFN CA requirements for 4Rx | CMCC | Endorsed |  |
| R4-2207192 | draftCR to TS 38.101-4: HST-SFN CA requirements for 2Rx | Intel | Endorsed |  |
| R4-2207193 | Draft CR on HST FR1 DPS CA requirements for 2Rx (38.101-4) | Huawei,HiSilicon | Endorsed |  |
| R4-2207233 | draft CR: FRC for CA PDSCH demodulation requirements for HST | Ericsson | Endorsed |  |
| R4-2207234 | Draft CR on Applicability Rules for FR1 HST CA requirements | Qualcomm Incorporated | Endorsed |  |

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**R4-2207194 WF on FR1 HST demodulation**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207195 LS on release independent of FR1 HST demodulation**

*Type: LS out For: Approval*

*To: RAN2  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207196 Big CR to 38.101-4: Introduction of FR1 HST demodulation requirements**

*Type: CR For: Agreement  
 38.101-4 v17.3.0 CR-? rev Cat: B (Rel-17)   
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: For email appproval**

**R4-2205080 Summary for FR1 HST demodulation results**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This spread sheet summarizes the simulation results of FR1 HST demodulation requirements.

**Decision: Noted.**

##### 10.8.3.2 PDSCH requirements for CA scenarios

**R4-2203762 Discussion on PDSCH CA Requirements in HST**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2203763 Draft CR on HST DPS CA requirements for 4Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2207190 (from R4-2203763).**

**R4-2207190 Draft CR on HST DPS CA requirements for 4Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Apple*

**Decision: Endorsed.**

**R4-2204253 Draft CR on PDSCH requirements for HST-SFN CA requirements for 4Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: CMCC*

**Decision: Revised to R4-2207191 (from R4-2204253).**

**R4-2207191 Draft CR on PDSCH requirements for HST-SFN CA requirements for 4Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: CMCC*

**Decision: Endorsed.**

**R4-2204259 Discussion on FR1 HST UE demodulation for CA scenario**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204384 Discussion on HST FR1 CA PDSCH performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204385 draftCR to TS 38.101-4: HST-SFN CA requirements for 2Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2207192 (from R4-2204385).**

**R4-2207192 draftCR to TS 38.101-4: HST-SFN CA requirements for 2Rx**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Endorsed.**

**R4-2204430 Discussion on PDSCH requirements for FR1 HST CA scenarios**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205081 PDSCH demodulation requirements for CA with HST-SFN scenario**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues of the PDSCH demodulation requirements for CA with HST-SFN scenario.

**Decision: Noted.**

**R4-2205082 draft CR: FRC for CA PDSCH demodulation requirements for HST**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draft CR provides FRC used for PDSCH demodulation requirements for HST with CA.

**Decision: Revised to R4-2207233 (from R4-2205082).**

**R4-2207233 draft CR: FRC for CA PDSCH demodulation requirements for HST**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draft CR provides FRC used for PDSCH demodulation requirements for HST with CA.

**Decision: Endorsed.**

**R4-2205752 Discussion on PDSCH CA scenarios for NR UE HST FR1 performance requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205753 Draft CR on HST FR1 DPS CA requirements for 2Rx (38.101-4)**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207193 (from R4-2205753).**

**R4-2207193 Draft CR on HST FR1 DPS CA requirements for 2Rx (38.101-4)**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2206090 Views on FR1 HST PDSCH CA Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2206110 Draft CR on Applicability Rules for FR1 HST CA requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207234 (from R4-2206110).**

**R4-2207234 Draft CR on Applicability Rules for FR1 HST CA requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

### 10.9 NR support for high speed train scenario in FR2

#### 10.9.4 Demodulation requirements

##### 10.9.4.1 General

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**Email discussion for [102-e][320] NR\_HST\_FR2\_Demod\_Part1, AI 10.9.4.1,10.9.4.2-Yunchuan Yang**

**R4-2207160 Email discussion summary for [102-e][320] NR\_HST\_FR2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207433 (from R4-2207160).**

**R4-2207433 Email discussion summary for [102-e][320] NR\_HST\_FR2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**GTW discussion on Feb 25th**

**Issue 1-1-1: Test cases definition and test applicability rule**

       Proposals

o   Option 1 (Intel, Samsung, ZTE, Qualcomm, Ericsson):

  If UE is capable of more than 1 activated TCI state, UE should pass test both case 1 and case 2, otherwise, UE should only pass test of case 2

o   Option 2 (CMCC): Update the test applicability rule

  If UE is capable of more than 1 activated TCI state, UE should pass test both case 1 and case 2, otherwise, UE should only pass test of case 2

  If UE passes case 1 (Uni-directional scenario A with DPS scheme 1b), the performance of Uni-directional scenario B with DPS scheme 1b are also guaranteed.

o   Option 3 (Huawei, ZTE): Agree the following applicability and do not have any impact on the specification.

  If UE passes case 1 (Uni-directional scenario A with DPS scheme 1b), the performance of Uni-directional scenario B with DPS scheme 1b are also guaranteed.

 Agreement:

RAN4 define UE demodulation requirements with transmission schemes with test applicable rule as

o   Case 1: Uni-directional scenario A with DPS scheme 1b

o   Case 2: Bi-directional scenario B with DPS scheme 1a

o   Test applicable rule

  - If UE is capable of more than 1 activated TCI state, UE should pass test both case 1 and case 2, otherwise, UE should only pass test of case 2

It is RAN4 common understanding that if UE passes case 1 (Uni-directional scenario A with DPS scheme 1b), the performance of Uni-directional scenario B with DPS scheme 1b are also guaranteed.

**Issue 1-1-2: CSI-RS/TRS configuration**

* Proposals
  + Option 1(Huawei): Change the TRS configuration for TRS resource set 2 from l0=6/10 to l0 =4/8
  + Option 2(Intel): Consider CSI-RS offset as 5 slots for tracking resources 1,2, 5 and 6, and consider CSI-RS offset as 6 slots for CSI-RS for tracking resource 3,4,7 and 8
* Recommended WF
  + Encourage comments if any.

Agreement: Option 1.

**Issue 1-2-1: Slot for scheduling TCI switching command**

       Proposals

o   Option 1(Samsung, Ericsson, Huawei, Qualcom): slot# 57600n slots (assuming UE speed =350km/h)

o   Option 2 (Huawei, Intel): slot#57600n+56800 slots

 Agreement: Option 1

**Issue 1-3-2: Method to set Tfirst SSB**

*Candidate options:*

       Proposals

Option 1(Qualcomm):

  RAN4 to consider how to set TfirstSSB depending on the two proposed approaches for alignment between TDD Frame and TCI switching timeline as described above and in the picture

o   Option 2(Huawei, Qualcomm): TDD Frame and TCI switching timeline are aligned

  Option 2a (Qualcomm): reducing the duration before the first TCI switch command to [28800 – 30] slots. The rest of the TCI switches will then happen every [28800] slots

o   Option 3(Intel) : TDD fame boundary starts with some offset with respect to the TCI pattern switch

Agreement:

Option 2, furtherv discsuss the details.

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207226 | Draft CR on minimum requirements for PDSCH HST-DPS (38.101-4) | Huawei, HiSilicon, | Endorsed |  |
| R4-2207227 | draft CR for FR2 HST – High speed Train Scenarios (B.3.4) | Qualcomm | Postponed |  |
| R4-2207228 | DraftCR to TS 38.101-4: Applicability rules for HST FR2 PDSCH requirements | Intel | Endorsed |  |
| R4-2207229 | draft CR: FRC for PDSCH demodulation requirement for FR2 HST | Ericsson | Endorsed |  |
| R4-2207230 | WF on UE demodulation requirement for FR2 HST | Samsung | Approved |  |
| R4-2207231 | Simulation assumption for PDSCH requirement | Intel | Approved |  |
| R4-2207232 | Draft big CR for 38.101-4: FR2 HST | Samsung | Email approval |  |

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**R4-2207230 WF on UE demodulation requirement for FR2 HST**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207231 Simulation assumption for PDSCH requirement**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207232 Big draftCR for 38.101-4: FR2 HST**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Email approval**

**R4-2205754 Draft CR on minimum requirements for PDSCH HST-DPS (38.101-4)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207226 (from R4-2205754).**

**R4-2207226 Draft CR on minimum requirements for PDSCH HST-DPS (38.101-4)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2206077 draft CR for FR2 HST - High speed Train Scenarios (B.3.4)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207227 (from R4-2206077).**

**R4-2207227 draft CR for FR2 HST - High speed Train Scenarios (B.3.4)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Postponed.**

##### 10.9.4.2 UE demodulation requirements

**R4-2203541 Simulation results summary for Rel-17 FR2 HST UE demod**

*Type: other For: Information  
 Source: Samsung*

**Decision: Noted.**

**R4-2204255 Discussion on UE demodulation for FR2 HST**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204387 Views on FR2 HST PDSCH performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204388 DraftCR to TS 38.101-4: Applicability rules for HST FR2 PDSCH requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2207228 (from R4-2204388).**

**R4-2207228 DraftCR to TS 38.101-4: Applicability rules for HST FR2 PDSCH requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Endorsed.**

**R4-2205084 draft CR: FRC for PDSCH demodulation requirement for FR2 HST**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draft CR provides FRC used for PDSCH demodulation requirements for FR2 HST

**Decision: Revised to R4-2207229 (from R4-2205084).**

**R4-2207229 draft CR: FRC for PDSCH demodulation requirement for FR2 HST**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draft CR provides FRC used for PDSCH demodulation requirements for FR2 HST

**Decision: Endorsed.**

**R4-2206073 Addressing open issues on FR2 HST UE Demodulation**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

###### 10.9.4.2.1 PDSCH requirements under Uni-directional scenario

**R4-2203543 Discussion and simulation results of PDSCH requirement with Uni-directional scenario for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205083 PDSCH demodulation requirements for HST FR2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the UE demodulation requirements for HST FR2.

**Decision: Noted.**

**R4-2205756 Discussion on UE demodulation requirements for FR2 HST Ui-directional**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 10.9.4.2.2 PDSCH requirements under Bi-directional scenario

**R4-2203544 Discussion and simulation results of PDSCH requirement with Bi-directional scenario for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2204432 PDSCH requirements under Bi-directional scenario**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205757 Discussion on UE demodulation requirements for FR2 HST Bi-directional**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.9.4.3 BS demodulation requirements

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**Email discussion for [102-e][321] NR\_HST\_FR2\_Demod\_Part2, AI 10.9.4.3- Mueller, Axel**

**R4-2207161 Email discussion summary for [102-e][321] NR\_HST\_FR2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207434 (from R4-2207161).**

**R4-2207434 Email discussion summary for [102-e][321] NR\_HST\_FR2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**GTW discussion on Feb 25th**

**Sub-topic 2-2: MCS selection**

Issue 2-2-1: MCS

*Candidate options:*

* Option 1: Only MCS 20.
* Option 2: Only MCS 16.
* Option 3: Use MCS 20 only as a baseline. Change to lower MCS if SNR after requirement derivation is larger than 20Db or if there is a span >2.5dB in the alignment results.
* Option 4: Only MCS 19.

**GTW discussion**

Agreement: MCS 19

**Sub-topic 2-3: Requirement selection**

Issue 2-3-1: Requirement selection

*Candidate options:*

* Option 1: Apply standard requirement selection to (post-FFT) results with outlier selection, as in Rel-15 [R4-1904713] [R4-19004714]. Choose ideal result alignment threshold as [2.5dB], and impairment threshold as [4dB].
* Option 2: Other options not precluded.

Agreement:

Option 1, it’s encouraged that companies can further update their results in future meetings to specify final performance requirements.

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2204389 | DraftCR to TS 38.104: FRC for HST FR2 PUSCH performance requirements | Intel | Postponed |  |
| R4-2204390 | DraftCR to TS 38.104: HST FR2 PUSCH performance requirements | Intel | Postponed |  |
| R4-2204391 | DraftCR to TS 38.141-2: FRC for HST FR2 PUSCH performance requirements | Intel | Postponed |  |
| R4-2205033 | Draft CR on introduction of FR2 HST test procedure for PUSCH | Ericsson | Postponed |  |
| R4-2207236 | Draft CR on PRACH minimum requirements for high speed train (38.104), | Huawei | Endorsed |  |
| R4-2207237 | Draft CR on PRACH test requirement for high speed train (38.141-2) | Huawei | Endorsed |  |
| R4-2207235 | WF on BS demodulation requirement for FR2 HST | Nokia, Nokia Shanghai Bell | Approved |  |

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**R4-2207235 WF on BS demodulation requirement for FR2 HST**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205755 Draft CR on HST FR2 BS applicability rule (38.141-2)**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

Session Chair Note: Move to this AI from AI 10.9.4.1

**Decision: Postponed.**

**R4-2203542 Simulation results summary for Rel-17 FR2 HST BS demod**

*Type: other For: Information  
 Source: Samsung*

**Decision: Noted.**

**R4-2205034 On the OTA test setup CR for 38.141-2**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discusses the need for a CR

**Decision: Noted.**

###### 10.9.4.3.1 PUSCH requirements

**R4-2203545 Discussion and simulation results of PUSCH requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2203971 Discussion on PUSCH demodulation requirements for FR2 HST**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2203972 Simulation results for PUSCH demodulation requirements for FR2 HST**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204389 DraftCR to TS 38.104: FRC for HST FR2 PUSCH performance requirements**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Postponed.**

**R4-2204390 DraftCR to TS 38.104: HST FR2 PUSCH performance requirements**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Postponed.**

**R4-2204391 DraftCR to TS 38.141-2: FRC for HST FR2 PUSCH performance requirements**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Postponed.**

**R4-2204392 HST FR2 PUSCH simulation results**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205023 HST PUSCH requirements**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Remaining issues for PUSCH requirement

**Decision: Noted.**

**R4-2205033 Draft CR on introduction of FR2 HST test procedure for PUSCH**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR text for PUSCH FR2

**Decision: Postponed.**

**R4-2205758 Discussion on PUSCH demodulation requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205965 On HST FR2 PUSCH Demodulation Requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

###### 10.9.4.3.2 PUSCH with UL timing adjustment requirements

**R4-2203546 Simulation results of UL timing adjustment requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2203973 Simulation results for UL timing adjustment demodulation requirements for FR2 HST**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204393 HST FR2 UL TA simulation results**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205759 Simulation results on PUSCH with UL timing adjustment requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205963 HST FR2 PUSCH UL TA Impairment Simulation Results**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

###### 10.9.4.3.3 PRACH requirements

**R4-2203547 Simulation results of PRACH requirement for Rel-17 FR2 HST**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2203974 Simulation results for PRACH demodulation requirements for FR2 HST**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204394 HST FR2 PRACH simulation results**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205760 Simulation results on PRACH demodulation requirements for FR2 HST**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205761 Draft CR on PRACH minimum requirements for high speed train (38.104)**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207236 (from R4-2205761).**

**R4-2207236 Draft CR on PRACH minimum requirements for high speed train (38.104)**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205762 Draft CR on PRACH test requirement for high speed train (38.141-2)**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Revised to R4-2207237 (from R4-2205762).**

**R4-2207237 Draft CR on PRACH test requirement for high speed train (38.141-2)**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205964 HST FR2 PRACH Impairment Simulation Results**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

### 10.12 Further enhancement on NR demodulation performance

#### 10.12.1 General

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**Email discussion for [102-e][322] NR\_perf\_enh2\_Demod\_Part1, AI 10.12.1, 10.12.2.3- Shan Yang**

**R4-2207162 Email discussion summary for [102-e][322] NR\_perf\_enh2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207435 (from R4-2207162).**

**R4-2207435 Email discussion summary for [102-e][322] NR\_perf\_enh2\_Demod\_Part1**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207238 | draft LS on UE capability and network assistant signalling for CRS interference mitigation in scenarios with overlapping spectrum for LTE and NR | China Telecom | Approved |  |
| R4-2207239 | WF on general part and 15kHz NR SCS scenario for CRS-IM receiver | China Telecom | Approved |  |
| R4-2207240 | WF on 30 kHz NR SCS scenario for CRS-IM receiver | CMCC | Approved |  |
| R4-2207241 | Draft TR 38.833 v1.2.0: Further enhancement on NR demodulation performance | China Telecom | Email approval |  |

**R4-2207239 WF on general part and 15kHz NR SCS scenario for CRS-IM receiver**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207240 WF on 30 kHz NR SCS scenario for CRS-IM receiver**

*Type: other For: Approval  
 Source: CMCC*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207241 Draft TR 38.833 v1.2.0: Further enhancement on NR demodulation performance**

*Type: draftTR For: Approval*

*TR 38.833 v1.2.0   
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Email approval**

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**Email discussion for [102-e][323] NR\_perf\_enh2\_Demod\_Part2, AI 10.12.2.1, 10.12.2.2- Belov, Dmitry**

**R4-2207163 Email discussion summary for [102-e][323] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207436 (from R4-2207163).**

**R4-2207436 Email discussion summary for [102-e][323] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**GTW discussion on Feburary 24th**

**Sub-topic 4-1: MMSE-IRC requirements for scenarios with inter-cell interference**

**Issue 4-1-1: UE feature list, capability signalling and release independence**

* Option 1 (China Telecom, Intel, CMCC, Apple, Ericsson, Qualcomm, Docomo, MTK- 8 companies): No need to introduce new UE feature, requirements release independent from Rel-15
* Option 2 (MediaTek, CMCC, Ericsson, Qualcomm): Optional without UE capability signalling for Rel-15/16 UE and mandatory from Rel-17
* Option 3 (Huawei): Single feature, optional with UE capability signalling for both scenario including inter-cell and intra-cell and release independent from Rel-15

Working assumption: Optional without UE capability signalling for Rel-15/16 UE and mandatory from Rel-17

Huawei: We have concern on the work assumption on Rel-15 part.

**Topic #1: MMSE-IRC receiver for inter-cell interference – Demodulation requirements**

**Issue 1-1-1: Network type**

* Option 1 (Huawei, MediaTek, Intel, Apple, Nokia, Qualcomm, Docomo): Consider only synchronous case
* Option 2 (China Telecom, Intel, CMCC, Ericsson): Include asynchronous case
  + Option 2A (China Telecom, Intel, CMCC, Ericsson): With applicability rule
  + Option 2B (China Telecom, Intel, Docomo, CMCC): Without applicability rule

**Agreement:**

**Option 1**

CMCC/China Telecom/Ericsson: We think async scenario also is typical scenario which also better to check UE performance.

Intel/Qualcom/Apple/MTK/Huawei: From UE receiver side, the UE implementation is agnoistic to sync/async.

**Issue 1-2-3: Time offset for synchronized network with 30 kHz SCS**

* Option 1 (Intel, Ericsson): The serving cell is 3 us for interfering cell 1 and -1 us for interfering cell 2 (in case modeled)
* Option 2 (Huawei, Apple, Qualcomm): The serving cell is 1 us for interfering cell 1 and -0.25 us for interfering cell 2 (in case modeled)
* Option 3 (CMCC, Apple, Nokia): Tighten the total time offset to less than CP. For example, the time offset for interfering cell 1 is 1.5 us, and the time offset for interference cell 2 is -0.5 us.

Agreement:

* The time offset for interfering cell 1 is 1.5 us, and the time offset for interference cell 2 is -0.5 us.

**Issue 1-3-1: TRS-IC/IM**

* Option 1 (Huawei, China Telecom, Intel, Apple): Add in the simulation assumptions the clarification that no TRS interference cancellation/mitigation is considered for inter-cell MMSE-IRC requirements definition
* Option 2 (Intel, Apple, Ericsson, Qualcomm): Don’t add such clarification

Agreement:

[How to handle TRS interference for colliding case up to UE impemeantion, from RAN4 performance requirements and simulation perspective, the baseline assumption is without consideration of TRS interference cancellation/mitigation. Note: No performance difference observed for the cases TRS with and without interference for the scenario specifcied in RAN4 for inter-cell MMSE-IRC requirements.]

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207245 | Draft CR on PDSCH demod requirements in ICI-FDD | Apple | Postponed |  |
| R4-2207246 | Draft CR for TS38.101-4 PDSCH TDD demodulation requirements for inter-cell interference MMSE-IRC | CMCC | Postponed |  |
| R4-2207247 | Draft CR for 38.101-4 Interference model for enhanced performance requirements | Nokia, Nokia Shanghai Bell | Postponed |  |
| R4-2205791 | Draft CR for introduction of general applicability section of inter-cell MMSE-IRC receiver in TS 38.101-4 | Huawei, HiSilicon | Postponed | *Taking into account that Issue 4-1-1 is not finally concluded, it is suggested to postpone this Draft CR.* |
| R4-2207248 | draftCR on CSI reporting test case (TDD) | Ericsson | Postponed |  |
| R4-2203768 | TP to TR 38.833: MU-MIMO-Receiver structure | Apple | Approved |  |
| R4-2207249 | TP to TR 38.833: Link level simulation results for Inter-user interference suppression for MU-MIMO | Intel Corporation | Approved |  |
| R4-2205796 | Draft CR for introduction of MU-MIMO Beamforming model in TS 38.101-4 | Huawei, HiSilicon | Postponed | *Based on guidelines for this meeting, only Draft CRs for inter-cell scenario are allowed. Therefore, we can come back to discussion on this Draft CR in the next meeting* |
| R4-2207242 | WF on general and PDSCH demodulation requirements for inter-cell interference MMSE-IRC | Intel Corporation | Approved |  |
| R4-2207243 | WF on CSI requirements for inter-cell interference MMSE-IRC | Ericsson | Approved |  |
| R4-2207244 | WF on MMSE-IRC receiver for intra-cell inter-user interference | Huawei, HiSilicon | Approved |  |

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**R4-2207242 WF on general and PDSCH demodulation requirements for inter-cell interference MMSE-IRC**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207243 WF on CSI requirements for inter-cell interference MMSE-IRC**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207244 WF on MMSE-IRC receiver for intra-cell inter-user interference**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204375 Discussion on UE feature list and capability signalling**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205788 Discussions on UE feature list for MMSE-IRC receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

#### 10.12.2 UE demodulation and CSI requirements

##### 10.12.2.1 MMSE-IRC receiver for inter-cell interference

###### 10.12.2.1.1 PDSCH requirements

**R4-2203764 Discussion on PDSCH requirements in intercell interference scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2203765 Draft CR on PDSCH demod requirements in ICI-FDD**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2207245 (from R4-2203765).**

**R4-2207245 Draft CR on PDSCH demod requirements in ICI-FDD**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Apple*

**Decision: Postponed.**

**R4-2204376 Discussion on PDSCH demodulation MMSE-IRC requirements for scenario with inter-cell interference**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204377 Summary of PDSCH simulation results for inter-cell interference suppression**

*Type: other For: Information  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204488 Views on MMSE-IRC receiver for inter-cell interference test**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2204523 Draft CR for TS38.101-4 PDSCH TDD demodulation requirements for inter-cell interference MMSE-IRC**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Revised to R4-2207246 (from R4-2204523).**

**R4-2207246 Draft CR for TS38.101-4 PDSCH TDD demodulation requirements for inter-cell interference MMSE-IRC**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Postponed.**

**R4-2204524 Discussion on R17 demodulation enhancement for inter-cell interference suppressing**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204830 draftCR to TS 38.101-4: NR Interference model for enhanced performance requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207247 (from R4-2204830).**

**R4-2207247 draftCR to TS 38.101-4: NR Interference model for enhanced performance requirements**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Postponed.**

**R4-2204832 On Intercell PDSCH MMSE-IRC demodulation requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our views on various open issues with relation to Intercell PDSCH MMSE-IRC demodulation requirements. We make proposals concerning Common test parameters and Interference model for scenario 1.

**Decision: Noted.**

**R4-2205497 On PDSCH requirements for UE MMSE-IRC receiver for inter-cell interference suppression**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205502 Remaining issues on PDSCH requirement for inter-cell interference**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses PDSCH requirements for inter-cell IRC

**Decision: Noted.**

**R4-2205503 Simulation results on PDSCH performance for inter-cell interference**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contribution submits our simulation results for PDSCH demodulation for inter-cell IRC

**Decision: Noted.**

**R4-2205789 Discussion on demodulation requirements for inter-cell MMSE-IRC receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205790 Simulation results on demodulation requirements for inter-cell MMSE-IRC receiver**

*Type: discussion For: Information  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205791 Draft CR: Introduction of general and applicability section of inter-cell MMSE-IRC receiver in TS 38.101-4**

*Type: discussion For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Postponed.**

**R4-2205901 Discussion on the PDSCH requirements for scenarios with inter-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2206070 Views on Inter-cell Interference PDSCH Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

###### 10.12.2.1.2 CQI requirements

**R4-2203766 Discussion on CSI reporting requirements in intercell interference scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204378 Discussion on CSI MMSE-IRC requirements for scenario with inter-cell interference**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204831 On CQI requirements for intercell interference MMSE-IRC**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our views on various open issues with relation to CQI requirements for intercell interference MMSE-IRC. We make proposals concerning requirement definition.

**Decision: Noted.**

**R4-2205498 On CSI requirements for UE MMSE-IRC receiver for inter-cell interference suppression**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205504 Remaining issues on CSI reporting requirements for inter-cell interference**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses CSI reporting requirements for inter-cell IRC

**Decision: Noted.**

**R4-2205505 Simulation results on CSI reporting for inter-cell interference**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contribution submits our simulation results for CSI reporting for inter-cell IRC

**Decision: Noted.**

**R4-2205508 draftCR on CSI reporting test case(TDD)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draftCR introduce the new CSI reporting test case.

**Decision: Revised to R4-2207248 (from R4-2205508).**

**R4-2207248 draftCR on CSI reporting test case(TDD)**

*Type: draftCR For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This draftCR introduce the new CSI reporting test case.

**Decision: Postponed.**

**R4-2205509 Summary of simulation results for Inter-cell MMSE-IRC CQI reporting**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contribution summarizes the CSI reporting simulation results for companies

**Decision: Noted.**

**R4-2205792 Discussions on remain issues for inter cell MMSE-IRC CQI requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205793 Simulations results for inter cell MMSE-IRC CQI requirements**

*Type: discussion For: Information  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205902 Discussion on the CQI requirements for scenarios with inter-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2206086 Simulation results for Inter-cell Interference CQI Reporting Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 10.12.2.2 MMSE-IRC receiver for intra-cell inter-user interference

**R4-2203767 Discussion on PDSCH requirements in MU-MIMO scenarios**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2203768 TP to TR 38.833: MU-MIMO-Receiver structure**

*Type: pCR For: Approval  
 38.833 v1.0.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Approved.**

**R4-2204379 Discussion on MMSE-IRC requirements for scenario with intra-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204380 TP to TR 38.833: Link level simulation results for Inter-user interference suppression for MU-MIMO**

*Type: pCR For: Approval  
 38.833 v1.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2207249 (from R4-2204380).**

**R4-2207249 TP to TR 38.833: Link level simulation results for Inter-user interference suppression for MU-MIMO**

*Type: pCR For: Approval  
 38.833 v1.1.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Approved.**

**R4-2204525 Discussion on R17 demodulation enhancement for intra-cell inter-user interference suppressing**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205499 Views on UE MMSE-IRC receiver for intra-cell inter-user interference suppression**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205506 Remaining issues on MMSE-IRC receiver for intra-cell inter-user interference**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses PDSCH requirements for MU-MIMO

**Decision: Noted.**

**R4-2205507 Simulation results on PDSCH performance for intra-cell inter-user interference**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

This contribution submits our simulation results for PDSCH demodulation for intra-cell inter-user IRC

**Decision: Noted.**

**R4-2205794 Remain issues on MU-MIMO MMSE-IRC receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205795 Simulation results on MU-MIMO MMSE-IRC receiver**

*Type: discussion For: Information  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205796 Draft CR: Introduction of MU-MIMO Beamforming model in TS 38.101-4**

*Type: discussion For: Endorsement  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Postponed.**

**R4-2205797 Summary of simulation results for intra cell inter user MMSE-IRC receiver requirements**

*Type: discussion For: Information  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205903 Discussion on the MMSE-IRC receiver for intra-cell interference**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2206089 Views on Intra-cell Inter-user Interference Scenarios**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 10.12.2.3 CRS-IM receiver in scenarios with overlapping spectrum for LTE and NR

###### 10.12.2.3.1 General

**R4-2203769 Discussion on CRS-IM requirements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204381 CRS-IM requirements for 30 kHz SCS scenarios with overlapping spectrum for LTE and NR**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204526 Discussion on the CRS-IM for NR 30kHz SCS**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204917 Discussion CRS-IM Feasibility for 30kHz SCS Scenario**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205435 Discussion on the general for CRS-IM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Share our views on the 30kHz SCS scenario

**Decision: Noted.**

**R4-2205494 draft LS on UE capability and network assistant signalling for CRS interference mitigation in scenarios with overlapping spectrum for LTE and NR**

*Type: LS out For: Approval  
 to TSG WG RAN2  
 Source: China Telecom*

**Decision: Revised to R4-2207238 (from R4-2205494).**

**R4-2207238 draft LS on UE capability and network assistant signalling for CRS interference mitigation in scenarios with overlapping spectrum for LTE and NR**

*Type: LS out For: Approval  
 to TSG WG RAN2  
 Source: China Telecom*

**Decision: Approved.**

**R4-2205798 Discussions on 30kHz CRS-IM receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206071 Views on the requirements for CRS-IM receiver**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

**R4-2206095 Views on CRS Interference Mitigation for 30kHz SCS in NR**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

###### 10.12.2.3.2 Network assistant signaling

**R4-2203770 Discussion on Network Assistance Signalling for CRS-IM**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204382 Network assistance signaling for CRS-IM receiver for scenarios with overlapping spectrum for LTE and NR**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204527 Discussion on the network assistant signaling necessity for CRS-IM**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204833 On Necessity of Network assistant signalling for CRS-IM**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our views on the open issues for the subject of “Necessity of Network Assistant Signalling”. In addition, we have provided a compromise proposal for a Network Assistance Signaling IM.

**Decision: Noted.**

**R4-2204918 Network assistant signaling**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205433 Discussion on the network assistant signaling for CRS-IM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Share our views on how to design the NWA signaling

**Decision: Noted.**

**R4-2205495 Discussion on the network assistance signalling and UE capability for CRS-IM**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205799 Discussions on NWA and capability signaliing for 15kHz CRS-IM receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 10.12.2.3.3 Test set-up

**R4-2203771 Discussion on Test setup for CRS-IM requirements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204383 Test setup for CRS-IM receiver for scenarios with overlapping spectrum for LTE and NR**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204528 Discussion on the test setup for CRS-IM**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2204919 Test setup for 15 kHz SCS scenario**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205434 Discussion on the test set-up for CRS-IM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the left open parameter configurations

**Decision: Noted.**

**R4-2205496 Discussion on the test setup for CRS-IM requirement definition**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205800 Discussion on test setup for 15kHz CRS-IM receiver**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206052 On test setup for CRS-IM**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have provided our views on various open issues with relation to the Test Setup for CRS-IM.

**Decision: Noted.**

**R4-2206107 Views on Test Setup for CRS Interference Mitigation in NR**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

#### 10.12.3 BS demodulation requirements

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**Email discussion for [102-e][324] NR\_perf\_enh2\_Demod\_Part2, AI 10.12.3- Tricia Li**

**R4-2207164 Email discussion summary for [102-e][324] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207437 (from R4-2207164).**

**R4-2207437 Email discussion summary for [102-e][324] NR\_perf\_enh2\_Demod\_Part2**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2203550 | draft CR on FR1 PUSCH 256QAM FRC for TS 38.141-1 | Samsung | Endorsed |  |
| R4-2203551 | draft CR on FR1 PUSCH 256QAM FRC for TS 38.141-2 | Samsung | Endorsed |  |
| R4-2207250 | Draft CR for TS38.141-2 Requirements for PUSCH with transform precoding disabled for BS type 1-O | CMCC | Endorsed | To remove the square brackets |
| R4-2205127 | Draft big CR for TS38.141-2 FR1 PUSCH 256QAM | Ericsson | Withdrawn | New Big CR will be assigned |
| R4-2205810 | draft CR for FR1 PUSCH 256QAM requirements in TS 38.141-1 | Huawei,HiSilicon | Endorsed |  |
| R4-2207252 | Draft CR for TS 38.104: FR1 256QAM PUSCH requirements | Intel Corporation | Endorsed | To remove the square brackets |
| R4-2205824 | BigCR for FR1 PUSCH 256QAM requirements in TS 38.141-1 | Huawei,HiSilicon | Email approval | To merge all endorsed draft CRs for 38.141-1 and for post-meeting approval |

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**R4-2207251 Big CR for TS38.141-2 FR1 PUSCH 256QAM**

*Type: CR For: Agreement  
 38.141-2 v17.4.0 CR-？ rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Big CR to capture all endorsed CRs for TS38.141-2

**Decision:** Email approval

**R4-2207253 BigCR for TS38.104: Introduction of conformance testing requirements for FR1 PUSCH 256QAM**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-? rev Cat: B (Rel-17)  
  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Email approval**

##### 10.12.3.1 PUSCH demodulation requirements for FR1 256QAM

**R4-2203550 draft CR on FR1 PUSCH 256QAM FRC for TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2203551 draft CR on FR1 PUSCH 256QAM FRC for TS 38.141-2**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2204026 Big CR for TS38.141-2 FR1 PUSCH 256QAM**

*Type: other For: Approval  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Big CR to capture all endorsed CRs for TS38.141-2

**Decision: Withdrawn.**

**R4-2204529 Draft CR for TS38.141-2 Requirements for PUSCH with transform precoding disabled for BS type 1-O**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Revised to R4-2207250 (from R4-2204529).**

**R4-2207250 Draft CR for TS38.141-2 Requirements for PUSCH with transform precoding disabled for BS type 1-O**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: CMCC*

**Decision: Endorsed.**

**R4-2205127 Draft big CR for TS38.141-2 FR1 PUSCH 256QAM**

*Type: draftCR For: Endorsement  
 38.141-2 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Draft big CR to capture all endorsed CRs for TS38.141-2

**Decision: Withdrawn.**

**R4-2205810 draft CR for FR1 PUSCH 256QAM requirements in TS 38.141-1**

*Type: draftCR For: Endorsement  
 38.141-1 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Endorsed.**

**R4-2205811 BigCR for FR1 PUSCH 256QAM requirements in TS 38.104**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0370 rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision:** The document was **withdrawn**.

**R4-2205812 Summary of simulation results for FR1 PUSCH 256QAM performance requirements**

*Type: other For: Information  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205816 Draft CR for TS 38.104: FR1 256QAM PUSCH requirements**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2207252 (from R4-2205816).**

**R4-2207252 Draft CR for TS 38.104: FR1 256QAM PUSCH requirements**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Endorsed.**

**R4-2205824 BigCR for FR1 PUSCH 256QAM requirements in TS 38.141-1**

*Type: CR For: Agreement  
 38.141-1 v17.4.0 CR-0259 rev Cat: B (Rel-17)  
  
 Source: Huawei,HiSilicon*

**Decision: Email approval**

### 10.13 Solutions for NR to support non-terrestrial networks (NTN)

#### 10.13.1 General

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**Email discussion for [102-e][308] NTN\_Solutions\_Part1, AI 10.13.1- Dorin Panaitopol**

**R4-2207165 Email discussion summary for [102-e][308] NTN\_Solutions\_Part1**

*Type: other For: Information  
 Source: Moderator (Thales)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207438 (from R4-2207165).**

**R4-2207438 Email discussion summary for [102-e][308] NTN\_Solutions\_Part1**

*Type: other For: Information  
 Source: Moderator (Thales)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |
| --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** |
| R4-2207330 | TP TR 38.863 7.4.1 NTN UE Requirement (General) | HUGHES Network Systems Ltd | Approved |
| R4-2207338 | TP for TR 38.863: Regulatory aspects for NTN satellite access nodes and UEs operating in UL1626.5-1660.5 MHz and DL 1525-1559 MHz frequencies ranges | Ligado Networks | Approved |
| R4-2207333 | TP to TR 38.863 on Section 5.2 NTN Satellite band | HUGHES Network Systems Ltd | Approved |
| R4-2207339 | TP to TR 38.863 Regulatory aspects for HAPS | Nokia, Nokia Shanghai Bell | Approved |
| R4-2207345 | Draft text proposal for Clauses 7, 7.1, 7.2, 7.3 in TR 38.863 | THALES | Approved |
| R4-2207331 | TP for 38.108: clause 5.3&5.4 on system parameters | CATT | Approved |
| R4-2207336 | Draft text proposal for Clause 4.4 Satellite Access Node classes - TS 38.108 | THALES | Approved |
| R4-2207342 | Draft text proposal for Annex B - TS 38.108 | THALES | Merged |
| R4-2207337 | TP for 38.108: clause 4.3 requirement reference point | CATT | Approved |
| R4-2207340 | TP to TR 38.108 on 4.5 Regional Requirement | HUGHES Network Systems Ltd | Approved |
| R4-2207335 | TP for TS 38.108: General (5.1) and Operating Band (5.2) | ZTE Corporation | Approved |
| R4-2207332 | TP on TS 38.101-5 for UE channel bandwidth and channel arrangement | Qualcomm Incorporated | Approved |
| R4-2207343 | Draft text proposal for Clause 3 - TS 38.101-5 | THALES | Approved |
| R4-2207344 | Draft text proposal for Clause 4 - TS 38.101-5 | THALES | Approved |
| R4-2207334 | TP for TS 38.101-5: General (5.1) and Operating Band (5.2) | ZTE Corporation | Approved |
| R4-2207341 | CR for TS 38.104: capturing HAPS requirements | Softbank, Deutsche Telekom, Ericsson, NTT Docomo, KDDI, Nokia, Intelsat | Agreed |
| R4-2207346 | Way Forward on NTN\_solutions\_Part1 | THALES | Approved |

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**R4-2207346 Way Forward on NTN\_solutions\_Part1**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**GTW discussion on Feb 28th**

Further discuss below two options

* Option 1: Supporting UL/DL 64QAM for NTN operation as optional with [per UE/per band]
* Option 2: Mandatory same as TN operation

**Agreement:**

**Supporting UL/DL 64QAM for NTN operation as optional with per band**

**Decision: Approved.**

**R4-2203964 UE feature for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2205232 TP TR 38.863 7.4.1 NTN UE Requirement (General)**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Revised to R4-2207330 (from R4-2205232).**

**R4-2207330 TP TR 38.863 7.4.1 NTN UE Requirement (General)**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Approved.**

##### 10.13.1.1 System parameters

**Topic #1: system parameters**

**R4-2203953 TP for 38.108: clause 5.3&5.4 on system parameters**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207331 (from R4-2203953).**

**R4-2207331 TP for 38.108: clause 5.3&5.4 on system parameters**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2204507 TP on TS 38.101-5 for UE channel bandwidth and channel arrangement**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207332 (from R4-2204507).**

**R4-2207332 TP on TS 38.101-5 for UE channel bandwidth and channel arrangement**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

**R4-2205314 TP to TR 38.863 on Section 5.2 NTN Satellite band**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Revised to R4-2207333 (from R4-2205314).**

**R4-2207333 TP to TR 38.863 on Section 5.2 NTN Satellite band**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

*Session chair: No Track changes on this TP, TR rapportenur need to enable the changes when merged this TP to update TR.*

**Decision: Approved.**

**R4-2205472 TP for TS 38.101-5: Genera(5.1) and Operating Band(5.2)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207334 (from R4-2205472).**

**R4-2207334 TP for TS 38.101-5: Genera(5.1) and Operating Band(5.2)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205476 TP for TS 38.108: Genera(5.1) and Operating Band(5.2)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207335 (from R4-2205476).**

**R4-2207335 TP for TS 38.108: Genera(5.1) and Operating Band(5.2)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

##### 10.13.1.2 NTN Satellite Access Node Class/Type

**Topic #2 SAN class**

**R4-2205048 NTN - SAN class**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the different SAN classes to be considered

**Decision: Noted.**

**R4-2205730 Draft text proposal for Clause 4.4 Satellite Access Node classes - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 4.4: Satellite Access Node classes

**Decision: Revised to R4-2207336 (from R4-2205730).**

**R4-2207336 Draft text proposal for Clause 4.4 Satellite Access Node classes - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 4.4: Satellite Access Node classes

**Decision: Approved.**

**TP for reference Point**

**R4-2205673 Draft text proposal for Clause 4.3 Requirement reference points - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 4.3: Requirement reference points

**Decision: Merged.**

**R4-2203952 TP for 38.108: clause 4.3 requirement reference point**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207337 (from R4-2203952).**

**R4-2207337 TP for 38.108: clause 4.3 requirement reference point**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

##### 10.13.1.3 Regulatory information

**R4-2205111 TP for TR 38.863: Regulatory aspects for NTN satellite access nodes and UEs operating in UL1626.5-1660.5 MHz and DL 1525-1559 MHz frequencies ranges**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Revised to R4-2207338 (from R4-2205111).**

**R4-2207338 TP for TR 38.863: Regulatory aspects for NTN satellite access nodes and UEs operating in UL1626.5-1660.5 MHz and DL 1525-1559 MHz frequencies ranges**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Approved.**

**R4-2205555 TP to TR 38.863 Regulatory aspects for HAPS**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207339 (from R4-2205555).**

**R4-2207339 TP to TR 38.863 Regulatory aspects for HAPS**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**R4-2205733 Draft text proposal for Clause 4.5 Regional requirements - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 4.5 : Regional requirements

**Decision:** The document was **withdrawn**.

**R4-2205437 TP to TR 38.108 on 4.5 Regional Requirement**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Revised to R4-2207340 (from R4-2205437).**

**R4-2207340 TP to TR 38.108 on 4.5 Regional Requirement**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Approved.**

##### 10.13.1.4 Others

**R4-2205554 On NTN System parameters**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2203536 Considerations on HAPS operating band(s)**

*Type: discussion For: Decision  
 38.104 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: SoftBank, Deutsche Telekom, Ericsson, NTT Docomo, KDDI, Nokia, Intelsat*

**Decision: Noted.**

**R4-2204195 CR for TS 38.104: capturing HAPS requirements**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0364 rev Cat: B (Rel-17)  
  
 Source: Softbank, Deutsche Telekom, Ericsson, NTT Docomo, KDDI, Nokia, Intelsat*

**Abstract:**

CR for introducing HAPS requirements to 4.4 and 5.2 as work of NTN.

**Decision: Revised to R4-2207341 (from R4-2204195).**

**R4-2207341 CR for TS 38.104: capturing HAPS requirements**

*Type: CR For: Agreement  
 38.104 v17.4.0 CR-0364 rev Cat: B (Rel-17)  
  
 Source: Softbank, Deutsche Telekom, Ericsson, NTT Docomo, KDDI, Nokia, Intelsat*

**Abstract:**

CR for introducing HAPS requirements to 4.4 and 5.2 as work of NTN.

**Decision: Agreed.**

**R4-2205051 NTN - General aspect related to TS assumptions**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses general aspect related to the taken assumption to be captured in the TSs

**Decision: Noted.**

**R4-2205667 Draft text proposal for Annex B - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Annex B (normative): Error Vector Magnitude (FR1)

**Decision: Revised to R4-2207342 (from R4-2205667).**

**R4-2207342 Draft text proposal for Annex B - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Annex B (normative): Error Vector Magnitude (FR1)

**Decision: Merged (with R4-220xxxx).**

**R4-2205671 Draft text proposal for Clause 3 - TS 38.101-5**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.101-5 - Section 3: Definitions of terms, symbols and abbreviations

**Decision: Revised to R4-2207343 (from R4-2205671).**

**R4-2207343 Draft text proposal for Clause 3 - TS 38.101-5**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.101-5 - Section 3: Definitions of terms, symbols and abbreviations

**Decision: Approved.**

**R4-2205672 Draft text proposal for Clause 4 - TS 38.101-5**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.101-5 - Section 2: References; Section 4: General

**Decision: Revised to R4-2207344 (from R4-2205672).**

**R4-2207344 Draft text proposal for Clause 4 - TS 38.101-5**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.101-5 - Section 2: References; Section 4: General

**Decision: Approved.**

**R4-2205921 Draft text proposal for Clauses 7, 7.1, 7.2, 7.3 in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Sections 7.1, 7.2 and 7.3 of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 and TS 38.101-5 specification elaboration.

**Decision: Revised to R4-2207345 (from R4-2205921).**

**R4-2207345 Draft text proposal for Clauses 7, 7.1, 7.2, 7.3 in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Sections 7.1, 7.2 and 7.3 of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 and TS 38.101-5 specification elaboration.

**Decision: Approved.**

#### 10.13.2 Coexistence aspects

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**Email discussion for [102-e][309] NTN\_Solutions\_Part2, AI 10.13.2-Yiran Jin**

**R4-2207166 Email discussion summary for [102-e][309] NTN\_Solutions\_Part2**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207439 (from R4-2207166).**

**R4-2207439 Email discussion summary for [102-e][309] NTN\_Solutions\_Part2**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207347 | WF on [309] NTN\_Solutions\_Part2 | Samsung | Approved |  |
| R4-2207348 | Simulation assumptions for NTN co-existence | Samsung, CATT | Approved |  |
| R4-2207349 | Summary of NTN co-existence study | Samsung | Withdrawn  This t-doc not available in the inbox, given the deadline for t-doc submission already passed, this t-doc will be withdrawn. |  |
| R4-2207350 | Summary of HAPS co-existence study | Nokia | Approved |  |
| R4-2207351 | Draft text proposal to update TR 38.863 Chapter 6 | Samsung | Approved |  |
| R4-2207352 | Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to correct conclusions from simulation results based on AAS antenna assumption | THALES | Merged into R4-2207353 |  |
| R4-2207353 | Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to include simulation results based on Non-AAS antenna assumption | THALES | Approved |  |

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**R4-2207347 WF on [309] NTN\_Solutions\_Part2**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207348 Simulation assumptions for NTN co-existence**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207349 Summary of NTN co-existence study**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Decision: Withdrawn.**

**R4-2207350 Summary of HAPS co-existence study**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204333 Draft text proposal to update TR 38.863 Chapter 6**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Samsung*

**Decision: Revised to R4-2207351 (from R4-2204333).**

**R4-2207351 Draft text proposal to update TR 38.863 Chapter 6**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Samsung*

**Decision: Approved.**

##### 10.13.2.1 NTN coexistence scenarios and simulations

**R4-2204502 Coexistence simulation results for TN-NTN case 1**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2205044 NTN - Coexistence simulation results**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution provides new simulation results based on the agreed assumptions

**Decision: Noted.**

**R4-2205924 On the ACIR selection and ACIR average computation between companies**

*Type: discussion For: Decision  
 Source: THALES*

**Abstract:**

This contribution is proposing a clear definition for the value selection and averaging algorithm between companies, and is also proposing an algorithm (as also being explained in R4-2203112, “Email discussion summary for [101-bis-e][307] NTN\_Solutions\_Pa

**Decision: Noted.**

**R4-2205913 Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to correct conclusions from simulation results based on AAS antenna assumption**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

This contribution proposes to revise Section 6.4 of TR 38.863 by correcting some conclusions obtained with the AAS TN BS antenna assumption. For information, the results included in the TR 38.863 are directly extracted from the results summary attached in

**Decision: Revised to R4-2207352 (from R4-2205913).**

**R4-2207352 Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to correct conclusions from simulation results based on AAS antenna assumption**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

This contribution proposes to revise Section 6.4 of TR 38.863 by correcting some conclusions obtained with the AAS TN BS antenna assumption. For information, the results included in the TR 38.863 are directly extracted from the results summary attached in

**Decision: Merged (with R4-2207353).**

**R4-2205914 Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to include simulation results based on Non-AAS antenna assumption**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

This contribution proposes to complete Section 6.4 of TR 38.863 by including the simulation results obtained with the non-AAS TN BS antenna assumption. For information, the results included in the TR 38.863 are directly extracted from the results summary

**Decision: Revised to R4-2207353 (from R4-2205914).**

**R4-2207353 Draft text proposal for Clauses 6.4 and 6.5 in TR 38.863 to include simulation results based on Non-AAS antenna assumption**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

This contribution proposes to complete Section 6.4 of TR 38.863 by including the simulation results obtained with the non-AAS TN BS antenna assumption. For information, the results included in the TR 38.863 are directly extracted from the results summary

**Decision: Approved.**

##### 10.13.2.2 HAPS coexistence scenarios and simulations

**R4-2204503 Coexistence simulation results for HAPS**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2205284 Discussion on HAPS requirements**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2205556 HAPS coexistence simulation results**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2205557 TP to TR 38.863 on HAPS simulation update**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

##### 10.13.2.3 ACLR/ACS proposals

**R4-2205045 NTN - SAN ACS and case 6**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution further analyzes case 6 and proposes SAN ACS value

**Decision: Noted.**

**R4-2205104 Discussion on GEO SAN ACLR**

*Type: discussion For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks, Inmarsat*

**Decision: Noted.**

**R4-2205558 HAPS BS ACLR and ACS requirements**

*Type: discussion For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2205925 On the applicability of rural SAN ACS requirements for urban TN deployment in the case of GEO**

*Type: discussion For: Decision  
 Source: THALES*

**Abstract:**

This contribution shows that at least for GEO: the rural scenario is predominant in the case of GEO, even if we say that we have urban deployment inside the GEO beam; the urban scenario for GEO is a mixture of urban and rural TN deployment, and is predomi

**Decision: Noted.**

#### 10.13.3 Satellite Access Node RF requirements

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**Email discussion for [102-e][310] NTN\_Solutions\_Part3, AI 10.13.3-Yuexia Song**

**R4-2207167 Email discussion summary for [102-e][310] NTN\_Solutions\_Part3**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207440 (from R4-2207167).**

**R4-2207440 Email discussion summary for [102-e][310] NTN\_Solutions\_Part3**

*Type: other For: Information  
 Source: Moderator (CATT)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207387 | WF on open issue for SAN | CATT | Approved |  |
| R4-2207456 | WF on SAN SEM and spurious emission | Thales | Approved |  |
| R4-2207388 | Operating band unwanted emissions | Thales | Noted |  |
| R4-2207389 | SAN spurious emissions | Thales | Noted |  |
| R4-2207390 | ICS requirement | Thales | Noted |  |
| [R4-2207354](https://protect2.fireeye.com/v1/url?k=3e62d1c8-61f9e911-3e635a87-0cc47a3356b2-9a849f38e1b52114&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205054.zip) | pCR to TS 38.108 - Scope and general | Ericsson | Approved |  |
| [R4-2207355](https://protect2.fireeye.com/v1/url?k=8106ad4f-de9d9596-81072600-0cc47a3356b2-7adac45f7beca056&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205976.zip) | TP to TS 38.108: section 4 | Huawei, HiSilicon | Approved |  |
| [R4-2207356](https://protect2.fireeye.com/v1/url?k=4bc13738-145a0fe1-4bc0bc77-0cc47a3356b2-bf256201977b7207&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2206121.zip) | TP to TS 38.108: section 3 | Huawei, HiSilicon | Approved |  |
| R4-2207362 | TP for 38.108: clause 9.3 OTA Satellite Access Node output power | CATT | Approved |  |
| [R4-2207363](https://protect2.fireeye.com/v1/url?k=8cb56ff1-d32e5728-8cb4e4be-0cc47a3356b2-d2e273427a008c16&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205474.zip) | TP for TS 38.108 Annex B | ZTE Corporation | Approved |  |
| [R4-2207383](https://protect2.fireeye.com/v1/url?k=4fddcdd6-1046f50f-4fdc4699-0cc47a3356b2-b5d2965465d9ef4a&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205987.zip) | TP to TS 38.108: annex A (FRC) | Huawei, HiSilicon | Approved |  |
|  |  |  |  |  |
| [R4-2207357](https://protect2.fireeye.com/v1/url?k=f181bccb-ae1a8412-f1803784-0cc47a3356b2-ef6a4293523a0971&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2203957.zip) | TP for 38.108: clause 9.7 OTA unwanted emissions | CATT | Approved |  |
| [R4-2207358](https://protect2.fireeye.com/v1/url?k=84c2fd32-db59c5eb-84c3767d-0cc47a3356b2-44ff6644f5b1ea6e&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205057.zip) | pCR to TS 38.108 -Radiated Tx general and transmit power | Ericsson | Approved | *With the new comments accepted.* |
| [R4-2207359](https://protect2.fireeye.com/v1/url?k=5109bde5-0e92853c-510836aa-0cc47a3356b2-c0d0ed5a580dfd63&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205477.zip) | TP for TS 38.108 OTA output power dynamics(9.4) | ZTE Corporation | Approved |  |
| [R4-220](https://protect2.fireeye.com/v1/url?k=0efc054f-51673d96-0efd8e00-0cc47a3356b2-48bad0fbd58be365&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205848.zip)7360 | Draft text proposal for Clause 7.3.4.7.3 OTA ACLR in TR 38.863 | THALES | Approved |  |
| [R4-2207361](https://protect2.fireeye.com/v1/url?k=337844d0-6ce37c09-3379cf9f-0cc47a3356b2-641ff2a3650ddcdb&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205979.zip) | TP to TS 38.108: 9.5 (OTA Tx ON/OFF), 9.6 (OTA TX signal quality) and 9.8 (OTA Tx IMD) | Huawei, HiSilicon | Approved |  |
| [R4-2207364](https://protect2.fireeye.com/v1/url?k=1f37d5c1-40aced18-1f365e8e-0cc47a3356b2-b1c3aae17f892b39&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2203958.zip) | TP for 38.108: clause 10.5 OTA in-band selectivity and blocking | CATT | Approved |  |
| [R4-2207365](https://protect2.fireeye.com/v1/url?k=62f17223-3d6a4afa-62f0f96c-0cc47a3356b2-f79997218d702b33&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205058.zip) | pCR to TS 38.108 - Radiated Rx general and sensitivity | Ericsson | Approved |  |
| [R4-2207366](https://protect2.fireeye.com/v1/url?k=8e06d2d0-d19dea09-8e07599f-0cc47a3356b2-943c0d8c714a14bc&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205478.zip) | TP for TS 38.108 OTA Rx requirements(10.3, 10.4,10.6 and 10.9) | ZTE Corporation | Approved |  |
| [R4-2207367](https://protect2.fireeye.com/v1/url?k=529c5b2d-0d0763f4-529dd062-0cc47a3356b2-07b5a2e60ed65bd3&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205851.zip) | Draft text proposal for Clause 7.3.5.6 OTA Out-of-band blocking in TR 38.863 | THALES | Approved |  |
| [R4-2207368](https://protect2.fireeye.com/v1/url?k=250cd6c9-7a97ee10-250d5d86-0cc47a3356b2-18307bb112201bf8&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205981.zip) | TP to TS 38.108: section 10.7 (OTA Rx spur) and 10.8 (OTA Rx IMD) | Huawei, HiSilicon | Approved |  |
| [R4-2207369](https://protect2.fireeye.com/v1/url?k=52d5dfca-0d4ee713-52d45485-0cc47a3356b2-399accae74c65eba&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2203954.zip) | TP for 38.108: clause 6.6.1&6.6.2&6.6.3 unwanted emissions | CATT | Postponed | *Spurious emission is not concluded.* |
| [R4-2207384](https://protect2.fireeye.com/v1/url?k=76e88d4d-2973b594-76e90602-0cc47a3356b2-051800b2e83c65a4&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205055.zip) | pCR to TS 38.108 - Transmitter spurious emissions | Ericsson | Postponed | *Spurious emission is not concluded.* |
| [R4-2207370](https://protect2.fireeye.com/v1/url?k=44bb22bc-1b201a65-44baa9f3-0cc47a3356b2-1c84af8083dc65f5&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205445.zip) | TP to TS 38.108 on 6.0 Conducted transmitter characteristics | HUGHES Network Systems Ltd | Postponed |  |
| [R4-2207371](https://protect2.fireeye.com/v1/url?k=52a727a1-0d3c1f78-52a6acee-0cc47a3356b2-57fc6a7203583a2a&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205479.zip) | TP for TS 38.108: Output power dynamics (6.3) | ZTE Corporation | Approved |  |
| [R4-2207372](https://protect2.fireeye.com/v1/url?k=dffb7767-80604fbe-dffafc28-0cc47a3356b2-544be253c5a03315&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205813.zip) | Draft text proposal for Clause 6.1 and 6.2 Satellite Access Node output power - TS 38.108 | THALES | Approved |  |
| [R4-2207460](https://protect2.fireeye.com/v1/url?k=fc6c7826-a3f740ff-fc6df369-0cc47a3356b2-510ae6fbd052cb0d&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205827.zip) | Draft text proposal for Clause 7.3.2.2.4.1 ACLR in TR 38.863 | THALES | Approved |  |
| [R4-2207373](https://protect2.fireeye.com/v1/url?k=15b18afa-4a2ab223-15b001b5-0cc47a3356b2-18fbd0bdd95b349d&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205983.zip) | TP to TS 38.108: section 6.4 (Tx ON/OFF) and 6.5 (TX signal quality) | Huawei, HiSilicon | Approved |  |
| [R4-2207374](https://protect2.fireeye.com/v1/url?k=f4a14c5d-ab3a7484-f4a0c712-0cc47a3356b2-4b25e1eb2e3ee887&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205984.zip) | TP to TS 38.108: section 6.7 (Tx IMD) | Huawei, HiSilicon | Approved |  |
| [R4-2207375](https://protect2.fireeye.com/v1/url?k=6cf1cf69-336af7b0-6cf04426-0cc47a3356b2-2f1b6c1888f3596a&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2206117.zip) | Draft TP for TS 38.108 Section 6.6.4 Operating band unwanted emissions | Inmarsat | Postponed | *UEM is not concluded.* |
| [R4-2207376](https://protect2.fireeye.com/v1/url?k=4d212047-12ba189e-4d20ab08-0cc47a3356b2-8d0c0fad7f31c818&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2203955.zip) | TP for 38.108: clause 7.1&7.2 on Rx refsens sensitivity | CATT | Withdrawn | *The original R4-2203955 is approved.* |
| [R4-2207377](https://protect2.fireeye.com/v1/url?k=03249a8e-5cbfa257-032511c1-0cc47a3356b2-fdde022a28639e13&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205056.zip) | pCR to TS 38.108 - In-band selectivity and blocking | Ericsson | Approved |  |
| [R4-2207378](https://protect2.fireeye.com/v1/url?k=05b6321f-5a2d0ac6-05b7b950-0cc47a3356b2-975679e404108900&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205475.zip) | TP for TS 38.108 Dynamic range(7.3) and In channel selectivity(7.8) | ZTE Corporation | Approved |  |
| [R4-2207379](https://protect2.fireeye.com/v1/url?k=a17a5c20-fee164f9-a17bd76f-0cc47a3356b2-77611bda8760d857&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205847.zip) | Draft text proposal for Clause 7.3.3.2.4 Out-of-band blocking in TR 38.863 | THALES | Approved |  |
| [R4-2207380](https://protect2.fireeye.com/v1/url?k=1cb1067a-432a3ea3-1cb08d35-0cc47a3356b2-6a24bbca8f240c5c&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205866.zip) | Draft text proposal for Clause 7.5 Out-of-band blocking - TS 38.108 | THALES | Approved |  |
| [R4-2207381](https://protect2.fireeye.com/v1/url?k=a69fabd8-f9049301-a69e2097-0cc47a3356b2-9c49cc5243eaa056&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205922.zip) | Draft text proposal for Clauses 7.3.3.2.3.1 Adjacent Channel Selectivity (ACS) and 7.3.3.2.3.2 In-band blocking in TR 38.863 | THALES | Approved |  |
| [R4-2207382](https://protect2.fireeye.com/v1/url?k=ca4b4cb2-95d0746b-ca4ac7fd-0cc47a3356b2-9209682e1c9fec91&q=1&e=26734ba5-efe1-4f5a-805f-c0f3cb326aec&u=https%3A%2F%2Fwww.3gpp.org%2Fftp%2FTSG_RAN%2FWG4_Radio%2FTSGR4_102-e%2FDocs%2FR4-2205986.zip) | TP to TS 38.108: section 7.6 (Rx spur) and section 7.7 (Rx IMD) | Huawei, HiSilicon | Approved |  |

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**R4-2207387 WF on open issue for SAN**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207388 Operating band unwanted emissions**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2207389 SAN spurious emissions**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2207390 SAN ICS requirements**

*Type: other For: Approval  
 Source: Thales*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**R4-2207456 WF on SAN SEM and spurious emission**

*Type: other For: Approval  
 Source: Thales, ZTE*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205054 pCR to TS 38.108 - Scope and general**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Scope and general sub-clause

**Decision: Revised to R4-2207354 (from R4-2205054).**

**R4-2207354 pCR to TS 38.108 - Scope and general**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Scope and general sub-clause

**Decision: Approved.**

**R4-2205976 TP to TS 38.108: section 4**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 section 4 is provided for approval.

**Decision: Revised to R4-2207355 (from R4-2205976).**

**R4-2207355 TP to TS 38.108: section 4**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 section 4 is provided for approval.

**Decision: Approved.**

**R4-2206121 TP to TS 38.108: section 3**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 section 3 is provided for approval.

**Decision: Revised to R4-2207356 (from R4-2206121).**

**R4-2207356 TP to TS 38.108: section 3**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 section 3 is provided for approval.

**Decision: Approved.**

##### 10.13.3.1 TX requirements for radiated characteristics

**R4-2205977 Further discussion on Satellite Access Node radiated RF requirements: Tx**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide discussion on the remaining OTA Tx requirements for the Satellite Access Node.

**Decision: Noted.**

**R4-2205978 Discussion on the AAS architecture and consideration of the emissions scaling**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution, we provide discussion on the AAS architecture, based on the previous work on the AAS BS and NR BS requirements derivation, highlighting number of issues related to emission scaling exclusion, and its motivation.

**Decision: Noted.**

**R4-2203948 Open issue for Tx RF requriements for SAN type 1-O**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2203957 TP for 38.108: clause 9.7 OTA unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207357 (from R4-2203957).**

**R4-2207357 TP for 38.108: clause 9.7 OTA unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2205057 pCR to TS 38.108 -Radiated Tx general and transmit power**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 -Radiated Tx general and transmit power sub-clause

**Decision: Approved.**

**R4-2207358 pCR to TS 38.108 -Radiated Tx general and transmit power**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 -Radiated Tx general and transmit power sub-clause

**Decision: Withdrawn.**

**R4-2205477 TP for TS 38.108 OTA output power dynamics(9.4)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207359 (from R4-2205477).**

**R4-2207359 TP for TS 38.108 OTA output power dynamics(9.4)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205848 Draft text proposal for Clause 7.3.4.7.3 OTA ACLR in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.4.7.3 OTA Adjacent Channel Leakage Power Ratio (ACLR) of TR 38.863 by including some justifications and recommendations with respect to SAN ACLR value in the TS 38.108 specifi

**Decision: Revised to R4-2207360 (from R4-2205848).**

**R4-2207360 Draft text proposal for Clause 7.3.4.7.3 OTA ACLR in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.4.7.3 OTA Adjacent Channel Leakage Power Ratio (ACLR) of TR 38.863 by including some justifications and recommendations with respect to SAN ACLR value in the TS 38.108 specifi

**Decision: Approved.**

**R4-2205878 Draft text proposal for Clause 9.3 OTA Satellite Access Node output power - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 9.3: OTA Satellite Access Node output power

**Decision: Merged**

**R4-2205880 Draft text proposal for Clause 9.6 OTA transmitted signal quality - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 9.6: OTA transmitted signal quality; Section 9.6.1: OTA frequency error; Section 9.6.2: OTA modulation quality

**Decision: Merged.**

**R4-2205886 Draft text proposal for Clause 9.7.3 OTA Adjacent Channel Leakage Power Ratio (ACLR) - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 9.7.3: OTA Adjacent Channel Leakage Power Ratio (ACLR)

**Decision: Merged.**

**R4-2205979 TP to TS 38.108: 9.5 (OTA Tx ON/OFF), 9.6 (OTA TX signal quality) and 9.8 (OTA Tx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 9.5 (OTA Tx ON/OFF), 9.6 (OTA TX signal quality) and 9.8 (OTA Tx IMD) is provided for approval.

**Decision: Revised to R4-2207361 (from R4-2205979).**

**R4-2207361 TP to TS 38.108: 9.5 (OTA Tx ON/OFF), 9.6 (OTA TX signal quality) and 9.8 (OTA Tx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 9.5 (OTA Tx ON/OFF), 9.6 (OTA TX signal quality) and 9.8 (OTA Tx IMD) is provided for approval.

**Decision: Approved.**

**R4-2203956 TP for 38.108: clause 9.3 OTA Satellite Access Node output power**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

Session Chair Note: Move to this AI from AI 10.13.1.2

**Decision: Revised to R4-2207362 (from R4-2203956).**

**R4-2207362 TP for 38.108: clause 9.3 OTA Satellite Access Node output power**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

Session Chair Note: Move to this AI from AI 10.13.1.2

**Decision: Approved.**

##### 10.13.3.2 RX requirements for radiated characteristics

**R4-2203949 Open issue for Rx RF requriements for SAN type 1-O**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2205285 Discussion on ACS for NR NTN SAN**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2203958 TP for 38.108: clause 10.5 OTA in-band selectivity and blocking**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207364 (from R4-2203958).**

**R4-2207364 TP for 38.108: clause 10.5 OTA in-band selectivity and blocking**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2205049 NTN - SAN OTA RX requirement proposals**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the remaining open issue of Satellite node access - OTA Rx requirements

**Decision: Noted.**

**R4-2205058 pCR to TS 38.108 - Radiated Rx general and sensitivity**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Radiated Rx general and sensitivity sub-clause

**Decision: Revised to R4-2207365 (from R4-2205058).**

**R4-2207365 pCR to TS 38.108 - Radiated Rx general and sensitivity**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Radiated Rx general and sensitivity sub-clause

**Decision: Approved.**

**R4-2205478 TP for TS 38.108 OTA Rx requirements(10.3, 10.4,10.6 and 10.9)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207366 (from R4-2205478).**

**R4-2207366 TP for TS 38.108 OTA Rx requirements(10.3, 10.4,10.6 and 10.9)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205851 Draft text proposal for Clause 7.3.5.6 OTA Out-of-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.5.6 OTA Out-of-band blocking of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 specification elaboration.

**Decision: Revised to R4-2207367 (from R4-2205851).**

**R4-2207367 Draft text proposal for Clause 7.3.5.6 OTA Out-of-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.5.6 OTA Out-of-band blocking of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 specification elaboration.

**Decision: Approved.**

**R4-2205897 Draft text proposal for Clause 10.5 OTA in-band selectivity (ACS) and OTA in-band blocking - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 10.5: OTA in-band selectivity and blocking; Section 10.5.1: OTA adjacent channel selectivity; Section 10.5.2: OTA in-band blocking

**Decision: Merged.**

**R4-2205899 Draft text proposal for Clause 10.6 OTA out-of-band blocking - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 10.6: OTA out-of-band blocking

**Decision: Merged.**

**R4-2205980 Further discussion on Satellite Access Node radiated RF requirements: Rx**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide discussion on the remaining OTA Rx requirements for the Satellite Access Node.

**Decision: Noted.**

**R4-2205981 TP to TS 38.108: section 10.7 (OTA Rx spur) and 10.8 (OTA Rx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section section 10.7 (OTA Rx spur) and 10.8 (OTA Rx IMD) is provided for approval.

**Decision: Revised to R4-2207368 (from R4-2205981).**

**R4-2207368 TP to TS 38.108: section 10.7 (OTA Rx spur) and 10.8 (OTA Rx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section section 10.7 (OTA Rx spur) and 10.8 (OTA Rx IMD) is provided for approval.

**Decision: Approved.**

##### 10.13.3.3 Tx requirements for conducted characteristics

**R4-2203950 Open issue for Tx RF requriements for SAN type 1-H**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2203954 TP for 38.108: clause 6.6.1&6.6.2&6.6.3 unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207369 (from R4-2203954).**

**R4-2207369 TP for 38.108: clause 6.6.1&6.6.2&6.6.3 unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Postponed.**

**R4-2205046 NTN - SAN TX requirement proposals**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the remaining open issue of Satellite node access - Tx requirements

**Decision: Noted.**

**R4-2205055 pCR to TS 38.108 - Transmitter spurious emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Transmitter spurious emissions sub-clause

**Decision: Revised to R4-2207384 (from R4-2205055).**

**R4-2207384 pCR to TS 38.108 - Transmitter spurious emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - Transmitter spurious emissions sub-clause

**Decision: Postponed.**

**R4-2205445 TP to TS 38.108 on 6.0 Conducted transmitter characteristics**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Revised to R4-2207370 (from R4-2205445).**

**R4-2207370 TP to TS 38.108 on 6.0 Conducted transmitter characteristics**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Postponed.**

**R4-2205468 Discussion on conducted Tx requirements of satellite access node**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205479 TP for TS 38.108: Output power dynamics (6.3)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207371 (from R4-2205479).**

**R4-2207371 TP for TS 38.108: Output power dynamics (6.3)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205813 Draft text proposal for Clause 6.1 and 6.2 Satellite Access Node output power - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 6.1: General; Section 6.2: Satellite Access Node output power

**Decision: Revised to R4-2207372 (from R4-2205813).**

**R4-2207372 Draft text proposal for Clause 6.1 and 6.2 Satellite Access Node output power - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 6.1: General; Section 6.2: Satellite Access Node output power

**Decision: Approved.**

**R4-2205823 Draft text proposal for Clause 6.5.2 Modulation quality - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 6.5: Transmitted signal quality; Section 6.5.2: Modulation quality

**Decision: Merged.**

**R4-2205825 Draft text proposal for Clause 6.6.3 Adjacent Channel Leakage Power Ratio - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 6.6.3: Adjacent Channel Leakage Power Ratio

**Decision: Merged.**

**R4-2205827 Draft text proposal for Clause 7.3.2.2.4.1 ACLR in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.2.2.4.1 ACLR of TR 38.863 by including some justifications and recommendations with respect to SAN ACLR value in the TS 38.108 specification elaboration.

**Decision: Revised to R4-2207386 (from R4-2205827).**

**R4-2207386 Draft text proposal for Clause 7.3.2.2.4.1 ACLR in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.2.2.4.1 ACLR of TR 38.863 by including some justifications and recommendations with respect to SAN ACLR value in the TS 38.108 specification elaboration.

**Decision: Revised to R4-2207460 (from R4-2207386).**

**R4-2207460 Draft text proposal for Clause 7.3.2.2.4.1 ACLR in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.2.2.4.1 ACLR of TR 38.863 by including some justifications and recommendations with respect to SAN ACLR value in the TS 38.108 specification elaboration.

**Decision: Approved.**

**R4-2205982 Further discussion on Satellite Access Node conducted RF requirements: Tx**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide discussion on the remaining conducted Tx requirements for the Satellite Access Node.

**Decision: Noted.**

**R4-2205983 TP to TS 38.108: section 6.4 (Tx ON/OFF) and 6.5 (TX signal quality)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 6.4 (Tx ON/OFF) and 6.5 (TX signal quality) is provided for approval.

**Decision: Revised to R4-2207373 (from R4-2205983).**

**R4-2207373 TP to TS 38.108: section 6.4 (Tx ON/OFF) and 6.5 (TX signal quality)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 6.4 (Tx ON/OFF) and 6.5 (TX signal quality) is provided for approval.

**Decision: Approved.**

**R4-2205984 TP to TS 38.108: section 6.7 (Tx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 6.7 (Tx IMD) is provided for approval.

**Decision: Revised to R4-2207374 (from R4-2205984).**

**R4-2207374 TP to TS 38.108: section 6.7 (Tx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 6.7 (Tx IMD) is provided for approval.

**Decision: Approved.**

**R4-2206117 Draft TP for TS 38.108 Section 6.6.4 Operating band unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Inmarsat*

**Decision: Revised to R4-2207375 (from R4-2206117).**

**R4-2207375 Draft TP for TS 38.108 Section 6.6.4 Operating band unwanted emissions**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Inmarsat*

**Decision: Postponed.**

##### 10.13.3.4 Rx requirements for conducted characteristics

**R4-2203951 Open issue for Rx RF requriements for SAN type 1-H**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2203955 TP for 38.108: clause 7.1&7.2 on Rx refsens sensitivity**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2207376 TP for 38.108: clause 7.1&7.2 on Rx refsens sensitivity**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Withdrawn.**

**R4-2205047 NTN - SAN RX requirement proposals**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the remaining open issue of Satellite node access - Rx requirements

**Decision: Noted.**

**R4-2205056 pCR to TS 38.108 - In-band selectivity and blocking**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - In-band selectivity and blocking sub-clause

**Decision: Revised to R4-2207377 (from R4-2205056).**

**R4-2207377 pCR to TS 38.108 - In-band selectivity and blocking**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.108 - In-band selectivity and blocking sub-clause

**Decision: Approved.**

**R4-2205469 Discussion on conducted RF requirements from satellite network perspective**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205474 TP for TS 38.108 Annex B**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207363 (from R4-2205474).**

**R4-2207363 TP for TS 38.108 Annex B**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205475 TP for TS 38.108 Dynamic range(7.3) and In channel selectivity(7.8)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207378 (from R4-2205475).**

**R4-2207378 TP for TS 38.108 Dynamic range(7.3) and In channel selectivity(7.8)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2205847 Draft text proposal for Clause 7.3.3.2.4 Out-of-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.3.2.4 Out-of-band blocking of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 specification elaboration.

**Decision: Revised to R4-2207379 (from R4-2205847).**

**R4-2207379 Draft text proposal for Clause 7.3.3.2.4 Out-of-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Section 7.3.3.2.4 Out-of-band blocking of TR 38.863 by including some justifications and recommendations with respect to the TS 38.108 specification elaboration.

**Decision: Approved.**

**R4-2205864 Draft text proposal for Clause 7.4.1 Adjacent Channel Selectivity (ACS) and Clause 7.4.2 In-band blocking - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 7.4: In-band selectivity and blocking; Section 7.4.1: Adjacent Channel Selectivity (ACS); Section 7.4.2: In-band blocking

**Decision: Merged.**

**R4-2205866 Draft text proposal for Clause 7.5 Out-of-band blocking - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 7.5: Out-of-band blocking; Section 7.5.1: General; Section 7.5.2: Minimum requirements for Satellite Access Node

**Decision: Revised to R4-2207380 (from R4-2205866).**

**R4-2207380 Draft text proposal for Clause 7.5 Out-of-band blocking - TS 38.108**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this document, following changes have been proposed as a TP to update TS 38.108 - Section 7.5: Out-of-band blocking; Section 7.5.1: General; Section 7.5.2: Minimum requirements for Satellite Access Node

**Decision: Approved.**

**R4-2205922 Draft text proposal for Clauses 7.3.3.2.3.1 Adjacent Channel Selectivity (ACS) and 7.3.3.2.3.2 In-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Sections 7.3.3.2 Conducted receiver characteristics, 7.3.3.2.3.1 Adjacent Channel Selectivity (ACS) and 7.3.3.2.3.2 In-band blocking of TR 38.863 by including some justifications and reco

**Decision: Revised to R4-2207381 (from R4-2205922).**

**R4-2207381 Draft text proposal for Clauses 7.3.3.2.3.1 Adjacent Channel Selectivity (ACS) and 7.3.3.2.3.2 In-band blocking in TR 38.863**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: THALES*

**Abstract:**

In this contribution is proposed to add information with respect to Sections 7.3.3.2 Conducted receiver characteristics, 7.3.3.2.3.1 Adjacent Channel Selectivity (ACS) and 7.3.3.2.3.2 In-band blocking of TR 38.863 by including some justifications and reco

**Decision: Approved.**

**R4-2205985 Further discussion on Satellite Access Node conducted RF requirements: Rx**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution we provide discussion on the remaining conducted Rx requirements for the Satellite Access Node.

**Decision: Noted.**

**R4-2205986 TP to TS 38.108: section 7.6 (Rx spur) and section 7.7 (Rx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 7.6 (Rx spur) and section 7.7 (Rx IMD) is provided for approval.

**Decision: Revised to R4-2207382 (from R4-2205986).**

**R4-2207382 TP to TS 38.108: section 7.6 (Rx spur) and section 7.7 (Rx IMD)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in R4-2203080 (Issue 3-3-2), in this contribution a TP to TS 38.108 section 7.6 (Rx spur) and section 7.7 (Rx IMD) is provided for approval.

**Decision: Approved.**

**R4-2205987 TP to TS 38.108: annex A (FRC)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 annex A (FRC) is provided for approval.

**Decision: Revised to R4-2207383 (from R4-2205987).**

**R4-2207383 TP to TS 38.108: annex A (FRC)**

*Type: pCR For: Approval  
 38.108 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Based on the worksplit agreed in [1] (Issue 3-3-2), in this contribution a TP to TS 38.108 annex A (FRC) is provided for approval.

**Decision: Approved.**

#### 10.13.4 UE RF requirements

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**Email discussion for [102-e][311] NTN\_Solutions\_Part4, AI 10.13.4-Fei Xue**

**R4-2207168 Email discussion summary for [102-e][311] NTN\_Solutions\_Part4**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207441 (from R4-2207168).**

**R4-2207441 Email discussion summary for [102-e][311] NTN\_Solutions\_Part4**

*Type: other For: Information  
 Source: Moderator (ZTE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207416 | WF on NTN UE RF requirement | ZTE | Approved |  |
| **TP to TS 38.101-5** | | | | |
| R4-2207391 | TP for 38.101-5: clause 6.3 output power dynamics | CATT | Approved |  |
| R4-2207393 | TP to TS 38.101-5 on clause 7.5 NTN UE ACS | Mediatek India Technology Pvt. | Approved |  |
| R4-2207394 | TP to TS 38.101-5 on clause 7.6 Blocking characteristics | Mediatek India Technology Pvt. | Approved |  |
| [R4-2204344](https://protect2.fireeye.com/v1/url?k=310616d9-6e9d2fc6-31079d96-000babdfecba-610eeeb4ada70f87&q=1&e=de99042b-e52d-46e2-9b4d-24a7bf034e4b&u=https%3A%2F%2Fnam10.safelinks.protection.outlook.com%2F%3Furl%3Dhttps%253A%252F%252Fwww.3gpp.org%252Fftp%252FTSG_RAN%252FWG4_Radio%252FTSGR4_102-e%252FDocs%252FR4-2204344.zip%26data%3D04%257C01%257COjas.choksi%2540LIGADO.COM%257C0fa6fb268026414c930208d9fc8f5f72%257Cfd5c25a7def24d1aaef8750e5e2992e5%257C0%257C0%257C637818515003895887%257CUnknown%257CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%253D%257C3000%26sdata%3D73njVU7PDB6sbChyfS%252FbhXofoLsgK7WtrRnoPhb%252F6QQ%253D%26reserved%3D0) | Draft text proposal to update TS 38.101-5 Chapter 1 | Samsung R&D Institute UK | Merged | withdraw R4-2207395 .  merge R4-2204344 into R4-2207407 |
| R4-2207396 | TP on TS 38.101-5 for general part of transmitter characteristics | Qualcomm Incorporated | Approved |  |
| R4-2207415 | TP for TS38.101-5 on section 6.2 transmitter power | Xiaomi | Approved | Please use the clean version for final submission in future |
| R4-2207400 | TP for TS38.101-5 on section 7.8 Intermodulation characteristics | Xiaomi | Approved |  |
| R4-2207404 | pCR to TS 38.101-5 - Scope | Ericsson | Approved |  |
| R4-2207405 | pCR to TS 38.101-5 - Receiver requirements general | Ericsson | Approved |  |
| R4-2207407 | pCR for TS 38.101-5: NS value and additional spurious requirements for n255 | Ligado Networks | Noted |  |
| [R4-220](https://protect2.fireeye.com/v1/url?k=7816905e-278da941-78171b11-000babdfecba-03e5ef77f5b0b13b&q=1&e=de99042b-e52d-46e2-9b4d-24a7bf034e4b&u=https%3A%2F%2Fnam10.safelinks.protection.outlook.com%2F%3Furl%3Dhttps%253A%252F%252Fwww.3gpp.org%252Fftp%252FTSG_RAN%252FWG4_Radio%252FTSGR4_102-e%252FDocs%252FR4-2205290.zip%26data%3D04%257C01%257COjas.choksi%2540LIGADO.COM%257C0fa6fb268026414c930208d9fc8f5f72%257Cfd5c25a7def24d1aaef8750e5e2992e5%257C0%257C0%257C637818515003895887%257CUnknown%257CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%253D%257C3000%26sdata%3DHF46VNjJWCFiw%252F8MIJfqOZot1UHQPNLf9xNn1dKqUE8%253D%26reserved%3D0)7462 | TP for 38.101-5 on Output RF spectrum emissions for satellite UE | Huawei, HiSilicon | Postponed |  |
| [R4-220](https://protect2.fireeye.com/v1/url?k=4c3cec56-13a7d549-4c3d6719-000babdfecba-4a95497e6559d80b&q=1&e=de99042b-e52d-46e2-9b4d-24a7bf034e4b&u=https%3A%2F%2Fnam10.safelinks.protection.outlook.com%2F%3Furl%3Dhttps%253A%252F%252Fwww.3gpp.org%252Fftp%252FTSG_RAN%252FWG4_Radio%252FTSGR4_102-e%252FDocs%252FR4-2205291.zip%26data%3D04%257C01%257COjas.choksi%2540LIGADO.COM%257C0fa6fb268026414c930208d9fc8f5f72%257Cfd5c25a7def24d1aaef8750e5e2992e5%257C0%257C0%257C637818515003895887%257CUnknown%257CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%253D%257C3000%26sdata%3DxGvGdeBELFjK7BGrr7fbQTg%252FzC4di07jqeimwpc1LoQ%253D%26reserved%3D0)7410 | TP for 38.101-5 on Rx Spurious emissions and spurious response for satellite UE | Huawei, HiSilicon | Approved |  |
| [R4-2207](https://protect2.fireeye.com/v1/url?k=83a3ee44-dc38d75b-83a2650b-000babdfecba-3969984517eea093&q=1&e=de99042b-e52d-46e2-9b4d-24a7bf034e4b&u=https%3A%2F%2Fnam10.safelinks.protection.outlook.com%2F%3Furl%3Dhttps%253A%252F%252Fwww.3gpp.org%252Fftp%252FTSG_RAN%252FWG4_Radio%252FTSGR4_102-e%252FDocs%252FR4-2205473.zip%26data%3D04%257C01%257COjas.choksi%2540LIGADO.COM%257C0fa6fb268026414c930208d9fc8f5f72%257Cfd5c25a7def24d1aaef8750e5e2992e5%257C0%257C0%257C637818515004052109%257CUnknown%257CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%253D%257C3000%26sdata%3DJ4V4lEsj0dVhEeej6CHfcZQ9gAa9X1%252FQ9BJW8xTwWJA%253D%26reserved%3D0)411 | TP for TS 38.101-5: Maximum input level (7.4) | ZTE Corporation | Approved |  |
| R4-2207412 | TP to TS 38.101-5 on 7.3 Reference sensitivity | HUGHES Network Systems Ltd | Postponed | not upload into draft inbox, please upload it as soon as possible. |
| R4-2207413 | TP for 38.101-5 clause 6.4 transmit signal qulity | CATT | Approved |  |
| TP to TR 38.863 | | | | |
| [R4-2207392](https://protect2.fireeye.com/v1/url?k=940a11f2-cb9128ed-940b9abd-000babdfecba-52e40e564725cdd9&q=1&e=de99042b-e52d-46e2-9b4d-24a7bf034e4b&u=https%3A%2F%2Fnam10.safelinks.protection.outlook.com%2F%3Furl%3Dhttps%253A%252F%252Fwww.3gpp.org%252Fftp%252FTSG_RAN%252FWG4_Radio%252FTSGR4_102-e%252FDocs%252FR4-2203960.zip%26data%3D04%257C01%257COjas.choksi%2540LIGADO.COM%257C0fa6fb268026414c930208d9fc8f5f72%257Cfd5c25a7def24d1aaef8750e5e2992e5%257C0%257C0%257C637818515004052109%257CUnknown%257CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%253D%257C3000%26sdata%3Ddn4DlUGA%252Fe2Q2pZ7Q7oebY5DH253kQHROkAZekUMK%252FU%253D%26reserved%3D0) | TP for 38.863: clause 7.3.2 Conducted transmission characteristics | CATT | Postponed |  |
| 2207397 | TP on TR 38.863 for NTN UE Tx requirements | Qualcomm Incorporated | Approved |  |
| R4-2207398 | Draft TP to update TR 38.863 clause 7.4.3.2 on NTN UE ACS | Mediatek India Technology Pvt. | Approved |  |
| R4-2207399 | Draft TP to update TR 38.863 clause 7.4.3.2 on Blocking characteristics | Mediatek India Technology Pvt. | Approved |  |
| R4-2207401 | TP for TR38.863 on Intermodulation characteristics for NTN UE | Xiaomi | Approved |  |
| R4-2207402 | TP for 38.863 on spurious response for NTN UE | Xiaomi | Approved |  |
| R4-2207403 | TP for TR 38.863: Unwanted emissions for NTN satellite UEs transmitting in 1626.5 to 1660.5 MHz | Ligado Networks | Approved |  |
| R4-2207406 | TP for TR 38.863: Updates to UE Maximum Output Power for n255 | Ligado Networks, Inmarsat | Approved |  |
| R4-2207414 | TP for 38.863 on UE Receiver characteristics for satellite access | Huawei, HiSilicon | Approved |  |

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**R4-2207416 WF on NTN UE RF requirement**

*Type: other For: Approval  
 Source: ZTE*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204344 Draft text proposal to update TS 38.101-5 Chapter 1**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Samsung R&D Institute UK*

**Abstract:**

This is a draft text proposal to update Chapter 1 of TS 38.101-5

**Decision: Merged.**

**R4-2207395 Draft text proposal to update TS 38.101-5 Chapter 1**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Samsung R&D Institute UK*

**Abstract:**

This is a draft text proposal to update Chapter 1 of TS 38.101-5

**Decision: Withdrawn.**

**R4-2205052 pCR to TS 38.101-5 - Scope**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.101-5 - Scope sub-clause

**Decision: Revised to R4-2207404 (from R4-2205052).**

**R4-2207404 pCR to TS 38.101-5 - Scope**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.101-5 - Scope sub-clause

**Decision: Approved.**

**R4-2205654 Selection of UE duplexer and REFSENS for band n256 in TS 38.101-5**

*Type: discussion For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Noted.**

##### 10.13.4.1 TX requirements

**R4-2203863 Discussion on NTN TX spurious emission for UE co-existence**

*Type: discussion For: Approval  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

**R4-2203926 Further discussion on UE Tx RF requirements for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2203959 TP for 38.101-5: clause 6.3 output power dynamics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Revised to R4-2207391 (from R4-2203959).**

**R4-2207391 TP for 38.101-5: clause 6.3 output power dynamics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Approved.**

**R4-2203960 TP for 38.863: clause 7.3.2 Conducted transmission characteristics**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Postponed.**

**R4-2207392 TP for 38.863: clause 7.3.2 Conducted transmission characteristics**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

**Decision: Postponed.**

**R4-2204504 Discussion on NTN UE RF requirements**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2204505 TP on TS 38.101-5 for general part of transmitter characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207396 (from R4-2204505).**

**R4-2207396 TP on TS 38.101-5 for general part of transmitter characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

**R4-2204506 TP on TR 38.863 for NTN UE Tx requirements**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Revised to R4-2207397 (from R4-2204506).**

**R4-2207397 TP on TR 38.863 for NTN UE Tx requirements**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Approved.**

**R4-2204807 TP for TS38.101-5 on section 6.2 transmitter power**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Revised to R4-2207415 (from R4-2204807).**

**R4-2207415 TP for TS38.101-5 on section 6.2 transmitter power**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Approved.**

**Further discuss whether Note 3 from 101-1 need to be applied for 101-5 on band n255.**

**R4-2204808 TP for 38.863 on MPR and A-MPR requirement for NTN UE**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Merged.**

**R4-2204809 Discussion on MPR and A-MPR requirements for NTN UE**

*Type: other For: Approval  
 Source: Xiaomi*

**Decision: Noted.**

**R4-2205043 TP for TR 38.863: Unwanted emissions for NTN satellite UEs transmitting in 1626.5 to 1660.5 MHz**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Revised to R4-2207403 (from R4-2205043).**

**R4-2207403 TP for TR 38.863: Unwanted emissions for NTN satellite UEs transmitting in 1626.5 to 1660.5 MHz**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Approved.**

**R4-2205050 NTN - UE RF Tx requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the remaining open issue of UE - Tx requirements

**Decision: Noted.**

**R4-2205110 TP for TR 38.863: Updates to UE Maximum Output Power for n255**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks, Inmarsat*

**Decision: Revised to R4-2207406 (from R4-2205110).**

**R4-2207406 TP for TR 38.863: Updates to UE Maximum Output Power for n255**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks, Inmarsat*

**Decision: Approved.**

**Session chair Note: Further discuss whether Note 3 from 101-1 need to be applied for 101-5 on band n255.**

**R4-2205235 pCR for TS 38.101-5: NS value and additional spurious requirements for n255**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Revised to R4-2207407 (from R4-2205235).**

**R4-2207407 pCR for TS 38.101-5: NS value and additional spurious requirements for n255**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ligado Networks*

**Decision: Not pursued.**

**R4-2205286 Discussion on UE Tx requirements for satellite access**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2205288 TP for 38.863 on UE transmitter characteristics for satellite access**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged**

**R4-2205290 TP for 38.101-5 on Output RF spectrum emissions for satellite UE**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207409 (from R4-2205290).**

**R4-2207409 TP for 38.101-5 on Output RF spectrum emissions for satellite UE**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207462 (from R4-2207409).**

**R4-2207462 TP for 38.101-5 on Output RF spectrum emissions for satellite UE**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Postponed.**

**R4-2205470 Discussion on NTN UE Tx RF requirements**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2204329 TP for 38.101-5: clause 6.4 transmit signal qulity**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

Session Chair Note: Move to this AI from AI 10.13.2

**Decision: Revised to R4-2207413 (from R4-2204329).**

**R4-2207413 TP for 38.101-5: clause 6.4 transmit signal qulity**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: CATT*

Session Chair Note: Move to this AI from AI 10.13.2

**Decision: Approved.**

##### 10.13.4.2 RX requirements

**R4-2203864 Discussion on UE RX REFSENS for NTN**

*Type: discussion For: Approval  
 Source: Mediatek India Technology Pvt.*

**Decision: Noted.**

**R4-2203927 Further discussion on UE Rx RF requirements for NTN**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

**R4-2204169 TP to TS 38.101-5 on clause 7.5 NTN UE ACS**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Revised to R4-2207393 (from R4-2204169).**

**R4-2207393 TP to TS 38.101-5 on clause 7.5 NTN UE ACS**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Approved.**

**R4-2204170 TP to TS 38.101-5 on clause 7.6 Blocking characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Revised to R4-2207394 (from R4-2204170).**

**R4-2207394 TP to TS 38.101-5 on clause 7.6 Blocking characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Approved.**

**R4-2204810 TP for TS38.101-5 on section 7.8 Intermodulation characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Revised to R4-2207400 (from R4-2204810).**

**R4-2207400 TP for TS38.101-5 on section 7.8 Intermodulation characteristics**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Approved.**

**R4-2204811 TP for 38.863 on Intermodulation characteristics for NTN UE**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Revised to R4-2207401 (from R4-2204811).**

**R4-2207401 TP for 38.863 on Intermodulation characteristics for NTN UE**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Approved.**

**R4-2204812 TP for 38.863 on spurious response for NTN UE**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Revised to R4-2207402 (from R4-2204812).**

**R4-2207402 TP for 38.863 on spurious response for NTN UE**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Xiaomi*

**Decision: Approved.**

**R4-2205053 pCR to TS 38.101-5 - Receiver requirements general**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.101-5 - Receiver requirements general sub-clause

**Decision: Revised to R4-2207405 (from R4-2205053).**

**R4-2207405 pCR to TS 38.101-5 - Receiver requirements general**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This contribution is a pCR to TS 38.101-5 - Receiver requirements general sub-clause

**Decision: Approved.**

**R4-2205287 Discussion on UE Rx requirements for satellite access**

*Type: other For: Approval  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

**R4-2205289 TP for 38.863 on UE Receiver characteristics for satellite access**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207414 (from R4-2205289).**

**R4-2207414 TP for 38.863 on UE Receiver characteristics for satellite access**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2205291 TP for 38.101-5 on Rx Spurious emissions and spurious response for satellite UE**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2207410 (from R4-2205291).**

**R4-2207410 TP for 38.101-5 on Rx Spurious emissions and spurious response for satellite UE**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

**R4-2205471 Discussion on NTN UE Rx RF requirements**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205473 TP for TS 38.101-5: Maximum input level (7.4)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207411 (from R4-2205473).**

**R4-2207411 TP for TS 38.101-5: Maximum input level (7.4)**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Approved.**

**R4-2204592 Draft TP to update TR 38.863 clause 7.4.3.2 on NTN UE ACS**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Revised to R4-2207398 (from R4-2204592).**

**R4-2207398 Draft TP to update TR 38.863 clause 7.4.3.2 on NTN UE ACS**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Approved.**

**R4-2204593 Draft TP to update TR 38.863 clause 7.4.3.2 on Blocking characteristics**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Revised to R4-2207399 (from R4-2204593).**

**R4-2207399 Draft TP to update TR 38.863 clause 7.4.3.2 on Blocking characteristics**

*Type: pCR For: Approval  
 38.863 v0.2.0 CR- rev Cat: (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Approved.**

**R4-2205608 TP to TS 38.101-5 on 7.3 Reference sensitivity**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Revised to R4-2207412 (from R4-2205608).**

**R4-2207412 TP to TS 38.101-5 on 7.3 Reference sensitivity**

*Type: pCR For: Approval  
 38.101-5 v0.0.1 CR- rev Cat: (Rel-17)  
  
 Source: HUGHES Network Systems Ltd*

**Decision: Postponed.**

#### 10.13.6 Demodulation requirements

##### 10.13.6.1 General

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**Email discussion for [102-e][325] NR\_NTN\_Demod, AI 10.13.6-Bin Han**

**R4-2207169 Email discussion summary for [102-e][325] NR\_NTN\_Demod**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207442 (from R4-2207169).**

**R4-2207442 Email discussion summary for [102-e][325] NR\_NTN\_Demod**

*Type: other For: Information  
 Source: Moderator (Qualcomm)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207464 | WF on general and NTN UE demodulation requirements | Qualcomm Incorporated | Approved |  |
| R4-2207198 | WF on NTN SAN demodulation requirements | Huawei, HiSilicon | Approved |  |

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**R4-2207197 WF on general and NTN UE demodulation requirements**

*Type: other For: Approval  
 Source:Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207463 (from R4-2207197).**

**R4-2207463 WF on general and NTN UE demodulation requirements**

*Type: other For: Approval  
 Source:Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207464 (from R4-2207463).**

**R4-2207464 WF on general and NTN UE demodulation requirements**

*Type: other For: Approval  
 Source:Qualcomm*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207198 WF on NTN SAN demodulation requirements**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Issue 2-1-2: Delay spread model**

*Candidate options*

* Option 1: Single delay spread
  + Option 1a: 100ns
  + Option 1b: 250ns
* Option 2: Different delay spread
  + Option 2a: 10ns/50ns/150ns
  + Option 2b: 10ns/50ns/250ns.

Agreement: option 1a

**Decision: Approved.**

**R4-2204027 Discussion on general issue of NTN demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on general issue of NTN demodulation

**Decision: Noted.**

**R4-2205763 Discussion on NTN general issues**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.13.6.2 Satellite Access Node demodulation requirements

**R4-2206003 Discussion on Satellite Access Node demodulation requirements for NR NTN**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

###### 10.13.6.2.1 PUSCH requirements

**R4-2204028 Discussion on NTN PUSCH demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on NTN PUSCH demodulation

**Decision: Noted.**

**R4-2205764 Discussion on satellite NTN demod PUSCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 10.13.6.2.2 PUCCH requirements

**R4-2204029 Discussion on NTN PUCCH demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on NTN PUCCH demodulation

**Decision: Noted.**

**R4-2205765 Discussion on satellite NTN demod PUCCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 10.13.6.2.3 PRACH requirements

**R4-2204030 Discussion on NTN PRACH demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on NTN PRACH demodulation

**Decision: Noted.**

**R4-2205766 Discussion on satellite NTN demod PRACH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.13.6.3 UE demodulation requirements

**R4-2206004 Discussion on UE demodulation requirements for NR NTN**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

###### 10.13.6.3.1 PDSCH requirements

**R4-2205430 Discussion on PDSCH requirements for NTN**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the left open issues of PDSCH requirements for NTN

**Decision: Noted.**

**R4-2205767 Discussion on UE NTN demod PDSCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206123 Views on NTN UE PDSCH Requirements**

*Type: discussion For: Discussion  
 Source: Qualcomm CDMA Technologies*

**Decision: Noted.**

###### 10.13.6.3.2 PDCCH/PBCH requirements

**R4-2205432 Discussion on PDCCH and PBCH requirements for NTN**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Share our views on whether to have such requirement

**Decision: Noted.**

**R4-2205768 Discussion on UE NTN demod PDCCH&PBCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.13.6.4 CSI requirements

**R4-2205431 Discussion on CSI reporting requirements for NTN**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Share our views on whether to have such requirement

**Decision: Noted.**

**R4-2205769 Discussion on UE NTN CSI**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206126 Views on NTN UE CSI Tests**

*Type: discussion For: (not specified)  
 Source: Qualcomm CDMA Technologies*

**Decision: Noted.**

### 10.14 UE Power Saving Enhancements for NR

#### 10.14.4 Demodulation performance requirements

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**Email discussion for [102-e][326] NR\_UE\_pow\_sav\_enh\_Demod\_NWM, AI 10.14.4-Licheng Lin**

**R4-2207170 Email discussion summary for [102-e][326] NR\_UE\_pow\_sav\_enh\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (MTK)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207443 (from R4-2207170).**

**R4-2207443 Email discussion summary for [102-e][326] NR\_UE\_pow\_sav\_enh\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (MTK)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207225 | Way Forward on demodulation requirements for power saving enhancement | MediaTek | Approved |  |

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**R4-2207225 Way Forward on demodulation requirements for power saving enhancement**

*Type: other For: Approval  
 Source: MTK*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2203759 UE power saving enhancement: demod performance requirements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204535 Discussion on demodulation for UE power saving enhancement**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205099 UE demodulation requirements for UE power saving enhancement**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution shows our view on the UE demodulation requirements due to Rel-17 UE power saving.

**Decision: Noted.**

**R4-2205770 Discussion on for power saving enhancement demod**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205912 Views on demodulation requirements for power saving enhancements**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

### 10.15 NR Sidelink enhancement

#### 10.15.7 Demodulation performance requirements

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**Email discussion for [102-e][332] NR\_SL\_enh\_Demod\_NWM, AI 10.15.7-Jin-yup Hwang**

**R4-2207171 Email discussion summary for [102-e][332] NR\_SL\_enh\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (LGE)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207444 (from R4-2207171).**

**R4-2207444 Email discussion summary for [102-e][332] NR\_SL\_enh\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (LGE)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207224 | WF on SL enhancement demodulation | LG Electronics | Approved |  |

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**R4-2207224 WF on SL enhancement demodulation**

*Type: other For: Approval  
 Source: LGE*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204317 Work plan and scope for NR sidelink enhancement demodulation performance**

*Type: Work Plan For: Approval  
 Source: LG Electronics Inc.*

**Decision: Noted.**

**R4-2205801 Discussions on Rel-17 sidelink UE requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

### 10.16 Extending current NR operation to 71GHz

#### 10.16.4 BS RF requirements

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**Email discussion for [102-e][312] NR\_exto71GHz\_BSRF, AI 10.16.4, 10.16.5-Toni lahteensuo**

**R4-2207172 Email discussion summary for [102-e][312] NR\_exto71GHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207445 (from R4-2207172).**

**R4-2207445 Email discussion summary for [102-e][312] NR\_exto71GHz\_BSRF**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207222 | Draft CR for TS 38.104 on introduction of BS RF Rx requirements for 57-71GHz in section 10.6 – 10.9 | ZTE Corporation | Endorsed |  |
| R4-2207220 | Draft CR to TS 38.104: Addition of requirements for NR extension up to 71 GHz in subclause 9.6 to 9.8 | Ericsson | Endorsed |  |
| R4-2207221 | Draft CR to TR 38.104: Clauses 9.1 to 9.5 | Nokia, Nokia Shanghai Bell | Endorsed |  |
| R4-2207216 | WF on >52.6 GHz BS RF Tx Requirements | Nokia, Nokia Shanghai Bell | Approved |  |
| R4-2207217 | WF on >52.6 GHz BS RF Rx Requirements | Ericsson | Approved |  |
| R4-2207218 | WF on >52.6 GHz BS RF conformance aspects | Keysight | Approved |  |
| R4-2207219 | DraftCR on for TS 38.104 for >52.6 GHz on clauses 10.1 – 10.5 | CATT | Endorsed |  |
| R4-2207457 | DraftCR on for TS 38.104 for >52.6 GHz licensed operation | Ercisson | Endorsed |  |

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**R4-2207216 WF on >52.6 GHz BS RF Tx Requirements**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207217 WF on >52.6 GHz BS RF Rx Requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207218 WF on >52.6 GHz BS RF conformance aspects**

*Type: other For: Approval  
 Source: Keysight*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207457 DraftCR on for TS 38.104 for >52.6 GHz licensed operation**

*Type: draftCR           For: Endorsement  
                              38.104 v17.4.0      CR-  rev  Cat: B (Rel-17)  
                              Source: Ericsson*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

**R4-2207219 DraftCR on for TS 38.104 for >52.6 GHz on clauses 10.1 – 10.5**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
 Source: CATT*

**Abstract:**

**Discussion:**

**Decision: Endorsed.**

##### 10.16.4.1 TX requirements

**R4-2203577 On BS RF transmitter requirements for the frequency range 52 to 71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present an overview of BS transmitter requirements, additional information and some proposals necessary to progress the work related to defining RF core requirements for the NR extension up to 71 GHz.

**Decision: Noted.**

**R4-2203579 Draft CR to TS 38.104: Addition of requirements for NR extension up to 71 GHz in subclause 9.6 to 9.8**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

As part of the work to extend NR frequency range up to 71 GHz this draft CR adds information related to requirements to subclauses 9.6 to 9.8. Additions will be collected in a “big” CR for the complete update of TS 38.104.

**Decision: Revised to R4-2207220 (from R4-2203579).**

**R4-2207220 Draft CR to TS 38.104: Addition of requirements for NR extension up to 71 GHz in subclause 9.6 to 9.8**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

As part of the work to extend NR frequency range up to 71 GHz this draft CR adds information related to requirements to subclauses 9.6 to 9.8. Additions will be collected in a “big” CR for the complete update of TS 38.104.

**Decision: Endorsed.**

**R4-2203649 Proposals on BS transmitter requirements for extending current NR operation to 71 GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides further proposals on BS transmitter requirements for extending current NR operation to 71 GHz according to the approved WF and the findings in the corresponding study item as recorded in TR 38.808.

**Decision: Noted.**

**R4-2203650 Draft CR to TR 38.104: Clauses 9.1 to 9.5**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Required changes to clauses 9.1 to 9.5 for extending current NR operation to 71 GHz

**Decision: Revised to R4-2207221 (from R4-2203650).**

**R4-2207221 Draft CR to TR 38.104: Clauses 9.1 to 9.5**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Required changes to clauses 9.1 to 9.5 for extending current NR operation to 71 GHz

**Decision: Endorsed.**

**R4-2203975 Discussion on BS TX RF requirements for 52 6-71GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2204436 Discussion on BS RF Tx requirements for 52.6 – 71 GHz**

*Type: discussion For: Approval  
 Source: NEC*

**Abstract:**

TAE, EVM, OBUE requirements for 52.6-71GHz are discussed.

**Decision: Noted.**

**R4-2205460 Further discussion on BS Tx requirements for 52.6-71GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2206119 Discussion on the remaining BS RF requirements for FR2-2: Tx requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution, we provide feedback on the remaining BS RF Tx requirements for FR2-2.

**Decision: Noted.**

##### 10.16.4.2 RX requirements

**R4-2203578 On BS RF receiver requirements for the frequency range 52 to 71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we continue the discussion from [2] on BS RF receiver requirements relevant for the NR extension to support up to 71 GHz. The contribution presents an overview of base station receiver requirement changes compared to current version o

**Decision: Noted.**

**R4-2203651 Proposals on BS receiver requirements for extending current NR operation to 71 GHz**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides further proposals on BS receiver requirements for extending current NR operation to 71 GHz according to the approved WF and the findings in the corresponding study item as recorded in TR 38.808.

**Decision: Noted.**

**R4-2203976 Discussion on BS RX RF requirements for 52 6-71GHz**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**R4-2205461 Further discussion on BS Rx requirements for 52.6-71GHz**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2205462 Draft CR for TS 38.104 on introduction of BS RF Rx requirements for 57-71GHz in section 10.6 – 10.9**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207222 (from R4-2205462).**

**R4-2207222 Draft CR for TS 38.104 on introduction of BS RF Rx requirements for 57-71GHz in section 10.6 – 10.9**

*Type: draftCR For: Endorsement  
 38.104 v17.4.0 CR- rev Cat: B (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

**R4-2206120 Discussion on the remaining BS RF requirements for FR2-2: Rx requirements**

*Type: discussion For: Discussion  
 Source: Huawei, HiSilicon*

**Abstract:**

In this contribution, we provide feedback on the remaining BS RF Rx requirements for FR2-2.

**Decision: Noted.**

#### 10.16.5 BS RF conformance testing

**R4-2203582 Initial considerations related to BS RF conformance testing and NR extension up to 71 GHz**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we present some high-level considerations to initiate the discussion on how to update the BS RF conformance test specification (TS 38.141-2) to extend the frequency range up to 71 GHz.

**Decision: Noted.**

**R4-2203652 Proposals on BS RF conformance testing for extending current NR operation to 71 GHz** *Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

This contribution provides proposals on BS RF conformance testing requirements for extending current NR operation to 71 GHz, focusing on test complexity with the shorter slot durations for the larger 480 kHz SCS and 960 kHz SCS.

**Decision: Noted.**

**R4-2204712 about FR2-2 BS conformance test system MU**

*Type: discussion For: Approval  
 38.141-2 v17.4.0 CR- rev Cat: (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Noted.**

**R4-2205668 Discussion on limitation of the measurement interval for the determination of the averaged EVM for FR2-2, test time improvements and possible impact on measuring uncertainties (minimal)**

*Type: discussion For: Agreement  
 Source: ROHDE & SCHWARZ, KEYSIGHT*

**Abstract:**

Discussion on limitation of the measurement interval for the determination of the averaged EVM for FR2-2, test time improvements and possible impact on measuring uncertainties (minimal). See original R-2111749

**Decision: Noted.**

#### 10.16.10 Demodulation and CSI requirements

##### 10.16.10.1 General

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**Email discussion for [102-e][327] NR\_exto71GHz\_Demod\_NWM, AI 10.16.10-Artyom Putilin**

**R4-2207173 Email discussion summary for [102-e][327] NR\_exto71GHz\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207446 (from R4-2207173).**

**R4-2207446 Email discussion summary for [102-e][327] NR\_exto71GHz\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207223 | WF on demodulation performance requirements definition for 52.6 - 71 GHz. | Intel Corporation | Approved |  |
| R4-2207205 | Work plan for FR2-2 demodulation performance requirement definition | Intel | Approved |  |

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**R4-2207223 WF on demodulation performance requirements definition for 52.6 - 71 GHz**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Issue 1-3-2: RMS delay spread**

TDL channel model:

* Option 1: TDL-A
* Option 2: TDL-D

RMS Delay spread:

* Option 1: 5ns
* Option 2: 10ns
* Option 3: 20ns

Note: Definition of requirements with different channel models is not precluded

Considering below candidate combinations on {SCS, RMS Delay spread} for initial simulation purpose:

* 120kHz: 10ns
* 480kHz: 10ns/5ns
* 960kHz: 10ns/5ns
* Other options not precluded

**Decision: Approved.**

**R4-2203530 Discussion on general demodulation requirements for the extension to 71 GHz**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2204031 Discussion on general issue of NR extended to 71GHz demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on general issue of NR extended to 71GHz demodulation

**Decision: Noted.**

**R4-2204589 Discussion on BS demodulation requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this paper we provide our view on the BS demodulation requirements. We present the new requirements emerge from extending current NR operation to 71GHz, and how those new requirements may influence the requirements based on the existing PRACH, PUCCH, a

**Decision: Noted.**

**R4-2205916 Work management for FR2-2 demodulation performance requirement definition**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Decision: Revised to R4-2207205 (from R4-2205916).**

**R4-2207205 Work plan for FR2-2 demodulation performance requirement definition**

*Type: discussion For: Approval  
 Source: Intel Corporation*

**Decision: Approved.**

**R4-2205917 General views on FR2-2 demodulation performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 10.16.10.2 UE Demodulation and CSI requirements

**R4-2204584 UE demodulation and CSI reporting requirements for FR2-2**

*Type: discussion For: Discussion  
 38.101-4 v17.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

Discussion on UE demodulation and CSI reporting requirements for FR2-2

**Decision: Noted.**

**R4-2204834 On ext\_to\_71GHz UE Demodulation and CSI requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have presented Nokia’s point of view concerning the UE demodulation requirements for the extension to 71 GHz.

**Decision: Noted.**

**R4-2205802 Discussions on UE requirements for NR extension to 71GHz**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205918 View on FR2-2 UE demodulation performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 10.16.10.3 BS demodulation requirements

**R4-2204032 Discussion on f NR extended to 71GHz BS demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on f NR extended to 71GHz BS demodulation

**Decision: Noted.**

**R4-2204395 View on FR2-2 BS demodulation performance requirements**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2205803 Discussions on BS requirements for NR extension to 71GHz**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

### 10.17 Enhancements to Integrated Access and Backhaul (IAB) for NR

#### 10.17.1 General

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**Email discussion for [102-e][313] NR\_eIAB\_RF, AI 10.17.1, 10.17.2, 10.17.3-Yankun Li**

**R4-2207174 Email discussion summary for [102-e][313] NR\_eIAB\_RF**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207447 (from R4-2207174).**

**R4-2207447 Email discussion summary for [102-e][313] NR\_eIAB\_RF**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

Session chair Note: It’s RAN4 common understanding with the agreed draftCRs in this meeting, Rel-17 eIAB RF core part can be considered as completed.

**GTW discussion on Feb25th**

**Issue 1-2-1: Timing error between intra-node MT TX and DU TX for case#6**

* Candidate options:
* Option 1: To specify TAE between IAB-MT and IAB-DU in timing case #6 (Nokia, Samsung, ZTE)
  + - The requirement value is min [3us , 4.69 / (SCS/15 kHz) µs].
* Option 2: No TAE between IAB-MT and IAB-DU (Huawei, Ericsson)

Agreement: Introducing this requirement into core specification

* Whether IAB need to pass corresponding conformance test cases if introduced pending on IAB declaration
* Further discuss the details of conformance test cases if introduced in conformance phase
  + It’s FFS whether conformance test cases needed or not considering test feasibility
* Note: Cell phase sync performance maybe relaxed by TAE. If relaxtion not acceptable, RAN4 can further revisit the agreement.

Ericcson: We would like to see the feedback from operators for above requirements. Cell phase sync requirements is relaxed by TAE.

ZTE: Please check whether N\_TA\_offset for IAB-MT transmission should be updated due to the potential increasing cell sync error.  In past, N\_TA\_offset should consider both cell sync error and ON-OFF transition period to avoid the cross -cell interference.

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207213 | Draft CR for RF requirements due to Tx power imbalance between IAB-MT and IAB-DU | ZTE Corporation | Endorsed |  |
| R4-2207214 | Draft CR to 38.174: update to general clause for R17 enhancement | Samsung | Endorsed |  |
| R4-2207215 | DraftCR to TS 38.174: Introduction of conducted transmitter requirements for eIAB | Nokia | Endorsed |  |
| R4-2207212 | WF on candidate issues for NR eIAB conformance testing | Samsung | Approved |  |

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**R4-2207212 WF on candidate issues for NR eIAB conformance testing**

*Type: other For: Approval  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2204583 Big CR to TS38.174 for Rel-17 IAB enhancement**

*Type: CR For: Agreement  
 38.174 v16.5.0 CR-0024 rev Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision:** Email approval

#### 10.17.2 RF requirements

##### 10.17.2.1 Impact for Simultaneous operation of IAB child and parent links

**R4-2204434 Draft CR for RF requirements due to Tx power imbalance between IAB-MT and IAB-DU**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Revised to R4-2207213 (from R4-2204434).**

**R4-2207213 Draft CR for RF requirements due to Tx power imbalance between IAB-MT and IAB-DU**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

**R4-2204579 Draft CR to 38.174: update to general clause for R17 enhancement**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision: Revised to R4-2207214 (from R4-2204579).**

**RR4-2207214 Draft CR to 38.174: update to general clause for R17 enhancement**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: Samsung*

**Decision: Endorsed.**

**R4-2206043 DraftCR to TS 38.174: Introduction of conducted transmitter requirements for eIAB**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2207215 (from R4-2206043).**

**R4-2207215 DraftCR to TS 38.174: Introduction of conducted transmitter requirements for eIAB**

*Type: draftCR For: Endorsement  
 38.174 v16.5.0 CR- rev Cat: B (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

##### 10.17.2.2 Impact for Timing enhancement

**R4-2204433 Discussion on timing issues for simultaneous operation of IAB**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2204580 Timing enhancement on Rel-17 IAB**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

**R4-2205527 IAB MT /DU case 6 timing**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our view on RF impact on simultaneous operation of DU and MT.

**Decision: Noted.**

**R4-2205975 eIAB – case#6 intra node TAE**

*Type: discussion For: Discussion  
 Source: Huawei*

**Abstract:**

Discussion on open issue for case #6 intra-node IAB0DU to IAB-MT TAE

**Decision: Noted.**

**R4-2206044 Discussion on timing error for eIAB**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

##### 10.17.2.3 Others

#### 10.17.3 RF conformance testing

**R4-2204581 Initial discussion on Rel-17 IAB enhancement on RF conformance testing**

*Type: other For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205202 Discussion on eIAB performance works**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Noted.**

**R4-2205526 IAB conformance testing aspects**

*Type: discussion For: Approval  
 Source: Ericsson*

**Abstract:**

In this paper, we present our overview on conformance testing in Rel-17

**Decision: Noted.**

#### 10.17.5 Demodulation requirements

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**Email discussion for [102-e][328] NR\_eIAB\_Demod\_NWM, AI 10.17.5-Mueller, Axel**

**R4-2207175 Email discussion summary for [102-e][328] NR\_eIAB\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207448 (from R4-2207175).**

**R4-2207448 Email discussion summary for [102-e][328] NR\_eIAB\_Demod\_NWM**

*Type: other For: Information  
 Source: Moderator (Nokia)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207199 | WF on specification of Rel-17 NR\_IAB\_enh demodulation requirements | Nokia, Nokia Shanghai Bell | Approved |  |

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**R4-2207199 WF on specification of Rel-17 NR\_IAB\_enh demodulation requirements**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205771 Discussion on eIAB demod**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

Session Chair: Move to this AI from AI 10.17.4

**Decision: Noted.**

**R4-2205966 On IAB Enhanced Demodulation Performance Requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

Session Chair: Move to this AI from AI 10.17.4

**Decision: Noted.**

**R4-2204582 Initial discussion on demodulation aspect for Rel-17 IAB enhancement**

*Type: other For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205032 eIAB demodulation requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Discussion on demodulation requirements for eIAB

**Decision: Noted.**

### 10.18 NR coverage enhancements

#### 10.18.3 BS demodulation requirements

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**Email discussion for [102-e][329] NR\_cov\_enh\_Demod, AI 10.18.3-Jingzhou Wu**

**R4-2207176 Email discussion summary for [102-e][329] NR\_cov\_enh\_Demod**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207449 (from R4-2207176).**

**R4-2207449 Email discussion summary for [102-e][329] NR\_cov\_enh\_Demod**

*Type: other For: Information  
 Source: Moderator (China Telecom)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207210 | WF on PUSCH demodulation performance of Rel-17 NR coverage enhancement | China Telecom | Approved |  |
| R4-2207211 | WF on PUCCH demodulation performance of Rel-17 NR coverage enhancement | Nokia | Approved |  |

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**R4-2207210 WF on PUSCH demodulation performance of Rel-17 NR coverage enhancement**

*Type: other For: Approval  
 Source: China Telecom*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207211 WF on PUCCH demodulation performance of Rel-17 NR coverage enhancement**

*Type: other For: Approval  
 Source: Nokia*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2206132 JCE BS demodulation requirements**

*Type: discussion For: Discussion  
 Source: MediaTek (Chengdu) Inc.*

**Decision: Noted.**

##### 10.18.3.1 PUSCH requirements

**R4-2203552 View on PUSCH demodulation requirement for Rel-17 coverage enhancement**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205489 PUSCH demodulation performance of Rel-17 NR coverage enhancements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution, we have provided parameters to test PUSCH enhancements performance.

**Decision: Noted.**

**R4-2205500 On BS PUSCH demodulation requirements for NR coverage enhancements**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205772 Discussion on BS coverage enhancement demod PUSCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205817 Discussion on PUSCH demodulation requirements for NR coverage enhancements WI**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204033 Discussion on NR coverage enhancement PUSCH demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on NR coverage enhancement PUSCH demodulation

Session Chair Note: Moved to this AI from AI 10.16.3

**Decision: Noted.**

##### 10.18.3.2 PUCCH requirements

**R4-2203553 View on PUCCH demodulation requirement for Rel-17 coverage enhancement**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205490 PUCCH demodulation performance of Rel-17 NR coverage enhancements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution, we have provided parameters to test PUSCH enhancements performance.

**Decision: Noted.**

**R4-2205501 On BS PUCCH demodulation requirements for NR coverage enhancements**

*Type: discussion For: Discussion  
 Source: China Telecom*

**Decision: Noted.**

**R4-2205773 Discussion on BS coverage enhancement demod PUCCH**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205818 Discussion on PUCCH demodulation requirements for NR coverage enhancements WI**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2204034 Discussion on NR coverage enhancement PUCCH demodulation**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on NR coverage enhancement PUCCH demodulation

Session Chair Note: Moved ot this AI from AI 10.16.3

**Decision: Noted.**

### 10.19 Further enhancements on MIMO for NR

#### 10.19.4 UE Demodulation and CSI requirements

##### 10.19.4.1 General

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**Email discussion for [102-e][330] NR\_FeMIMO\_Demod, AI 10.19.4-Yunchuan Yang**

**R4-2207177 Email discussion summary for [102-e][330] NR\_FeMIMO\_Demod**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207450 (from R4-2207177).**

**R4-2207450 Email discussion summary for [102-e][330] NR\_FeMIMO\_Demod**

*Type: other For: Information  
 Source: Moderator (Samsung)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207207 | WF on demodulation requirement for Enhancement on Multi-TRP | Huawei, HiSilicon | Approved |  |
| R4-2207208 | WF on demodulation requirement for Enhancement on HST-SFN deployment | Intel | Approved |  |
| R4-2207209 | WF on CSI requirement for Rel-17 FeMIMO | Samsung | Approved |  |

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**R4-2207207 WF on demodulation requirement for Enhancement on Multi-TRP**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207208 WF on demodulation requirement for Enhancement on HST-SFN deployment**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2207209 WF on CSI requirement for Rel-17 FeMIMO**

*Type: other For: Approval  
 Source: Samsung*

**Abstract:**

**Discussion:**

**Issue 5-1-1: whether to define PMI reporting requirement for inter-cell interference scenario in Rel-17 FeMIMO**

* FFS to define PMI reporting requirement with inter-cell interference in Rel-17 FeMIMO WI
* FFS on where to handle the PMI reporting requirement with inter-cell interference
  + Option 1: Rel-17 TEI
  + Option 2: Rel-18 timeframe
  + Option 3: Rel-17 FeMIMO WI

**Agreement:**

The issue for PMI reporting requirement for inter-cell interference scenario is out of existing Rel-17 FeMIMO scope, how to handle this issue subject to further decision/guidance from RAN-P; the candaidate options discussed in RAN4 as following:

* + Option 1: Rel-17 TEI
  + Option 2: Rel-18 timeframe
  + Option 3: update Rel-17 FeMIMO WI to include this objective

**Decision: Approved.**

##### 10.19.4.2 Demodulation requirements

**R4-2204735 Over view on Rel-17 FeMIMO demodulation requirements**

*Type: discussion For: Discussion  
 Source: SAMSUNG*

**Decision: Noted.**

###### 10.19.4.2.1 Enhancement on HST-SFN scenario

**R4-2203777 On demod requirements for HST Enahncements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204163 Views on Rel-17 HST-SFN scheme**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

**R4-2204268 Discussion on demodulation requirements for enhancement to support HST-SFN**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

**R4-2205428 Discussion on enhancement on HST-SFN scenario**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the left open issues of HST-SFN scenario

**Decision: Noted.**

**R4-2205774 Discussion on UE FeMIMO demod HST-SFN**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205920 Discussion on demodulation performance requirements definition for Rel-17 enhancements on HST-SFN**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

**R4-2206100 Views on FeMIMO HST Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm CDMA Technologies*

**Decision: Noted.**

###### 10.19.4.2.2 Enhancement on Multi-TRP

**R4-2203778 On demod requirements for multi-TRP Enahncements**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2205427 Discussion on enhancement on Multi-TRP**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the left open issues of multi-TRP

**Decision: Noted.**

**R4-2205775 Discussion on UE FeMIMO demod mTRP**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205919 Discussion on demodulation performance requirements definition for Rel-17 enhancements on Multi-TRP Tx**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 10.19.4.3 CSI requirements

**R4-2203779 On requirements for CSI Enahncements for FeMIMO**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204784 Views on FeMIMO CSI requirements**

*Type: discussion For: (not specified)  
 Source: SAMSUNG*

**Decision: Noted.**

###### 10.19.4.3.1 CSI reporting for Multi-TRP transmission

**R4-2205429 Discussion on CSI reporting for Multi-TRP transmission**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the left open issues of CSI reporting for multi-TRP transmission

**Decision: Noted.**

**R4-2205438 On CSI reporting for Multi-TRP transmission for FeMIMO**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have presented Nokia’s point of view concerning the Release-17 Scope of CSI reporting for Multi-TRP transmission, after giving some background on Multi-DCI vs Single-DCI considerations.

**Decision: Noted.**

**R4-2205776 Discussion on UE FeMIMO CSI mTRP**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2206108 Views on FeMIMO CSI Tests**

*Type: discussion For: Discussion  
 Source: Qualcomm CDMA Technologies*

**Decision: Noted.**

###### 10.19.4.3.2 Rel-17 eType II port selection codebook

**R4-2204829 On Rel-17 eType II port selection codebook for FeMIMO**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we have presented Nokia’s point of view concerning the CSI reporting performance requirement impact of the Rel-17 “further enhanced type II port selection codebook”, after giving some background on the new features and inner workings

**Decision: Noted.**

**R4-2205426 Discussion on Rel-17 eType II port selection codebook**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Share our views on whether to have such requirement

**Decision: Noted.**

**R4-2205777 Discussion on UE FeMIMO CSI FeTypeII PS codebook**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 10.19.4.3.3 Others

**R4-2205425 Discussion on false PMI reporting in inter-cell interference scenario**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Further discuss the detail of false PMI reporting issue and share some initial evaluations

**Decision: Noted.**

**R4-2205778 Discussion on UE FeMIMO CSI others**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205908 Discussion on PMI requirements for inter-cell interference scenario**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

### 10.20 Support of reduced capability NR devices

#### 10.20.4 UE demodulation and CSI requirements

**R4-2205001 On UE demodulation and CSI requirements for RedCap UE**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

##### 10.20.4.1 General

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**Email discussion for [102-e][331] NR\_RedCap\_Demod, AI 10.20.4-Kazuyoshi Uesaka**

**R4-2207178 Email discussion summary for [102-e][331] NR\_RedCap\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207451 (from R4-2207178).**

**R4-2207451 Email discussion summary for [102-e][331] NR\_RedCap\_Demod**

*Type: other For: Information  
 Source: Moderator (Ericsson)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207206 | WF on RedCap UE demodulation and CQI reporting requirements | Ericsson | Approved |  |

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**R4-2207206 WF on RedCap UE demodulation and CQI reporting requirements**

*Type: other For: Ericsson  
 Source: Approval*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2205094 General issues on UE demodulation and CSI requirements for RedCap**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the general issues on UE demodulation requirements and CSI reporting requirements for RedCap

**Decision: Noted.**

**R4-2205600 Motivation on the support of CRS-IM for Redcap UE**

*Type: other For: Approval  
 Source: ZTE Corporation*

**Decision: Noted.**

**R4-2206074 Introduction of RedCap Demodulation Requirements**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

##### 10.20.4.2 Demodulation requirements

**R4-2205819 Discussion on Demodulation requirements for reduced capability NR devices**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

###### 10.20.4.2.1 PDSCH/SDR requirements

**R4-2203780 On PDSCH Demod Requirements for Reduced Capability Devices in NR**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204585 Discussion on PDSCH/SDR requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we will express our views on the open issues related to PDSCH/SDR requirements and open new discussions, if necessary.

**Decision: Noted.**

**R4-2205095 PDSCH demodulation requirements for RedCap**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues on PDSCH demodulation requirements fo RedCap UE

**Decision: Noted.**

**R4-2205804 Discussions on common parameters and PDSCH requirements for Rel-17 Redcap UE**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205907 Discussion for the PDSCH requirements for RedCap**

*Type: discussion For: Discussion  
 Source: MediaTek inc.*

**Decision: Noted.**

###### 10.20.4.2.2 PDCCH/PBCH requirements

**R4-2203781 On PDCCH PBCH Demod Requirements for Reduced Capability Devices in NR**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2204586 Discussion on PDCCH/PBCH requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we will express our views on the open issues of PDCCH/PBCH requirements and open new discussions, if necessary.

**Decision: Noted.**

**R4-2205096 PDCCH/PBCH demodulation requirements for RedCap**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues on PDCCH/PBCH demodulation requirements fo RedCap UE

**Decision: Noted.**

**R4-2205805 Discussions on Rel-17 redcap UE PDCCH and PBCH requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

##### 10.20.4.3 CSI requirements

**R4-2203782 On CSI Reporting Requirements for Reduced Capability Devices in NR**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

**R4-2205806 Discussions on Rel-17 redcap UE CSI requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205820 Discussion on CSI requirements for reduced capability NR devices**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

###### 10.20.4.3.1 CQI requirements

**R4-2204587 Discussion on CQI requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we will express our views on the open issues related to CQI requirements and open new discussions, if necessary.

**Decision: Noted.**

**R4-2205097 CQI reporting requirements for RedCap**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues on CQI reporting requirements fo RedCap UE

**Decision: Noted.**

###### 10.20.4.3.2 PMI/RI requirements

**R4-2204588 Discussion on PMI/RI requirements**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

In this contribution we will express our views on the open issues related to PMI/RI requirements and open new discussions, if necessary.

**Decision: Noted.**

**R4-2205098 PMI/RI reporting requirements for RedCap**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses the open issues on PMI/RI reporting requirements fo RedCap UE

**Decision: Noted.**

## 11 Rel-17 Study Items for NR

### 11.1 Study on enhanced test methods for FR2 in NR

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**Email discussion for [102-e][337] FR2\_enhTestMethods, AI 11.1-Aida Vera Lopez**

**R4-2207179 Email discussion summary for [102-e][337] FR2\_enhTestMethods**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207452 (from R4-2207179).**

**R4-2207452 Email discussion summary for [102-e][337] FR2\_enhTestMethods**

*Type: other For: Information  
 Source: Moderator (Intel)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207203 | TP to TR38.884 on minimum SNR for RRM test cases for band n263 | Apple | Approved |  |
| R4-2207204 | TP to TR38.884 on minimum SNR for demodulation test cases for band n263 | Apple | Approved |  |
| R4-2204964 | TP to TR38.884 on applicability extension of test methods for band FR2-2 | vivo | Merged | Content will be merged into the revision of R4-2206092 |
| R4-2207202 | TP for TR 38.884 on NR test methods extension to FR2-2 | Intel Corporation | Approved |  |
| R4-2207201 | WF on FR2-2 OTA test methods | Intel Corporation | Approved |  |

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**R4-2207201 WF on FR2-2 OTA test methods**

*Type: other For: Approval  
 Source: Intel*

**Abstract:**

**Discussion:**

**Decision: Approved.**

**R4-2203706 Proposals to conclude the enhanced test methods study item**

*Type: discussion For: Approval  
 Source: Apple*

**Decision: Noted.**

#### 11.1.1 Maintenance on objectives 1~6

#### 11.1.2 OTA test methods for UE RF, RRM and demodulation for 52.6~71GHz

##### 11.1.2.1 General

**R4-2206092 TP for TR 38.884 on NR test methods extension to FR2-2**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Revised to R4-2207202 (from R4-2206092).**

**R4-2207202 TP for TR 38.884 on NR test methods extension to FR2-2**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Intel Corporation*

**Decision: Approved.**

###### 11.1.2.1.1 Test system assumption

###### 11.1.2.1.2 UE types

**R4-2203636 On FR2-2 Antenna Assumptions**

*Type: discussion For: Approval  
 Source: Keysight Technologies UK Ltd*

**Abstract:**

This contribution is addressing FR2-2 antenna assumption topics that have not been concluded yet

**Decision: Noted.**

**R4-2205007 Discussion on FR2-2 OTA test methods**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 11.1.2.1.3 MU assessment

###### 11.1.2.1.4 Others

**R4-2204964 TP to TR38.884 on applicability extension of test methods for band FR2-2**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: vivo*

**Decision: Merged.**

**R4-2206091 On general aspects and UE testing methodology for FR2-2**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 11.1.2.2 Test methodology for UE RF

**R4-2204965 Discussion on test methods for FR2-2**

*Type: discussion For: Approval  
 Source: vivo*

**Decision: Noted.**

**R4-2206109 MIMO EVM Measurement for FR2**

*Type: draftCR For: Endorsement  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Lenovo*

**Decision:** The document was **withdrawn**.

**R4-2206116 MIMO EVM Measurement for FR2**

*Type: discussion For: Approval  
 Source: Lenovo*

**Decision: Noted.**

##### 11.1.2.3 Test methodology for RRM

**R4-2203704 TP to TR38.884 on minimum SNR for RRM test cases for band n263**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2207203 (from R4-2203704).**

**R4-2207203 TP to TR38.884 on minimum SNR for RRM test cases for band n263**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Approved.**

**R4-2205915 FR2-2 OTA test methods for UE RRM**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

##### 11.1.2.4 Test methodology for UE demodulation and CSI

**R4-2203705 TP to TR38.884 on minimum SNR for demodulation test cases for band n263**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2207204 (from R4-2203705).**

**R4-2207204 TP to TR38.884 on minimum SNR for demodulation test cases for band n263**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2207459 (from R4-2207204).**

**R4-2207459 TP to TR38.884 on minimum SNR for demodulation test cases for band n263**

*Type: pCR For: Approval  
 38.884 v1.3.0 CR- rev Cat: (Rel-17)  
  
 Source: Apple*

**Decision: Approved.**

**R4-2204386 FR2-2 OTA test methods for UE demodulation**

*Type: discussion For: Discussion  
 Source: Intel Corporation*

**Decision: Noted.**

## 12 Rel-17 Work Items for LTE

### 12.9 Additional enhancements for NB-IoT and LTE-MTC

#### 12.9.6 Demodulation requirements

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**Email discussion for [102-e][333] NB-IOT\_MTC\_Demod, AI 12.9.6-Tricia Li**

**R4-2207180 Email discussion summary for [102-e][333] NB-IOT\_MTC\_Demod**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Revised to R4-2207453 (from R4-2207180).**

**R4-2207453 Email discussion summary for [102-e][333] NB-IOT\_MTC\_Demod**

*Type: other For: Information  
 Source: Moderator (Huawei)*

**Abstract:**

**Discussion:**

**Decision: Noted.**

**Conclusion after 2nd round**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Decision** | **Comments** |
| R4-2207200 | WF on Rel-17 NB-IOT and eMTC performance requirements | Huawei, HiSilicon | Approved |  |

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**R4-2207200 WF on Rel-17 NB-IOT and eMTC performance requirements**

*Type: other For: Approval  
 Source: Huawei*

**Abstract:**

**Discussion:**

**Decision: Approved.**

##### 12.9.6.2 Demodulation requirements for NB-IoT

###### 12.9.6.2.1 UE demodulation requirements

**R4-2204469 On UE performance requirements for 16-QAM NB-IoT**

*Type: discussion For: Discussion  
 Source: Qualcomm Incorporated*

**Decision: Noted.**

**R4-2205091 UE demodulation requirements for Rel-17 NB-IoT**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses our view on Rel-17 NB-IoT UE demodulation requirements.

**Decision: Noted.**

**R4-2205807 Discussions on Rel-17 NB-IOT UE requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

###### 12.9.6.2.2 BS demodulation requirements

**R4-2203549 View on demodulation requirement for Rel-17 NB-IoT**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205092 BS demodulation requirements for Rel-17 NB-IoT**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusees our view on Rel-17 NB-IoT BS demodulation requirements.

**Decision: Noted.**

**R4-2205808 Discussions on Rel-17 NB-IOT BS requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

**R4-2205942 Discussion on BS demodulation requirements for Additional enhancements for NB-IoT**

*Type: discussion For: Discussion  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Discussion on BS demodulation requirements for NB-IoT 16QAM

**Decision: Noted.**

##### 12.9.6.3 Demodulation requirements for MTC

**R4-2203548 View on demodulation requirement for Rel-17 eMTC**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**R4-2205093 UE demodulation requirements for Rel-17 LTE-MTC**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This contribution discusses our view on Rel-17 eMTC UE demodulation requirements.

**Decision: Noted.**

**R4-2205809 Discussions on Rel-17 eMTC UE requirements**

*Type: discussion For: Discussion  
 Source: Huawei,HiSilicon*

**Decision: Noted.**

## BACKUP

**R4-22AAAAA Email discussion summary for**

*Type: other For: Information  
 Source: Moderator (TBA)*

**Abstract:**

**Discussion:**

**Decision: Return to.**