**3GPP TSG-RAN WG4 Meeting # 102-e R4-220XXXX**

**Electronic Meeting, Feb 21st – Mar 3rd, 2022**

**Agenda item: 4.1.1, 4.2.1**

**Source:** Moderator (ZTE)

**Title:** Email discussion summary for [102-e][101] R15\_Maintenance

**Document for:** Information

# Introduction

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

*List of candidate target of email discussion for 1st round and 2nd round*

* 1st round:
* 2nd round: TBA

# Topic #1: LTE maintenance

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2205307**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205307.zip)R4-2205308 R4-2205309R4-2205310 | Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R14) | Huawei, HiSilicon | For LTE, the clarification “This restriction also apply for any band combinations when CA\_20-28 is a subset of a higher order band combination.” is added.Mirror CRs: R4-2205308 Rel-15R4-2205309 Rel-16R4-2205310 Rel-17 |
| [**R4-2205662**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205662.zip)R4-2205663R4-2205664R4-2205665 | Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Dish Network | For LTE. * DL Bands changed to refer operating band in table 5.5-1
* Band 70 added to table 5.5F-1.
 |

## Open issues summary

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

*No discussion points under this topic.*

## Companies views’ collection for 1st round

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| [**R4-2205307**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205307.zip)R4-2205308 R4-2205309R4-2205310Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R14) | Company A |
| Company B |
|  |
| [**R4-2205662**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205662.zip)R4-2205663R4-2205664R4-2205665Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Company A |
| Company B |
|  |

## Summary for 1st round

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| [**R4-2205307**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205307.zip)R4-2205308 R4-2205309R4-2205310 |  |
| [**R4-2205662**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205662.zip)R4-2205663R4-2205664R4-2205665 |  |

## Discussion on 2nd round (if applicable)

# Topic #2: Release independence

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2203991**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203991.zip) | Draft CR to TS 38.307 on NR intra-band CA BW class within FR1 (Rel-15) | ZTE Corporation | * Remove the invalid CA BW class “F” for intra-band contiguous CA configurations within FR1.
* Remove all unused CA BW classes other than “C” in Table 5.2.1-1.

Unify the notations for different types of configurations. |
| [**R4-2204069**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204069.zip) | Discussion on the common UE RF requirement tables for the release independent features in TS 36.307 and TS 38.307 | CHTTL, ZTE | Propose to check and agree on the following release independent procedure:If an RF feature introduced in the same release as the release which the feature is independent from, (i.e. M=N), the common UE RF requirements table in annex B.4 is specified from release N+1, otherwise the common UE RF requirements table is specified from release N. |
| [**R4-2204070**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204070.zip)R4-2204071R4-2204072 | draft CR for the procedure of introducing release independent features | CHTTL, ZTE | This draft CR is based on the agreed procedure in approved WF in R4-2202405 and additional aspect discussed in the discussion paper R4-2204069. |

## Open issues summary

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

### Sub-topic 2-1

*Sub-topic description: This sub-topic addresses how to implement the RAN4 agreements in TS 38.307.*

*In RAN4#101-bis-e , a WF (R4-2200698, Working procedures for updating release independence specification) was approved with the following agreements on the procedure of introducing release independent features for TS 36.307:*

**WayForward:**

**It is agreed to adopt the following procedure for introducing release independent features:**

**When a new feature is introduced only the latest release of release independent spec needs to be updated. The latest release of release independent spec refers to the release which the new feature is introduced in.
(i.e. CR to the frozen release might be needed when the release independent issue is missed to be resolved when the new feature is introduced, or when CR implementation errors occur in the previous release.)**

**- The general approach for updating the Common RF Requirements table (annex B.4 of 36.307/38.307 can be further investigated in the next meeting.**

**- Whether to capture the above procedure to the general section of 36.307/38.307 can be further discussed in the next meeting.**

*Open issues and candidate options before e-meeting:*

**Proposal 1: RAN4 to check and agree on the following release independent procedure:**

**If an RF feature introduced in the same release as the release which the feature is independent from, (i.e. M=N), the common UE RF requirements table in annex B.4 is specified from release N+1, otherwise the common UE RF requirements table is specified from release N.**

Note that the meaning of M and N specified in 38.307 is pasted below:

N Release in which a feature is introduced into TS 38.101 [2-5] or TS 38.133 [6]

M Release from which onwards (including release M) a feature is release independent

**Issue 2-1: Are the above proposed sentence agreeable?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 2-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| [**R4-2203991**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203991.zip)Draft CR to TS 38.307 on NR intra-band CA BW class within FR1 (Rel-15) | Company A |
| Company B |
|  |
| [**R4-2204070**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204070.zip)R4-2204071R4-2204072draft CR for the procedure of introducing release independent features | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#2-1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| [**R4-2203991**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203991.zip) |  |
| [**R4-2204070**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204070.zip) |  |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #3: NR SA Maintenance – single carrier operation

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2203605**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203605.zip)R4-2203606R4-2203607 | Correction to FR1 UL RMCs | Rohde & Schwarz | * Correct Payload size from 32 to 24.

Add missing RB allocations for UL RMCs. |
| [**R4-2203608**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203608.zip)R4-2203609R4-2203610 | Correction to Rel-15 FR2 RMCs | Rohde & Schwarz | * Correct Payload size for UL Pi/BPSK RMC.
* Correct Number of Binary Channel Bits Per Slot values.
* Correct max throughput per frame.
* Update number of allocated slots per frame.

Add clarifying notes to DL RMC tables |
| [**R4-2203670**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203670.zip) | draftCR for TS 38.101-1 Rel-15: Corrections on single bands for UE co-existence | Apple | * n28: The protected band 73 does not require harmonic exception. Note 2 was removed (Moderator: Note 2 still there for n28?).

n78: Seperated n77 and n78 coexistence requirements. Added the bands 32, 75 and 76 to the UE coexistence list of n78 as they are deployed in the same region. |
| [**R4-2203671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203671.zip)R4-2203672 | draftCR for TS 38.101-1 Rel-16: Corrections on single bands for UE co-existence | Apple | Similar change to R4-2203670. Moderator: Note 2 not removed for n28? |
| [**R4-2203678**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203678.zip)R4-2203679R4-2203680 | draft CR to 38.101-1 on AMPR edge RB allocation for NS R15 | Apple | Correction in line with reply LS R4-2120027 to RAN5 (R4-2117029) on AMPR for edge RB allocation. |
| [**R4-2203811**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203811.zip) | Correction of FR2 UE configured transmitted power | Apple | Resubmission of R4-2112141(endorsed but missing in the agreed big CR R4-2115130. |
| [**R4-2203999**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203999.zip)R4-2204000R4-2204001 | Draft CR to TS 38.101-1 on removal the bracket for the note of NS\_01 | ZTE Corporation | * Remove the bracket for the note of NS\_01 below the A-MPR table.

Some other editorial corrections. |
| [**R4-2204002**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204002.zip)R4-2204003R4-2204004 | Draft CR to TS 38.101-2 on corrections to UE maximum output power with additional requirements | ZTE Corporation | * Editorial corrections to UE A-MPR requirements in 6.2.3.
 |
| R4-2204165 | CR CatA n74 AMPR | Qualcomm Incorporated | Re-submission due to Cat-A upload error from RAN4#101-e?* Rel-16 mirror CR, ~~Not available?~~ -> uploaded to Inbox, mirror to the endorsed CR R4-2120029
 |
| R4-2204167 | CR CatA n74 AMPR | Qualcomm Incorporated | Re-submission due to Cat-A upload error from RAN4#101-e?Rel-17 mirror CR , ~~Not available?~~ -> uploaded to Inbox, mirror to the endorsed CR R4-2120029 |
| [R4-2204175](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204175.zip)R4-2204176R4-2204177 | n1 NS\_05 ineqaulity error fix Cat F rel 15 | Qualcomm Incorporated | Correct inequality sign < to ≤ in region A because there is no AMPR defined for = condition in either region A or region B. |
| [~~R4-2204331~~](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204331.zip)~~R4-2204313~~ |  ~~draft CR for n74 related CA co-existence requirements for TS 38.101-1~~ | ~~KDDI, NTT DoCoMo, Softbank~~ | ~~Reflect the changes related n74 in the UE co-existence table in TS38.101-1(R4-2119873) to CAs related to n74.~~ |
| [R4-2204596](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204596.zip)R4-2204597R4-2204598 | Correction to Pcmax: application of p-NR-FR1 for one CG with one uplink serving cell | Ericsson | Configured tx power for a single carrier further capped by cell group tx power limit and total tx power for FR1. 🡪 aligned with CAModerator: In the IE CellGroupConfig, PhysicalCellGroupConfig shall be present even for single carrier case, thus the correction is required. |
| [R4-2204599](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204599.zip)R4-2204600R4-2204601 | Correction to relative power tolerance | Ericsson | Correct the relative power tolerance for the special case of a 1 dB TPC step, Conformance test of the existing relative power control requirements is not possible due to the large power tolerance of the core requirement in view of the measurement uncertainty of the test system |
| [R4-2205220](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205220.zip)R4-2205221R4-2205222 | DraftCR for TS 38.101-1 on correction on IL for SRS antenna switching | ZTE Wistron Telecom AB | The description of insertion loss for SRS antenna switching capability indicated as ‘t1r4-t2r4’ is incorrect. |
| [R4-2205294](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205294.zip)R4-2205295R4-2205296 | Draft CR for 38.101-1 to align the UL channel bandwidth between clause 6.5.3.3 and 6.2.3.1 for n74(R15) | Huawei, HiSilicon | Align UL channel bandwidths between NS\_37 and NS\_39:* 5/20MHz are removed for NS\_37 in clause 6.5.3.3.6.
* 5MHz are removed for NS\_39 in clause 6.5.3.3.8.
 |
| [R4-2205617](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205617.zip) | General SE requirements for n41 | Anritsu Limited | Discussion paper.A “coverage hole” is identified for spurious emission for n41 (12.75 ~ 13.45GHz), and propose to modify Note 1 to fill up the hole:Change Note 1 in Table 6.5.3.1-2 [1] as “Applies for Band for which the upper frequency edge of the UL Band is greater than 2.55 GHz and less than or equal to 5.2 GHz”.Moderator: If the change is only for n41, then another alternative as shown below might be simpler?Applies for Band that the upper frequency edge of the UL Band ~~more~~ no less than 2.69 GHz |
| [R4-2205618](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205618.zip)R4-2205619R4-2205620 | Draft CR to correct the general SE requirements for n41 | Anritsu Limited | Implementing the proposal in R4-2205617 |

## Open issues summary

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

### Sub-topic 3-1

*Sub-topic description: This sub-topic addresses configured transmission power.*

*Open issues and candidate options before e-meeting:*

**Issue 3-1: Is the IE *CellGroupConfig::PhysicalCellGroupConfig* applicable for the single carrier operation?**

* Proposals
	+ Option 1: Yes, i.e., *p-NR-FR1* and *p-UE-FR1* is applicable for the single carrier operation
	+ Option 2: No
* Recommended WF
	+ TBA

### Sub-topic 3-2

*Sub-topic description: This sub-topic addresses the “coverage hole” identified in R4-2205617, i.e, spurious emission requirements for* *n41 (12.75 ~ 13.45GHz) are missing, and it originates from Note 1:*

Applies for Band that the upper frequency edge of the UL Band more than 2.69 GHz

*Open issues and candidate options before e-meeting:*

**Issue 3-2: Which of the following options do you prefer to resolve the missing spurious emission requirements for n41 (12.75 ~ 13.45GHz)?**

* Proposals
	+ Option 1: Applies for Band for which the upper frequency edge of the UL Band is greater than 2.55 GHz and less than or equal to 5.2 GHz ~~more than 2.69 GHz~~
	+ Option 2: Applies for Band that the upper frequency edge of the UL Band ~~more~~ no less than 2.69 GHz
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 3-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

Sub topic 3-2

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| [**R4-2203605**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203605.zip)R4-2203606R4-2203607 | Company A |
| Company B |
|  |
| [**R4-2203608**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203608.zip)R4-2203609R4-2203610 | Company A |
| Company B |
|  |
| [**R4-2203670**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203670.zip) | Company A |
| Company B |
| (Moderator: Note 2 still there for n28?). |
| [**R4-2203671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203671.zip)R4-2203672 | Company A |
| Company B |
| (Moderator: Note 2 still there for n28?). |
| [**R4-2203678**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203678.zip)R4-2203679R4-2203680 | Company A |
| Company B |
|  |
| [**R4-2203811**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203811.zip) | Company A |
| Company B |
|  |
| [**R4-2203999**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203999.zip)R4-2204000R4-2204001 | Company A |
| Company B |
|  |
| [**R4-2204002**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204002.zip)R4-2204003R4-2204004 | Company A |
| Company B |
|  |
| [R4-2204175](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204175.zip)R4-2204176R4-2204177 | Company A |
| Company B |
|  |
| [~~R4-2204331~~](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204331.zip)~~R4-2204313~~ | ~~Company A~~ |
| ~~Company B~~ |
| Moderator:Move to Thread [#103] |
| [R4-2204596](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204596.zip)R4-2204597R4-2204598 | Company A |
| Company B |
| Moderator: Related to the discussion on Sub-topic 3-1 |
| [R4-2204599](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204599.zip)R4-2204600R4-2204601 | Company A |
| Company B |
|  |
| [R4-2205220](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205220.zip)R4-2205221R4-2205222 | Company A |
| Company B |
|  |
| [R4-2205294](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205294.zip)R4-2205295R4-2205296 | Company A |
| Company B |
|  |
| [R4-2205618](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205618.zip)R4-2205619R4-2205620 | Company A |
| Company B |
| Moderator: Related to the discussion on Sub-topic 3-2 |
| R4-2204165R4-2204167 | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#3-1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |
| **Sub-topic#3-2** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| [**R4-2203605**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203605.zip)R4-2203606R4-2203607 |  |
| [**R4-2203608**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203608.zip)R4-2203609R4-2203610 |  |
| [**R4-2203670**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203670.zip) |  |
| [**R4-2203671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203671.zip)R4-2203672 |  |
| [**R4-2203678**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203678.zip)R4-2203679R4-2203680 |  |
| [**R4-2203811**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203811.zip) |  |
| [**R4-2203999**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203999.zip)R4-2204000R4-2204001 |  |
| [**R4-2204002**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204002.zip)R4-2204003R4-2204004 |  |
| [R4-2204175](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204175.zip)R4-2204176R4-2204177 |  |
| [~~R4-2204331~~](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204331.zip)~~R4-2204313~~ |  |
| [R4-2204596](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204596.zip)R4-2204597R4-2204598 |  |
| [R4-2204599](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204599.zip)R4-2204600R4-2204601 |  |
| [R4-2205220](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205220.zip)R4-2205221R4-2205222 |  |
| [R4-2205294](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205294.zip)R4-2205295R4-2205296 |  |
| [R4-2205618](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205618.zip)R4-2205619R4-2205620 |  |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #4: NR SA Maintenance – UL MIMO related

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2205610**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205610.zip) | FR1 UL coherent MIMO | Anritsu Limited | Discussion paper.Proposal 1: Put details regarding UL coherent MIMO requirements in "Annex G (informative): Transmit signal quality".Proposal 2: Channel estimation should be used for determining the relative phase and amplitude errors.Proposal 3: Use DMRS resource elements (DMRS symbol, DMRS subcarrier).Proposal 4: The “relative phase error” and “relative amplitude” shall be calculated in frequency domain. There should not be then mention of “instantaneous” or “average over a slot”.Proposal 5: CFO should be corrected for each slot.Proposal 6: Equalization should not be used by the TE for performing the test.Proposal 7: A block diagram shown in Figure 2 should be added in Annex G to indicate the reference point.Moderator: It seems that only P1 and P7 have direct impacts on specs, and the rest proposals related to TE implementation. However, per Proponent’s request, we will discuss the rest proposals at least in the first round. |
| [**R4-2206099**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206099.zip) | MIMO EVM Measurement for FR1 | Lenovo | (1) Pseudo-inverse does not exist for a non-full-rank channel matrix(2) Pseudo-inverse is equal to channel matrix inverse for a full-rank channel matrixModerator: The same proposal was submitted in R4-2119551 in RAN4#101-e. For (1), in this case the proposed channel matrix inverse does not exist either. For (2), when channel matrix is of full rank, they are equal. And EVM is defined on a per-layer basis, a non-full-rank channel matrix scheduled with 2-layer transmission will fail anyway. |

## Open issues summary

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

### Sub-topic 4-1

*Sub-topic description: This sub-topic addresses general issues for UL coherent MIMO*

*Open issues and candidate options before e-meeting:*

**Issue 4-1-1: Do you agree to put details regarding UL coherent MIMO requirements in "Annex G (informative): Transmit signal quality”, including a block diagram to indicate the reference point?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 4-1-2: Do you agree to indicate in "Annex G (informative): Transmit signal quality” that channel estimation should be used for determining the relative phase and amplitude errors?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 4-1-3: Do you agree to indicate in "Annex G (informative): Transmit signal quality” that Use DMRS resource elements (DMRS symbol, DMRS subcarrier) , not DMRS + data for channel estimation?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 4-1-4: Do you agree to indicate in "Annex G (informative): Transmit signal quality” that “relative phase error” and “relative amplitude” shall be calculated in frequency domain without mentioning “instantaneous” or “average”?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 4-1-5: Do you agree to indicate in "Annex G (informative): Transmit signal quality” that CFO should be corrected for each slot?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 4-1-6: Do you agree to indicate in "Annex G (informative): Transmit signal quality” that Equalization should not be used by the TE for performing the test?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

### Sub-topic 4-2

*Sub-topic description: This sub-topic addresses another attempt to replace the pseudo-inverse with matrix inverse in the description of ZF receiver.*

*Open issues and candidate options before e-meeting:*

**Issue 4-2: If channel matrix is not full-ranked, both the pseudo-inverse and normal matrix inverse do not exist, and for a full-ranked channel matrix, both the pseudo-inverse and normal inverse are equal. Considering these two cases, do you think the pseudo-inverse should be replaced by the normal matrix inverse?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 4-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

Sub topic 4-2

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

## Summary for 1st round

### Open issues

*Moderator tries to summarize discussion status for 1st round, list all the identified open issues and tentative agreements or candidate options and suggestion for 2nd round i.e. WF assignment.*

|  |  |
| --- | --- |
|  | **Status summary**  |
| **Sub-topic#4-1** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |
| **Sub-topic#4-2** | *Tentative agreements:**Candidate options:**Recommendations for 2nd round:* |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #5: Maintenance for NR CA and EN-DC

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2205304**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205304.zip)R4-2205305R4-2205306 | Draft CR for 38.101-3 to add spurious response exception for intra-band EN-DC (R15) | Huawei, HiSilicon | Similar to R4-2205301 but for intra-band EN-DC. |
| [**R4-2205614**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205614.zip)R4-2205615R4-2205616 | Draft CR to correct the output power in EN-DC Rx tests | Anritsu Limited | Apply the general requirement about the output power to all EN-DC tests to prevent and decrease the affect on NR operation by IMD during EN-DC Rx test, the output power of the E-UTRA uplink shall be set to 29 dB below PCMAX\_L for all EN-DC tests, not only for intra-band non-contiguous EN-DC. |
| [**R4-2205705**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205705.zip) | draft Rel-15 CR 38101-3-fg0 to align spurious emission between R15 and R16 | Ericsson | * Adding protected NR band n77 to DC\_2\_n5, DC\_2\_n66, DC\_2\_n71, DC\_5\_n66, DC\_12\_n5, DC\_12\_n66, DC\_25\_n41, DC\_30\_n5, DC\_30\_n66, DC\_66\_n5 and DC\_66\_n71.
* Added protected E-UTRA band 51 to DC\_7\_n28.
* Added protected E-UTRA band 53 to DC\_12\_n66 and DC\_30\_n5.
* Added protected E-UTRA band 28 to DC\_38\_n78 and DC\_38\_n79.
* Removed E-UTRA bands 48 and 52 from DC\_30A\_n5A.
 |
| **[R4-2205301](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205301.zip)**R4-2205302R4-2205303 | Draft CR for 38.101-1 to add spurious response exception for intra-band CA(R15) | Huawei, HiSilicon | The spurious response exception is missing for intra-band CA.Moderator: Polishing some wording and editorial changes may be required, and discussion may be also needed. |
| [**R4-2206063**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206063.zip)R4-2206064R4-2206065 | Draft CR to 38.101-2: missing image location for CA IBE (cat. F) | Qualcomm Incorporated | Since image location detail is present in the single CC IBE requiement, but not present for CA cases, replicate image location detail in the IBE requirement from the single CC case to CA case. |

### CRs/TPs comments collection

*Major close to finalize WIs and Rel-15 maintenance, comments collections can be arranged for TPs and CRs. For Rel-16 on-going WIs, suggest to focus on open issues discussion on 1st round.*

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| [**R4-2205304**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205304.zip)R4-2205305R4-2205306Draft CR for 38.101-3 to add spurious response exception for intra-band EN-DC (R15) | Company A |
| Company B |
| Moderator: Similar to R4-2205301 but for intra-band EN-DC. |
| [**R4-2205614**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205614.zip)R4-2205615R4-2205616Draft CR to correct the output power in EN-DC Rx tests | Company A |
| Company B |
|  |
| [**R4-2205705**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205705.zip)draft Rel-15 CR 38101-3-fg0 to align spurious emission between R15 and R16 | Company A |
| Company B |
|  |
| [**R4-2205301**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205301.zip)R4-2205302R4-2205303Draft CR for 38.101-1 to add spurious response exception for intra-band CA(R15) | Company A |
| Company B |
|  |
| [**R4-2206063**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206063.zip)R4-2206064R4-2206065Draft CR to 38.101-2: missing image location for CA IBE (cat. F) | Company A |
| Company B |
|  |

## Summary for 1st round

### CRs/TPs

*Moderator tries to summarize discussion status for 1st round and provided recommendation on CRs/TPs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation**  |
| XXX | *Based on 1st round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |
| [**R4-2205304**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205304.zip)R4-2205305R4-2205306 |  |
| [**R4-2205614**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205614.zip)R4-2205615R4-2205616 |  |
| [**R4-2205705**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205705.zip) |  |
| [**R4-2205301**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205301.zip)R4-2205302R4-2205303 |  |
| [**R4-2206063**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206063.zip)R4-2206064R4-2206065 |  |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #6: Reply LS to GCF on power ambiguity issue

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

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **TDoc** | **Title** | **Source** | **Moderator’s remarks** |
| [**R4-2204967**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204967.zip) | On draft reply LS in Power class issues for Rel-15 | vivo | Draft reply LS to GCF based on the conclusion on the power ambiguity issue. |

## Open issues summary

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

### Sub-topic 6-1

*Sub-topic description: This sub-topic addresses general issues for the reply LS to GCF on the Rel-15 power ambiguity issue.*

*In RAN4#95-e, an LS from GCF (R4-2006116, LS on requirement in Power Class 2 for UL MIMO Test cases) was received which triggered lengthy and intensive discussions on the Rel-15 power ambiguity issue in RAN4. A half-way reply LS was sent back to GCF (R4-2011903).*

*In RAN4#101-e, an WF (R4-2119835) was agreed to conclude the power class issue, thus a final reply LS may be required.*

*Open issues and candidate options before e-meeting:*

**Issue 6-1: Do you agree to send a final reply LS to GCF since RAN4 has concluded the Rel-15 power ambiguity issue?**

* Proposals
	+ Option 1: Yes
	+ Option 2: No
* Recommended WF
	+ TBA

**Issue 6-2: If the answer to Issue 6-1 is Yes, please provide your comments on the reply LS texts below.**

|  |
| --- |
| **1. Overall Description:**RAN4 would like to thank GCF CAG for the LS on power class ambiguities in RAN4 specification. Previously, the conclusion for Rel-16 has been sent back via LS R4-2011903 in RAN4#96-e, and the related revision has been applied in Rel-16. Now, RAN4 would like to inform GCF CAG about the conclusions for Rel-15:For the general description of EN-DC power class in Rel-15 TS 38.101-3 sub-clause 6.1, RAN4 has been decided to keep it as it is.For the fall back description for section 6.2D.1 of 3GPP 38.101-1, further revision was agreed in CR R4-2118286 and aligned with Rel-16 which is already implemented in TS 38.101-1 V15.16.0.With this, RAN4 consider this issue closed for Rel-15 and no more discussion is expected. The detailed study process can also reference to TR 38.837. |

## Companies views’ collection for 1st round

### Open issues

Sub topic 6-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

## Summary for 1st round

### Open issues

Sub topic 6-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX |  |

## Discussion on 2nd round (if applicable)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Recommendations for Tdocs

## 1st round

**New tdocs**

|  |  |  |
| --- | --- | --- |
| **Title** | **Source** | **Comments** |
| WF on … | YYY |  |
| LS on … | ZZZ | To: RAN\_X; Cc: RAN\_Y |
|  |  |  |

**Existing tdocs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation**  | **Comments** |
| R4-210xxxx | CR on … | XXX | Agreeable, Revised, Merged, Postponed, Not Pursued |  |
| [**R4-2203605**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203605.zip) | Correction to FR1 UL RMCs | Rohde & Schwarz |  |  |
| R4-2203606 | Correction to FR1 UL RMCs | Rohde & Schwarz |  |  |
| R4-2203607 | Correction to FR1 UL RMCs | Rohde & Schwarz |  |  |
| [**R4-2203608**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203608.zip) | Correction to Rel-15 FR2 RMCs | Rohde & Schwarz |  |  |
| R4-2203609 | Correction to Rel-15 FR2 RMCs | Rohde & Schwarz |  |  |
| R4-2203610 | Correction to Rel-15 FR2 RMCs | Rohde & Schwarz |  |  |
| [**R4-2203670**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203670.zip) | draftCR for TS 38.101-1 Rel-15: Corrections on single bands for UE co-existence | Apple |  |  |
| [**R4-2203671**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203671.zip) | draftCR for TS 38.101-1 Rel-16: Corrections on single bands for UE co-existence | Apple |  |  |
| R4-2203672 | draftCR for TS 38.101-1 Rel-17: Corrections on single bands for UE co-existence | Apple |  |  |
| [**R4-2203678**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203678.zip) | draft CR to 38.101-1 on AMPR edge RB allocation for NS R15 | Apple |  |  |
| R4-2203679 | draft CR to 38.101-1 on AMPR edge RB allocation for NS R16 | Apple |  |  |
| R4-2203680 | draft CR to 38.101-1 on AMPR edge RB allocation for NS R17 | Apple |  |  |
| [**R4-2203811**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203811.zip) | Correction of FR2 UE configured transmitted power | Apple |  |  |
| [**R4-2203991**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203991.zip) | Draft CR to TS 38.307 on NR intra-band CA BW class within FR1 (Rel-15) | ZTE Corporation |  |  |
| [**R4-2203999**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2203999.zip) | Draft CR to TS 38.101-1 on removal the bracket for the note of NS\_01 | ZTE Corporation |  |  |
| R4-2204000 | Draft CR to TS 38.101-1 on removal the bracket for the note of NS\_01 (R16\_CAT\_A) | ZTE Corporation |  |  |
| R4-2204001 | Draft CR to TS 38.101-1 on removal the bracket for the note of NS\_01 (R17\_CAT\_A) | ZTE Corporation |  |  |
| [**R4-2204002**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204002.zip) | Draft CR to TS 38.101-2 on corrections to UE maximum output power with additional requirements | ZTE Corporation |  |  |
| R4-2204003 | Draft CR to TS 38.101-2 on corrections to UE maximum output power with additional requirements (R16\_CAT\_A) | ZTE Corporation |  |  |
| R4-2204004 | Draft CR to TS 38.101-2 on corrections to UE maximum output power with additional requirements (R17\_CAT\_A) | ZTE Corporation |  |  |
| [**R4-2204069**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204069.zip) | Discussion on the common UE RF requirement tables for the release independent features in TS 36.307 and TS 38.307 | CHTTL, ZTE |  |  |
| [**R4-2204070**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204070.zip) | draft CR for the procedure of introducing release independent features | CHTTL, ZTE |  |  |
| R4-2204071 | draft CR for the procedure of introducing release independent features | CHTTL, ZTE |  |  |
| R4-2204072 | draft CR for the procedure of introducing release independent features | CHTTL, ZTE |  |  |
| R4-2204165 | CR CatA n74 AMPR | Qualcomm Incorporated |  |  |
| R4-2204167 | CR CatA n74 AMPR | Qualcomm Incorporated |  |  |
| [**R4-2204175**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204175.zip) | n1 NS\_05 ineqaulity error fix Cat F rel 15 | Qualcomm Incorporated |  |  |
| R4-2204176 | n1 NS\_05 ineqaulity error fix Cat A rel 16 | Qualcomm Incorporated |  |  |
| R4-2204177 | n1 NS\_05 ineqaulity error fix Cat A rel 17 | Qualcomm Incorporated |  |  |
| ~~R4-2204313~~ |  ~~draft CR for n74 related CA co-existence requirements for TS 38.101-1~~ | ~~KDDI Corporation~~ |  |  |
| [**~~R4-2204331~~**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204331.zip) |  ~~draft CR for n74 related CA co-existence requirements for TS 38.101-1~~ | ~~KDDI, NTT DoCoMo, Softbank~~ |  |  |
| [**R4-2204596**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204596.zip) | Correction to Pcmax: application of p-NR-FR1 for one CG with one uplink serving cell | Ericsson |  |  |
| R4-2204597 | Correction to Pcmax: application of p-NR-FR1 for one CG with one uplink serving cell | Ericsson |  |  |
| R4-2204598 | Correction to Pcmax: application of p-NR-FR1 for one CG with one uplink serving cell | Ericsson |  |  |
| [**R4-2204599**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204599.zip) | Correction to relative power tolerance | Ericsson |  |  |
| R4-2204600 | Correction to relative power tolerance | Ericsson |  |  |
| R4-2204601 | Correction to relative power tolerance | Ericsson |  |  |
| [**R4-2204967**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2204967.zip) | On draft reply LS in Power class issues for Rel-15 | vivo |  |  |
| [**R4-2205220**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205220.zip) | DraftCR for TS 38.101-1 on correction on IL for SRS antenna switching | ZTE Wistron Telecom AB |  |  |
| R4-2205221 | DraftCR for TS 38.101-1 on correction on IL for SRS antenna switching | ZTE Wistron Telecom AB |  |  |
| R4-2205222 | DraftCR for TS 38.101-1 on correction on IL for SRS antenna switching | ZTE Wistron Telecom AB |  |  |
| [**R4-2205294**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205294.zip) | Draft CR for 38.101-1 to align the UL channel bandwidth between clause 6.5.3.3 and 6.2.3.1 for n74(R15) | Huawei, HiSilicon |  |  |
| R4-2205295 | Draft CR for 38.101-1 to align the UL channel bandwidth between clause 6.5.3.3 and 6.2.3.1 for n74(R16) | Huawei, HiSilicon |  |  |
| R4-2205296 | Draft CR for 38.101-1 to align the UL channel bandwidth between clause 6.5.3.3 and 6.2.3.1 for n74(R17) | Huawei, HiSilicon |  |  |
| [**R4-2205301**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205301.zip) | Draft CR for 38.101-1 to add spurious response exception for intra-band CA(R15) | Huawei, HiSilicon |  |  |
| R4-2205302 | Draft CR for 38.101-1 to add spurious response exception for intra-band CA(R16) | Huawei, HiSilicon |  |  |
| R4-2205303 | Draft CR for 38.101-1 to add spurious response exception for intra-band CA(R17) | Huawei, HiSilicon |  |  |
| [**R4-2205304**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205304.zip) | Draft CR for 38.101-3 to add spurious response exception for intra-band EN-DC (R15) | Huawei, HiSilicon |  |  |
| R4-2205305 | Draft CR for 38.101-3 to add spurious response exception for intra-band EN-DC (R16) | Huawei, HiSilicon |  |  |
| R4-2205306 | Draft CR for 38.101-3 to add spurious response exception for intra-band EN-DC (R17) | Huawei, HiSilicon |  |  |
| [**R4-2205307**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205307.zip) | Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R14) | Huawei, HiSilicon |  |  |
| R4-2205308 | Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R15) | Huawei, HiSilicon |  |  |
| R4-2205309 | Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R16) | Huawei, HiSilicon |  |  |
| R4-2205310 | Draft CR for 36.101 to clarify the restriction of band 28 for CA\_20-28(R17) | Huawei, HiSilicon |  |  |
| [**R4-2205610**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205610.zip) | FR1 UL coherent MIMO | Anritsu Limited |  |  |
| [**R4-2205614**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205614.zip) | Draft CR to correct the output power in EN-DC Rx tests | Anritsu Limited |  |  |
| R4-2205615 | Draft CR to correct the output power in EN-DC Rx tests | Anritsu Limited |  |  |
| R4-2205616 | Draft CR to correct the output power in EN-DC Rx tests | Anritsu Limited |  |  |
| [**R4-2205617**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205617.zip) | General SE requirements for n41 | Anritsu Limited |  |  |
| [**R4-2205618**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205618.zip) | Draft CR to correct the general SE requirements for n41 | Anritsu Limited |  |  |
| R4-2205619 | Draft CR to correct the general SE requirements for n41 | Anritsu Limited |  |  |
| R4-2205620 | Draft CR to correct the general SE requirements for n41 | Anritsu Limited |  |  |
| [**R4-2205662**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205662.zip) | Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Dish Network |  |  |
| R4-2205663 | Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Dish Network |  |  |
| R4-2205664 | Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Dish Network |  |  |
| R4-2205665 | Draft CR for 36.101 Correction to Bands for NB-IoT in the USA | Dish Network |  |  |
| [**R4-2205705**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2205705.zip) | draft Rel-15 CR 38101-3-fg0 to align spurious emission between R15 and R16 | Ericsson |  |  |
| [**R4-2206063**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206063.zip) | Draft CR to 38.101-2: missing image location for CA IBE (cat. F) | Qualcomm Incorporated |  |  |
| R4-2206064 | Draft CR to 38.101-2: missing image location for CA IBE (cat. A) | Qualcomm Incorporated |  |  |
| R4-2206065 | Draft CR to 38.101-2: missing image location for CA IBE (cat. A) | Qualcomm Incorporated |  |  |
| [**R4-2206099**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_102-e/Docs/R4-2206099.zip) | MIMO EVM Measurement for FR1 | Lenovo |  |  |

Notes:

1. Please include the summary of recommendations for all tdocs across all sub-topics incl. existing and new tdocs.
2. For the Recommendation column please include one of the following:
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3. For new LS documents, please include information on To/Cc WGs in the comments column
4. Do not include hyper-links in the documents

## 2nd round

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| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation**  | **Comments** |
| R4-210xxxx | CR on … | XXX | Agreeable, Revised, Merged, Postponed, Not Pursued |  |
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| R4-210xxxx | LS on … | ZZZ | Agreeable, Revised, Noted |  |
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Notes:

1. Please include the summary of recommendations for all tdocs across all sub-topics.
2. For the Recommendation column please include one of the following:
	1. CRs/TPs: Agreeable, Revised, Merged, Postponed, Not Pursued
	2. Other documents: Agreeable, Revised, Noted
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# Annex

Contact information

|  |  |  |
| --- | --- | --- |
| **Company** | **Name** | **Email address** |
|  |  |  |

Note:

1. Please add your contact information in above table once you make comments on this email thread.
2. If multiple delegates from the same company make comments on single email thread, please add you name as suffix after company name when make comments i.e. Company A (XX, XX)