**3GPP TSG-RAN WG4 Meeting #94-e R4-2002166**

**Electronic Meeting, Feb.24th – Mar.6th 2020**

**Agenda item:** 6.11.1-6.11.2

**Source:** Moderator (Ericsson)

**Title:** Email discussion summary for RAN4#94e\_#43\_NR\_NewRAT\_RRM\_Perf\_Part\_1

**Document for:** Information

# Introduction

The documents in agenda items 6.11.1 and 6.11.2 mainly contains CRs to correct test configuration or test cases. There are following 2 main topics and sub-topics under each main topic:

* Topic #1: Correction to RRM test configuration
  + Issue 1-1: new OCNG pattern
  + Issue 1-2: correction to TRS configuration
* Topic #2: Correction to RRM tests
  + Issue 2-1: Editorial corrections
  + Issue 2-2: Correction to event used in RRM test with FR2
  + Issue 2-2: Correction to AoA setup in FR2 RRM tests

# Topic #1: Correction to RRM test configuration

## Companies’ contributions summary

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| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2001619 | Huawei, HiSilicon | Cat F CR: define new OCNG pattern for FR2 where OCNG is not transmitted in REs in SSB slots. |
| R4-2001620 | Huawei, HiSilicon | Cat A CR: |
| R4-2001592 | Huawei, HiSilicon | Cat F CR: TRS resources (CSI-RS) location in FR1 is changed to symbol 9 in the slot. |
| R4-2001593 | Huawei, HiSilicon | Cat A CR: |

## Open issues summary

### Sub-topic 1-1

**Issue 1-1: new OCNG pattern**

* Proposals
  + New OCNG pattern for FR2 is proposed where OCNG is not transmitted in REs in SSB slots.
* Recommended WF
  + Collect feedback from companies if there is any concern on introducing new OCNG pattern and on technical details in the CR in R4-2001619.

### Sub-topic 1-2

**Issue 1-2: correction to TRS configuration**

* Proposals
  + TRS resources (CSI-RS) location for CSI-RS resource 2 and 4 in FR1 is changed to symbol # 9 in the slot. In the existing configuration the CSI-RS location for CSI-RS resource 2 and 4 in FR1 is symbol # 10.
* Recommended WF
  + Collect feedback from companies if there is any concern on the proposed changes to the CR in R4-2001592.

## Companies views’ collection for 1st round

### Open issues

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| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 1-1:  Sub topic 1-2:  ….  Others: |

### 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** |
| R4-2001592 | Anritsu  As can be seen in TS 38.214 5.1.6.1.1, configuration of symbol is defined as follows.  cid:image001.png@01D5E693.50BBBEC0, cid:image002.png@01D5E693.50BBBEC0, orcid:image003.png@01D5E693.50BBBEC0 for frequency range 1 and frequency range 2,  Therefore the combination of 6&9 as proposed in the CR cannot be configured.  Feb.26 To comment from Huawei/HiSilicon  We are also fine to change the TRS combination to symbol 5 and 9 in a slot. |
| Huawei/HiSilicon |
| Thanks for Anritsu’s comments. We are fine to change the TRS combination to symbol 5 and 9 in a slot. |
| YYY | 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.*

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|  | **Status summary** |
| **Sub-topic#1-1** | *Tentative agreements:* Introduce new OCNG pattern for FR2 where OCNG is not transmitted in REs in SSB slots.  *Candidate options:* No other option.  *Recommendations for 2nd round:* Agree CR |
| **Sub-topic#1-2** | *Tentative agreements:* Change the TRS combination to symbol 5 and 9 in a slot.  *Candidate options:* No other option.  *Recommendations for 2nd round:* Revise CR in R4-2001592 to capture the above tentative agreement. |

*Recommendations on WF/LS assignment*

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| --- | --- | --- |
|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 |  |  |

### CRs/TPs

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

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| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2001619 | Agreeable |
| R4-2001592 | To be revised to capture agreements in sub-topic # 1-2 |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

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| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |

# Topic #2: Correction to RRM tests

## Companies’ contributions summary

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| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2000293 | Samsung | Cat F CR: Editorial changes |
| R4-2000294 | Samsung | Cat A CR |
| R4-2000515 | ZTE Corporation | Cat F CR: Editorial changes |
| R4-2000516 | ZTE Corporation | Cat A CR |
| R4-2001223 | ANRITSU LTD | Cat F CR: Editorial changes |
| R4-2001225 | ANRITSU LTD | Cat A CR |
| R4-2001365 | Rohde & Schwarz | Cat F CR: Corrected event from event A3 to event A4 in tests in annex A.5 |
| R4-2001366 | Rohde & Schwarz | Cat A CR |
| R4-2001367 | Rohde & Schwarz | Cat F CR: Corrected event from event A3 to event A4 in tests in annex A.7 |
| R4-2001368 | Rohde & Schwarz | Cat A CR |
| R4-2001369 | Rohde & Schwarz | Cat F CR: Correction or addition of AoA setup in different FR2 RRM test cases in annex A.5 |
| R4-2001370 | Rohde & Schwarz | Cat A CR |
| R4-2001371 | Rohde & Schwarz | Cat F CR: Correction or addition of AoA setup in different FR2 RRM test cases in annex A.8 |
| R4-2001372 | Rohde & Schwarz | Cat A CR |

## Open issues summary

### Sub-topic 2-1

**Issue 2-1: Editorial corrections**

* Proposals
  + Editorial corrections in R4-2000293, R4-2000515 and R4-2001223.
  + Note: some of the changes related to spelling and font size of titles in R4-2000515 and R4-2001223 are supposed to be done by MCC (ETSI edit help)
* Recommended WF
  + Agree CRs in R4-2000293, R4-2000515 and R4-2001223 and their respective cat A CRs unless any concern is raised.

### Sub-topic 2-2

**Issue 2-2: Correction to event used in RRM test with FR2**

* Proposals
  + The CR changes event A3 to event A4 in the test cases in R4-2001365 and R4-2001367. Ok, it is A4 as A4 threshold and levels are for A4
* Recommended WF
  + The tests in R4-2001365 and R4-2001367 are supposed to use event A4 and A4 threshold is also configured. Mistakenly A3 is mentioned in the tests.
  + Agree CRs in R4-2001365 and R4-2001367 and their respective cat A CRs unless any concern is raised.

### Sub-topic 2-3

**Issue 2-2: Correction to AoA setup in FR2 RRM tests**

* Proposals
  + The AoA setup to be used in the tests is missing or incorrect in several test cases. The missing AoA setup is added or corrected in the test cases.
* Recommended WF
  + RAN4 has previously agreed with AoA setup for different FR2 RRM test cases.
  + Interested companies to review the AoA setup updated or added in different FR2 RRM test cases in R4-2001369 and R4-2001371.

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 1-1:  Sub topic 1-2:  ….  Others: |

### 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.*

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| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2001369 | Huawei, HiSilicon:  - For CSI-RS RLM test case the AoA setup has been decided in RAN4#91 under R4-1907233. Non-DRX will be setup 3 and DRX will be setup 1  - Do we need same changes for corresponding test cases in section A.7? |
| R&S to HW: The intention of the CR was to rather clarify the CR. The decision in R4-1907233 for the CSI-RS RLM TCs could also be implemented in a revision if (especially in case of Setup 3) it is clear which signals are mapped to which AoA. After the changes in A.5 are stable, the clean-up can be done also for a A.7 (in a separate CR). |
| Company B |
|  |
| R4-2001223 | Anritsu:  This CR was withdrawn as advised by Kai-Erik, as the corrections can be done by ETSI Edit help. Similarly the Cat A CR R4-2001225 was withdrawn. |
| 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.*

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|  | **Status summary** |
| **Sub-topic#2-1** | *Tentative agreements:* Editorial changes in cat-F CR in R4-2000293 are agreeable. Editorial changes in cat-F CR in R4-2000515 are agreeable but it also contains spelling mistake which should be corrected by ETSI helpdesk over the entire specification TS 38.133. Proponent of cat-F CR in R4-2001223 has withdrawn the CR as it contains changes to be corrected by ETSI helpdesk.  *Candidate options:* None  *Recommendations for 2nd round:* cat-F CR in R4-2000293 to be agreed and cat-F CR in R4-2000515 to be revised. |
| **Sub-topic#2-2** | *Tentative agreements:* Changing event A3 to event A4 in the test cases as proposed in cat-F CRs in R4-2001365 and R4-2001367.  *Candidate options:* None  *Recommendations for 2nd round:* Cat-F CRs in R4-2001365 and R4-2001367 can be agreed. |
| **Sub-topic#2-3** | *Tentative agreements:* Correct AoA setup in the test cases as proposed in cat-F CRs in R4-2001369 and R4-2001371. Correct also AoA setup in tests cases in section A.7 in this meeting or in the next meeting.  *Candidate options:* None  *Recommendations for 2nd round:* cat-F CRs in R4-2001369 and R4-2001371 can be agreed. Possible correction to AoA setup in tests cases in section A.7. |

*Suggestion on WF/LS assignment*

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|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 |  |  |

### CRs/TPs

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

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| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2000293 | Agreeable |
| R4-2000515 | Revise CR to exclude spelling mistakes |
| R4-2001223 | Withdrawn |
| R4-2001365 | Agreeable |
| R4-2001367 | Agreeable |
| R4-2001369 | Agreeable |
| R4-2001371 | Agreeable |

## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

*Moderator tries to summarize discussion status for 2nd round and provided recommendation on CRs/TPs/WFs/LSs Status update suggestion*

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
| XXX | *Based on 2nd round of comments collection, moderator can recommend the next steps such as “agreeable”, “to be revised”* |