**3GPP TSG-RAN WG4 Meeting # 100-e R4-210XXXX**

**Electronic Meeting, 16th – 27th August 2021**

**Agenda item:** 6.1.2

**Source:** Moderator (Nokia)

**Title:** Email discussion summary for [100-e][305] NR\_IAB\_Maintenance\_Part1

**Document for:** Information

# Introduction

This email discussion focuses on IAB conformance test, part 1. Following sub-AIs are covered in this email discussion thread:

6.1.2.2.1 General [NR\_IAB-Perf]

6.1.2.2.2 Common test issues for conducted and radiated conformance testing [NR\_IAB-Perf]

6.1.2.2.2.1 Test Model with High PSD and narrow RBs allocation [NR\_IAB-Perf]

6.1.2.2.2.2 MU clean-up [NR\_IAB-Perf]

6.1.2.2.2.3 Others [NR\_IAB-Perf]

This email thread also includes 2 Tdocs (R4-2113678 and R4-2113678) submitted to AI 6.1.2.2.3 and 6.1.2.2.4, as other Tdocs on this topic was submitted to this agenda in this email thread. Thus, all papers on test efficiency optimization issue are treated here.

# Topic #1: Single RB with high PSD for test model

Last RAN4#99-e meeting a WF on single RB High PSD (R4-21085630) was agreed. For this meeting 2 discussion Tdocs and 2 draft CRs were submitted on this issue.

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2112266 | Nokia, Nokia Shanghai Bell | Title: Proposal on single RB with high PSD test model for IAB  Proposal: Also use test model with single RB allocation with a higher PSD declared by the vendor to be supported for single RB transmission at RF bandwidth edge at least for IAB-MT transmitter operating band unwanted emission and spurious emission tests. |
| R4-2112267 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-1: Addition of test model with single RB allocation for transmitter operating band unwanted emission and spurious emission tests. |
| R4-2112268 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-2: Addition of test model with single RB allocation for transmitter operating band unwanted emission and spurious emission tests. |
| R4-2114324 | Ericsson | Title: IAB with high PSD testing  Observation-1: Parent IAB-DU needs to dimension the backhaul link with high bandwidth to cope with peak traffic of the child IAB and thus PSD level should be set with high number of the RB case.  Observation-2: All rated carrier power allocated to single RB behaviour is not specified in TS 38.174.  Proposal: No need to continue discussion on high PSD power case. |

## Open issues summary

### Sub-topic 1-1

*Sub-topic description:*

There are 2 contributions submitted with discussions on single RB with high PSD for test model for IAB. There are also 2 draft CRs submitted with proposals of addition of test model with single RB allocation for transmitter operating band unwanted emission (OBUE) and spurious emission test for both TS 38.176-1 and TS 38.176-2.

There are two different views submitted on need for single RB and high PSD for test models for IAB.

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

**Issue 1-1: Single RB with high PSD for test model**

* Proposals
  + Option 1: To add to test model for IAB single RB allocation for transmitter OBUE and spurious emission tests (Nokia R4-2112266)
  + Option 2: To not change current test models for IAB (Ericsson R4-2114324)
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 1-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 1-1: |
|  |  |
|  |  |

### CRs/TPs comments collection

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

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2112267  Nokia, daft CR to 38.176-1 | Company A |
| Company B |
|  |
| R4-2112268  Nokia, draft CR to 38.176-2 | 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 #1** | *Tentative agreements:*  *Candidate options:*  *Recommendations for 2nd round:* |

### CRs/TPs

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

*Note: The tdoc decisions shall be provided in Section 3 and this table is optional in case moderators would like to provide additional information.*

|  |  |
| --- | --- |
| **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”* |

## Discussion on 2nd round (if applicable)

# Topic #2: Other updates to IAB test specifications

There are few Tdocs submitted with proposal to update or correct IAB test specification. These Tdocs are split for following:

Issue 2-1: Alignment for test models acronyms used in IAB test specifications

Issue 2-2: Test efficiency optimization update

Issue 2-3: IAB with Luant modem testing

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2113489 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-1 – alignment for test models acronyms |
| R4-2113490 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-2 – alignment for test models acronyms |
| R4-2113676 | Nokia, Nokia Shanghai Bell | Title: On test efficiency optimization  This contribution proposes changes for test efficiency optimization in TS 38.176-1 and TS 38.176-2 that have been discussed and clarified. Corresponding draft CRs are provided in CRs to TR 38.809, TS 38.176-1 and TS 38.176-2. |
| R4-2113677 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.809: Test efficiency optimization  General description of test efficiency optimization is proposed to be added into the TR. |
| R4-2113678 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-1: Test efficiency optimization |
| R4-2113679 | Nokia, Nokia Shanghai Bell | Title: Draft CR to TS 38.176-2: Test efficiency optimization |
| R4-2114325 | Ericsson | Title: IAB with Luant modem testing  Observation #1: The luant model specification is specified with reference point of BS antenna connector which is BS type 1-C  Proposal-1: Luant modem testing aspect should be removed from the IAB test specification. |
| R4-2114326 | Ericsson | Title: CR on removal of Luant modem in conducted performance specification  Draft CR to TS 38.176-1 |
| R4-2114327 | Ericsson | Title: CR on removal of Luant modem in radiated performance specification  Draft CR to TS 38.176-2 |

## 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:*

There are 2 draft CR submitted to correct acronym used for test models. The reason is that some of acronyms used legacy NR test models, some used non-existing acronyms like IAB-FR1-TMx.x (without knowing if this is related to IAB-DU or IAB-MT) etc.

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

**Issue 2-1: Alignment for test models acronyms used in IAB test specifications**

* Proposals
  + Option 1: To align TMs acronyms and endorsed draft CRs: R4-2113489 and R4-2113490.
  + Option 2: TBA
* Recommended WF
  + TBA

### Sub-topic 2-2

*Sub-topic description*

This contribution proposes changes for test efficiency optimization in TS 38.176-1 and TS 38.176-2 that have been discussed and clarified in R4-2113677. Corresponding draft CRs are provided in CRs to TR 38.809, TS 38.176-1 and TS 38.176-2.

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

**Issue 2-2: Test efficiency optimization update**

* Proposals
  + Option 1: To endorsed draft CRs: R4-2113677, R4-2113678, R4-2113679
  + Option 2: TBA
* Recommended WF
  + TBA
    1. Sub-topic 2-3

*Sub-topic description*

Current luant modem is specified for BS type 1-C and as the IAB does not include the type of 1-C it is proposed to remove it from IAB test specifications.

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

**Issue 2-3: IAB with Luant modem testing**

* Proposals
  + Option 1: To removed luant from IAB specifications and endorsed draft CRs: R4-2114326 and R4-2114327
  + Option 2: TBA
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

**Example 1**

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 2-1:  Sub topic 2-2:  Sub topic 2-3: |

### 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** |
| **R4-2113489**  Nokia, draft CR to 38.176-1 | Company A  Company B |
| **R4-2113490**  Nokia, draft CR to 38.176-2 | Company A  Company B |
| **R4-2113677**  Nokia, draft CR to TR 38.809 | Company A |
| Company B |
|  |
| **R4-2113678**  Nokia, draft CR to TS 38.176-1 | Company A |
| Company B |
|  |
| **R4-2113679**  Nokia, draft CR to TS 38.176-2 | Company A  Company B |
| **R4-2114326**  Ericsson, draft CR to TS 38.176-1 | Company A  Company B |
| **R4-2114327**  Ericsson, draft CR to TS 38.176-2 | 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#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”* |

## 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 |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

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:
   1. CRs/TPs: Agreeable, Revised, Merged, Postponed, Not Pursued
   2. Other documents: Agreeable, Revised, Noted
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

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

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
3. Do not include hyper-links in the documents

# Annex

Contact information

|  |  |  |
| --- | --- | --- |
| **Company** | **Name** | **Email address** |
| Moderator (Nokia) | Bartlomiej Golebiowski | bartlomiej.golebiowski@nokia.com |

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)