**3GPP TSG-RAN WG4 Meeting # 98-bis-e R4-210XXXX**

**Electronic Meeting, 12th – 20th April, 2021**

**Agenda item:** 8.42

**Source:** Moderator (Huawei, HiSilicon)

**Title:** Email discussion summary for [99-e][131]NR\_intra\_HPUE\_UL\_MIMO\_bands

**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.*

Thread [131] include contributions under agenda 8.42, following topics will be discussed in this meeting:

1. Topic #1: Additional NR bands for UL-MIMO in Rel-17

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

* 1st round: TBA
* 2nd round: TBA

# Topic #1: New NR bands for UL-MIMO

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2111444 | Huawei, HiSilicon | ***Observation 1: A-MPR requirement should be considered for NR bands supporting UL MIMO for power classes other than PC3, which is studied band by band***  ***Observation 2: Band specific A-MPR requirements for UL MIMO are considered additionally in clause 6.2.3 with A-MPR applicable to non-MIMO mode***  ***Proposal 1: A-MPR for UL MIMO can be specified additionally with other A-MPR requirements for the operating bands in the same sub-clause if needed.***  ***Observation 3: Specifically for band n40, there is no A-MPR requirements.*** |
| R4-2111445 | Huawei, HiSilicon | revised WID on Additional NR bands for UL-MIMO in Rel-17:   1. Revise ‘PC3’ in the WID title 2. Add indentifier 3. Remove ‘TDD’ in the objective |

## 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 1-1

*Sub-topic description:*

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

**Issue 1-1: AMPR definition for UL MIMO Band**

* Proposals
  + AMPR needs to be study per band, but no AMPR for Band n40
* Recommended WF
  + TBA

**Issue 1-2: revised WID**

* Proposals
  + Option 1: Approve the revised WID in R4-2111445
  + Option 2: Other
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

*One of the two formats, i.e. either example 1 or 2 can be used by moderators.*

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Sub topic 1-1:  Better to wait for the outcome of TxD.  To Huawei: To understand better the situation, would you tell us what the technical reason that PC2 UL MIMO needs to revisit A-MPR but PC3 UL MIMO can use the same A-MPR with that for single NR operation is? |
| Qualcomm | Sub topic 1-1:  We also think it is better to wait for the outcome of TxD  It is also not clear why A-MPR needs to be revisited, the paper does not provide any technical explanation.  Sub-topic 1-2: revised WID can only be approved in the plenary. This paper can be presented in RAN4 for information. |

**Example 2**

Sub topic 1-1

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

Sub topic 1-2

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

### 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** |
| XXX | Company A |
| Company B |
|  |
| 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.*

|  |  |
| --- | --- |
|  | **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)

# 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