**3GPP TSG-RAN WG4 Meeting # 99-e R4-2107641**

**Electronic Meeting, 19th – 27th May, 2021**

**Agenda item:** 8.7, 11.8

**Source:** Moderator (Ligado Networks)

**Title:** Email discussion summary for [99-e][115] NR\_LTE\_band\_n24

**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.*

Background:

Agenda Items 8.7 is related to the recently introduced NR bands, n24. Agenda Item 11.8 is related to the recent modifications to LTE Band 24 due to regulatory updates.

CRs for both WIs were approved at RAN#91e meeting. At the RAN4#98-bis-e meeting, further progress was made via the WF R4-2105371.

Scope

To review and agree to the submitted CRs based on the WF agreements.

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

* 1st round: TBA

Discussion structure:

**Topic 1:** Review and agree to submitted CRs

* 2nd round: TBA

# Topic #1: Review and agree to submitted CRs

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

## Companies’ contributions summary

Moderator’s note: Cat A CRs are not listed.

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2108986 | Ligado Networks | **Summary of change to 38.101-1:** Finalization of A-MPR regions and values, assignment of different NS value to avoid conflict with one assigned for V2X bands and update to the notes as agreed to in WF tdoc R4-2105371 |
| R4-2108987 | Ligado Networks | **Summary of change to 36.101:** Finalization of A-MPR regions and values, assignment of different NS value to avoid conflict with one assigned for V2X bands and update to the notes as agreed to in WF tdoc R4-2105371 |

## Companies views’ collection for 1st round

### 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** |
| R4-2108986 | Nokia: You have changes on changes i.e. you added and then deleted a sentence. This is not ok. CR cannot be implemented by MCC. Take clean spec as a baseline. |
| Qualcomm: The MOP is specified as 23 dBm +2/-2, but when I checked the Tx filter IL, I found it to be 5 dB. With such large TxIL, it is not feasible to achieve this MOP. Was there other filter data that showed acceptable TxIL to enable MOP? |
| Ligado: The average max Tx IL of the filter data from 4 vendors submitted in R4-2014466 was 3.7 dB. |
| Huawei: We think that 3.7dB is OK according to proposed contribution. As for Nokia’s comments, it is better to revised the specs one time and one author for further processing. |
| Skyworks: filter data was looked at from different vendors and at the time the worst case filter insertion losses was 3dB which is comparable with other bands. |
| R4-2108987 | Nokia: You have changes on changes i.e. you added and then deleted a sentence. This is not ok. CR cannot be implemented by MCC. Take clean spec as a baseline. |
| Qualcomm: The A-MPR for region A is 3 dB but for the same region, SCS for NR, the A-MPR is 14 dB. Why is the A-MPR for LTE 11 dB lower than for NR? |
| Ligado: This is based on the simulation results and proposal presented in R4-2100134 and R4-2100135 at the RAN4#98e meeting. R4-2100545 describes the reasoning of lower A-MPR for LTE compared to NR. |
| Huawei: Do we only change 36.101(Rel-10)? For Rel-11 to Rel-17 of LTE, are there other needed CRs whose category is ‘A’? |
| Skyworks: the critical point is for requirement just at the band edge, for 10MHz LTE SU is 50RB vs 52RB for NR thus the reduced AMPR thanks to larger guard band |

## 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 #1.1** | *Moderator summary** Clarification on max Tx IL of the duplexer, unrelated to the technical changes in the CR, was requested and was provided.
* Clarification was requested on LTE A-MPR values in CR R4-2108987 and was provided.

*Tentative agreements:*Technical changes proposed in CR R4-2108986 seem to be agreeable. Except for LTE A-MPR Region A, technical changes proposed in CR R4-2108987 seem to be agreeable. *Candidate options:**Recommendations for 2nd round:** Given that the i) clarification in Round 1 discussion and ii) the simulation results presented for LTE in RAN4#98e in R4-2100134/R4-2100135 and iii) the explanation/proposal based on measurements in R4-2100545 seem to address the question raised related to the LTE A-MPR values, agree to the technical changes in CR R4-2108987.
* Address the change over change issue raised by Nokia and Huawei in revised CRs. The meeting date on the cover page needs to be also updated in the revised CRs.
* Based on filter data provided, review MOP tolerances in 36.101 and 38.101-1 and determine if updates are necessary. Any agreement resulting from the discussion should be incorporated in the revised CRs.
* Cat A CRs for 36.101 Rel 11-17 to be uploaded only after the revised CR for Rel-10 is agreed to.
 |

### 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”* |
| R4-2108986 | *To be revised* |
| R4-2108987 | *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