**3GPP TSG-RAN WG4 Meeting #** **97-e R4-200xxxx**

**Electronic Meeting, November 2nd – 13th, 2020**

**Agenda item:** 10.17

**Source:** Moderator (Ericsson)

**Title:** Email discussion summary for [97e][124] NR\_bands\_R17\_BWs

**Document for:** Information

# Introduction

A new basket WI was agreed in last RAN#88e meeting to manage all requests related to adding new channel BW in existing NR bands.

This agenda item will handle all contributions related to this WI:

* Endorsement of the updated WI including the new requests submitted for this meeting.
* Agreement on the big CRs collecting all draft CRs from previous RAN4#96-e meeting.
* Initiate discussion and make early agreements on:
  + Adding 40 MHz CBW to n80.
  + Adding 40 MHz CBW to n83.
  + Adding 90 and 100MHz MHz CBW to n40.

# Topic #1: Rapporteur inputs

This topic is aiming endorsing the updated WI with new requests submitted for this meeting.

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2015910 | Ericsson | WID revision including new requests made for this meeting |

## Open issues summary

### Sub-topic 1-1

Sub-topic description: Adding 30 MHz (all SCS) to n48.

**Issue 1-1: 30 MHz (all SCS) should be added to in n48.**

* Proposals:
  + Option 1: Agree
  + Option 2: Not agree
* Recommended WF
  + Agree with this proposal.

### Sub-topic 1-2

Sub-topic description: The WID has been updated with the status of the previous request and the new requests submitted for this meeting, it should be endorsed by RAN4 according to the agreed way of working. Two similar requests (30MHz for band n2) were received, it’s proposed to merge them and approve the request.

**Issue 1-2: 25, 30 and 40 MHz (all SCS) should be added to in n2.**

* Proposals: Approve this request. Remove Huawei’s proposal on adding 30MHz CBW in band n2, adding Telefonica and Huawei as supporting companies to the AT&T’s request.
  + Option 1: Agree
  + Option 2: Not agree
* Recommended WF
  + Agree with this proposal, the WID would then be revised accordingly.

### Sub-topic 1-3

Sub-topic description: Adding 25 MHz (all SCS) to n5..

**Issue 1-3: 25 MHz (all SCS) should be added to in n5.**

* Proposals:
  + Option 1: Agree
  + Option 2: Not agree
* Recommended WF
  + Agree with this proposal.

### Sub-topic 1-4

Sub-topic description: The proposed big CRs are merging all draft CRs endorsed in last RAN4#96-e meeting. They are proposed for agreement in this meeting. Note that if new draft CRs will be endorsed during this meeting, those draft CRs will be added to those big CRs and proposed for email approval.

**Issue 1-4: Big CRs to TS 38.104 and TS 38.101-1**

* Recommended WF
  + Provide any comment to the CRs to TR here after and/or mention if they are agreeable.

If agreeable, they would:

* + - Either be agreed after the 2nd round if no draft CRs are endorsed.
    - Or revised to add the endorsed draft CRs. An email approval for those revised big CRs would then be organized after the RAN#97-e meeting.

## Companies views’ collection for 1st round

### Open issues

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

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2015911 | *Big CR to TS 38.104 - New CBW Basket WI* |
| Company A |
| Company B |
| R4-2015912 | *Big CR to TS 38.101-1 - New CBW Basket WI* |
| 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:* |

*Recommendations on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **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*

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

## 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”* |

# Topic #2: Bands n80 (UE and BS) and n83 (BS only) - 40 MHz CBW

This topic is focusing on adding 40 MHz CBW support in bands n80 (UE and BS) and n83 (BS only).

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2015292 | Huawei | **Proposal: RAN4 agrees on the CRs proposed in this meeting in [2] [3] and [4] to add 40MHz for band n83 and n80, respectively.** |
| R4-2015293 | Huawei | DraftCR to TS 38.101-1 to add 40 MHz to band n80 |
| R4-2015294 | Huawei | DraftCR to TS 38.104 to add 40 MHz to band n80 |
| R4-2015295 | Huawei | DraftCR to TS 38.104 to add 40 MHz to band n83 |

## Open issues summary

### Sub-topic 3-1

It looks like no issue has been identified, draftCRs have been submitted.

**Issue 3-1: None has been identified.**

* Proposals
  + If any company disagrees with the proposed changes, please comment.
* Recommended WF
  + Focus on endorsing the draft CRs.

## Companies views’ collection for 1st round

### Open issues

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

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2015293 | *DraftCR to TS 38.101-1 to add 40 MHz to band n80* |
| Company A |
| Company B |
| R4-2015294 | *DraftCR to TS 38.104 to add 40 MHz to band n80* |
| Company A |
| Company B |
| R4-2015295 | *DraftCR to TS 38.104 to add 40 MHz to band n83* |
| 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:* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **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*

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

## 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”* |

# Topic #3: Band n40 – 90 and 100 MHz CBW

This topic is focusing on adding 90 and 100 MHz CBW support in band n40.

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2014593 | Skyworks | **Proposal: The need for 100MHz UL BW in n40 is further evaluated in relation to potential interference to the whole 2.4 GHz ISM band. If still adopted, MPR may be ignored.** |
| R4-2015296 | Huawei | **Proposal 1: Specify 1dB deltaMPR for 100MHz UE channel bandwidth for n40.**  **Proposal 2: Use values of REFSENS and RB allocation in the below table as the baseline when specifying requirements for 90 and 100MHz UE channel bandwidth for band n40.**   |  |  |  |  | | --- | --- | --- | --- | | **Bandwidth** | **SCS** | **REFSENS Value (dBm)** | **RB allocation** | | 90MHz | 30KHz | -87.1 | 243 | | 60KHz | -87.1 | 120 | | 100MHz | 30KHz | -84.7 | 270 | | 60KHz | -84.7 | 135 | |
| R4-2015297 | Huawei | draftCR to 38101-1 to add 90 and 100MHz BW for band n40 |
| R4-2015298 | Huawei | draftCR to 38104 to add 90MHz BW for band n40 |

## Open issues summary

### Sub-topic 3-1

Sub-topic description: It’s questionable if 100MHz UL CBW would be a relevant channel BW as it might impact the adjacent 2.4 GHz ISM band.

**Issue 3-1: Is 100MHz UL BW in n40 really needed considering potential interference to the whole 2.4 GHz ISM band.**

* Proposals
  + Option 1: Yes, it’s confirmed.
  + Option 2: No, better not specify this channel BW.
* Recommended WF
  + Share your view.

### Sub-topic 3-2

Sub-topic description: UE delatMPR.

**Issue 3-2: UE deltaPMR for 100MHz CBW.**

* Proposals:
  + Option 1: 1dB. (Huawei)
  + Option 2: Not needed.(Skyworks)
* Recommended WF

### Sub-topic 3-3

Sub-topic description: UE REFSENS limits and RB allocation.

**Issue 3-3:UE REFSENS.**

* Proposals
  + Option 1: Specify following REFSENS limits and corresponding RB allocation:

|  |  |  |  |
| --- | --- | --- | --- |
| **Bandwidth** | **SCS** | **REFSENS Value (dBm)** | **RB allocation** |
| 90MHz | 30KHz | -87.1 | 243 |
| 60KHz | -87.1 | 120 |
| 100MHz | 30KHz | -84.7 | 270 |
| 60KHz | -84.7 | 135 |

* Recommended WF
  + Please confirm or comment if you have another proposal.

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 3-1:  Issue 3-2:  Issue 3-3:  Other: |

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2015297 | *draftCR to 38101-1 to add 90 and 100MHz BW for band n40* |
| Company A |
| Company B |
| R4-2015298 | *draftCR to 38104 to add 90MHz BW for band n40* |
| Company A |
| Company B |

## Summary for 1st round

### Open issues

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

*Suggestion on WF/LS assignment*

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

### CRs/TPs

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| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
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## Discussion on 2nd round (if applicable)

## Summary on 2nd round (if applicable)

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| --- | --- |
| **CR/TP/LS/WF number** | **T-doc Status update recommendation** |
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