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

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

**Agenda item:** 7.4.2

**Source:** Moderator (Qualcomm)

**Title:** Email discussion summary for [97e][308] NR\_IAB\_RF\_Maintenance

**Document for:** Information

# Introduction

This e-mail discussion is treating documents related to the maintenance of IAB RF specifications. There are multiple CRs for TS 38.174, TR 38.809 and also some discussion documents related to EVM testing, power control testing.

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

* 1st round:
  + Tx EVM
  + Sensitivity and dynamic range requirements
  + In-band selectivity and blocking requirements
  + Tx Power related requirements
  + Unwanted emissions
  + Others
* 2nd round: Continue the discussion on Tx EVM related requirements and revisions of the CRs discussed in 1st round.

# Topic #1: Tx EVM

The IAB-MT Tx EVM measurement procedure and some editorial CRs are discussed in this thread.

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2014388 | CATT | **Proposal: IAB-MT EVM measurement process refers UE R15 specification.**  Detailed text proposal given in the paper also. |
| R4-2015207 | Nokia, Nokia Shanghai Bell | **Proposal 1:** **Single EVM-% is sufficient and there is no need to specify different requirements for different UL channels, i.e. only average EVM level is specified.**  **Proposal 2: DFT-s-OFDM should not be mandated to use for IAB conformance test.**  **Proposal 3: Usage of PT-RS should be enabled in Tx EVM conformance test for IAB-MT to be aligned with Tx EVM test for gNB.** |
| R4-2016137 | ZTE Corporation | **Proposal 3: to reuse** **UE EVM testing procedures without spectrum flatness, in-band emission, LO leakage and IQ-imbalance requirements and remove DFT-s-OFM signals for IAB-MT.**  For IAB-DU, its testing signal is defined in test models in TS 38.141, however testing signals for IAB-MT should follow the uplink configuration defined in TS 38.508 and TS 38.521. In addition, it should be known that DFT-s-OFDM PI/2 BPSK should be removed as IAB-MT is not necessary to support that feature. |

## Open issues summary

EVM measurements procedures are still open, there are several proposals that are discussed below.

### Sub-topic 1-1

IAB-MT Tx EVM measurement procedure

**Issue 1-1: EVM Measurement procedure**

* Proposals
  + Option 1: Re-use Rel.15 UE EVM testing procedures without spectrum flatness, in-band emission, LO leakage and IQ-imbalance requirements and remove DFT-s-OFM signals for IAB-MT(R4-2014388, R4-2016137)
  + Option 2: Re-use BS test procedure and use single requirement for all channels, remove DTS-s-OFDM (R4-2015207)
* Recommended WF
  + Adopt Option 1. The IAB-MT is transmitting signals just like a UE and the BS receiver is the same for IAB-MTs and UEs so same requirements and test procedure should be followed

### Sub-topic 1-2

Whether PT-RS should be used in the test or not

**Issue 1-2:** Whether PT-RS should be used in test

* Proposals
  + Option 1: Yes
  + Option 2: No
* Recommended WF
  + Adopt Option 2. This inline with the proposed WF for issue 1-1 and since the IAB-MT will track the DL signals, it is expected that frequency error is within certain bounds

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 1-1:  Sub topic 1-2:  ….  Others: |
| ZTE | Sub-topic 1-1:  At least testing signals should be based from UE testing configuration, and test up between UE and BS could be further discussed to check whether existing BS testup could be reused for IAB-MT.  Sub-topic 1-2: For PT-RS configuration, further clarifications on why IAB-MT could track DL signals and then the expected freq error is within certain bounds, we think PT-RS is purely based on RF component VCO and PLL phase noise, it seems that PT-RS for CPE is still needed for IAB-MT  If to follow the BS PT-RS configruation, then pattern 4 should be used. |
| CATT | **Issue 1-1: EVM Measurement procedure**  Although following BS structure maybe the high level direction, we still think IAB-MT EVM test procedure should follow UE. The difference of BS of UE is the difference of UL and DL, we don’t think DL signal EVM test procedure can apply to IAB-MT Tx signal.  **Issue 1-2:** Whether PT-RS should be used in test  Clarification is needed if the proposal is for DL signal or UL signal. Generally, we’re ok with the idea. But it should be noticed that currently no PTRS is configured at least for FR2 UE. R4-2011491 raised the issue but not approved. |
| Ericsson | Issue 1-1: Option 2. Depending on the IAB conformance testing framework, as the BS test structure is agreed to be used for IAB-MT in GTW session, the BS EVM test procedure can be used.  Issue 1-2: we prefer FFS/TBD option. We propose to have more technical discussion around this before RAN4 make a decision, the PT-RS signal is for FR2 and in BS EVM test for FR2, the PTRS is reflected in EVM test. |
| Samsung | Issue 1-1:  Even though IAB-MT supports UE functionality the Donor will still aware certain link is with UE or IAB-MT. And IAB is recognized more like a network node in this release. For IAB-MT it’s assumed that the data to serve more UEs connected to IAB-DU. It may not be treated equal priority as normal UE.  Issue 1-2:  Do not see the issue to consider PTRS in EVM test condition for FR2. |
| Nokia, Nokia Shanghai Bell | **Issue 1-1:** Option 1 and 2 are otherwise aligned, the only difference is whether the baseline is UE or BS procedure. We think that UL signal should be used in testing IAB-MT Tx EVM, but otherwise the high level principles should be aligned with infrastructure testing.  **Issue 1-2:** IAB-MT test procedure in FR2 should be brought on par with network-node testing where use of PT-RS is allowed. There is no need to mandate configuring PT-RS. We do not see a reason to create a difference between different network-nodes and therefore option 1 should be adopted. |
| Huawei | **Issue 1-1:** Option 2, the BS procedure should be adopted but with appropriate UL test signal.  **Issue 1-2:** We do not think the IAB-MT should be mandated to track the DL signal, option 1. |
| Qualcomm | **Issue 1-2:** there is a major difference between base station and MT(or UE), the base station configures the links so it can use PT-RS if it so desires. The MT cannot ask the gNB to use PTRS because gNB will configure the link. Hence, PTRS should not be used for IAB-MT EVM testing.It’s not clear why it would be allowed for the MT but not used for UEs. |

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2014386 | Company A |
| Samsung: for sub-clause 6.5.2 the shift due to mistake of sub-clause allocation is needed. Either way is acceptable. However for sub-clause 9.2 the re-numbering existing sub-clause seems not recommended by spec drafting rules. |
| Ericsson: ok as the BS structure was agreed in GTW session. |
| Nokia, Nokia Shanghai Bell: Section 9.6.2.2 states that 2-O requirements apply for 1-O and 9.6.2.3 states that 1-O requirements apply for 2-O. |
| Huawei: Clearly there is an error here as is also highlighted in 5435 and 6082, but I am not sure we can change the clause numbers and figure numbers in this way at this stage. For IAB-DU the reference is complete (including the frame structure clause) but for IAB-MNT the frame structure clause is missing, so the addition of this clause is a good correction. I think it is probably easiest to leave IAB-DU and a reference and add the new section to IAB-MT (adding sections is ok), otherwise we will get in a mess with clause numbering and void tables etc. |
| R4-2015435 | ZTE： could be merged with R4-2014386, no strong opinions on that |
| Company B |
| Ericsson :ok |
| Huawei: slightly different approach to issue as 6082 – its ok but maybe we should concentrate on updating 4386 |
| R4-2016082 | ZTE： could be merged with R4-2014386, no strong opinions on that |
| Nokia, Nokia Shanghai Bell: This provides the same correction as R4-2015435 above. |
| Ericsson :ok |
| Huawei: Same issue as 5436, again maybe best to concentrate on updating 4386 |
| R4-2016255 | ZTE： could be merged with R4-2014386, no strong opinions on that |
| Nokia, Nokia Shanghai Bell: In principle ok, but do we need to mention donor separately? It would be cleaner to define in section 3 that parent-node can be also donor. |
| Huawei: again the EVN clause order issue we think concentrate on updating 4386, the update including a donor node was discussed elsewhere if possible we should avoid defining to many node definitions, we should define parent node appropriately though (this could be checked in the definitions issue in [307] |
| Ericsson: in 38.874, chapter 6, the IAB network architecture always shows the IAB Donor and IAB node separately. We think it will be better to align the IAB node definition in RF specification with architecture and NOT define the new type of IAB node. Original TS has parent node which could mean either parent IAB node or parent IAB donor. Either we define the new node (which may not be necessary) or reuse the parent IAB node/IAB donor, actually if one search “parent IAB-node or IAB-donor” in 38.874 in chapter 6 (architecture), one can hit the same changes in recommended CR. |
| R4-2016139 (sections 6.5 and 9.6) | Nokia, Nokia Shanghai Bell: Changes in section 6.5 could be merged with other CR covering same section. In section 9.6.1.2.2 and 9.6.1.2.3 the change is a bit unnecessary. If it is agreed then section 9.6.1.2.3 should be voided instead of removed. |
|  |
| Ericsson: seem not necessary to combine 1-O and 2-O into one requirement. But no strong opinion. |
| Huawei: Clause 6.5, Looking at the definition of accumulative vs cumulative : “Cumulative refers to amassing or building up over time; growing by successive additions. Accumulative refers to the result of accumulating. It also implies an acquisitiveness or penchant for acquiring or accumulating things.” I think cumulative is the appropriate word. But agree these should be added to the CR for 6.5.  Clause 9.6, whilst both clauses can be merged, it necessitates voiding the deleted section, probably neater to keep it |
| R4-2014387 | ZTE： could be merged with R4-2014386, no strong opinions on that |
| CATT: This is draft CR for TS 38.809. R4-2014386 is for TS 38.174. |
| Ericsson: may be better rewording to “the principle of setting EVM frame structure for the IAB-MT can be reused from BS EVM frame structure.” i.e downlink need to change to uplink. |
|  |
| R4-2016263 | ZTE: replace should with could,this will give some implementation flexibility, |
| CATT: If “could” is used, does it mean the requirement is optional? |
| Ericsson: The concerned paragraph states deriving the IAB-MT FE using the DL signal, this is one implementation, we need consider the implementation flexibility. |
| Nokia, Nokia Shanghai Bell: We support agreeing these changes. |
| Huawei: We have decided the frequency error, agree should is not correct (we shouldn’t use “should” in normative document anyway) in terms of the requirement “could” is not really correct either as we have agreed to use it. |

## 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** | *Agreements from GTW:*  The signaling processing procedure on IAB-MT EVM requirements which similar as captured in Annex of BS and UE RF specification will be discussed in RF maintenance agenda.   * Alt1: Reusing UE approach with modification to remove spectrum flatness, in-band emission, LO leakage and IQ-imbalance parts * Alt2: Reusing BS approach and replacing DL channels as UL channels for IAB-MT * FFS whether PTRS need be configured or not * FFS whether RAN4 will introduce test cases for UL DFT-S-OFDM signals, if introduced clarification for optional supporting needed   For other test set-up issues will be discussed in conformance agenda.  *Recommendations for 2nd round:*  Further discuss Alt 1 and Alt 2 |

*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** |
| R4-2014386 | *To be revised, merge changes from R4-2015435, R4-2016082, R4-2016255,* |
| R4-2014387 | *To be revised, further discuss the change proposed by Ericsson* |
| R4-2016263 | *To be revised, further discuss how to fine tune the wording.* |

## Discussion on 2nd round (if applicable)

Further discussions on Tx EVM between the 2 alternatives and the 2 FFS listed after the 1st round:

Issue 1-1:

* Alt1: Reusing UE approach with modification to remove spectrum flatness, in-band emission, LO leakage and IQ-imbalance parts
* Alt2: Reusing BS approach and replacing DL channels as UL channels for IAB-MT

Issue 1-2:

* FFS whether PTRS need be configured or not
* FFS whether RAN4 will introduce test cases for UL DFT-S-OFDM signals, if introduced clarification for optional supporting needed

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

Discuss the revisions of the CRs

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2014386 |  |
|  |
| Revision of R4-2014387 |  |
|  |
| Revisions of R4-2016263 |  |
|  |

## 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: Sensitivity and dynamic range requirements

Editorial CRs were submitted for this agenda, companies should provide comments in the CRs/TPs section

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
|  |  |  |

## Open issues summary

There are a lot of fixes proposed for the specifications, companies to provide comments to the proposed changes directly.

### Sub-topic 2-1

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 2-1:  Sub topic 2-2:  ….  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** |
| R4-2015436 | ZTE: fine with that, it’s also aligned with our proposal |
| Company B |
| Ericsson: ok |
| Huawei: ok |
| CR-2016254 | ZTE: fine to further discuss and not sure any difference from 5 directions? |
| Company B |
| Nokia, Nokia Shanghai Bell: We’d think that it is fine to keep the same principle of declaring 5 directions, but in conformance it can be clarified if all those directions are tested. Other changes are needed in sensitivity and dynamic range sections as detailed in other documents. |
| Huawei: The declarations define the capability of the system and hence are required, which ones are tested for each req. is specified in the initial conditions. |
| R4-2016083 (changes to section 10.2) | ZTE: fine with that. |
|  |
| Ericsson: Ok, terminology need to be combined with other papers. |
| Huawei: Our paper, so issue is how to update or combine, as 10.2 seems ok revision with just 10.2 seems appropriate. |
| R4-2016139 (sections 7.2, 7.3, 10.2, 10.3, 10.4) | Samsung: in this CR there are several [] of reference TS38.141-1/2 removed, for which the extreme and normal condition seems still under discussion in perf part. Even it is going to reuse definition in TS38.141-1/2 the reference# may be [21] or [22] rather than [6]. |
| Huawei: 7.2 – 5436 has similar changes bit is preferable, cannot just add sections like this at this stage I think.. 7.3 again this is done in 5436, 10.2 – ok, 10.3.3.3 table number is incorrect (10.3.3.2-1 should be 10.3.3.3-1) |
|  |
| R4-2016262 | ZTE: fine with that. |
|  |
|  |

## 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** | *Several CRs were discussed during the 1st round, the recommendations on how to handle them are listed below:*  *Recommendations for 2nd round: Discuss the revised CRs below and aim to agree them.* |

*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** |
| R4-2015436 | Revise to take into account changes proposed in R4-2016139 in Sections 7.2 and 7.3. |
| R4-2016083 | *Revise to have only the changes to Section 10.2 and merge with the changes proposed in R4-2016254 and R4-2016139 (Sections 10.2, 10.3 and 10.4)*  *Take into accounts the editorial comments and further discuss the number of directions and how to handle them.* |
| R4-2016254 | *Mark as not pursued.* |
| R4-2016262 | *Agreeable as is* |

## Discussion on 2nd round (if applicable)

Continue discussion on the revised CR listed in the table below:

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2015436 |  |
|  |
| Revision of R4-2016083 |  |
|  |

## 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: In-band selectivity and blocking requirements

Editorial CRs were submitted for this agenda, companies should provide comments in the CRs/TPs section

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
|  |  |  |
|  |  |  |
|  |  |  |

## Open issues summary

There are a lot of fixes proposed for the specifications, companies to provide comments to the proposed changes directly*.*

### Sub-topic 3-1

## Companies views’ collection for 1st round

### Open issues

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

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2015437 | ZTE: 5MHz for IAB-MT should be removed, in addition,freq offset for ACS requirement has been define i think. |
| Company B |
| Ericsson:ok |
| R4-2016252 | ZTE: fine to remove 5MHz for IAB-MT |
| Huawei: cover sheet should have reason for change etc and clauses effected. |
|  |
| R4-2016139 (“big CR” – see section 7.4 ,10.5) | Huawei: 7.4 can we merge with 6252, also what is the intention of the highlighted text?, 10.5 ok |
|  |
|  |
| R4-2016261 | ZTE: fine with that. |
|  |
|  |
| R4-2014752 | ZTE: fine with that. |
| Nokia, Nokia Shanghai Bell: Change is technically ok but there is typo in 9.4: “power dymaic range” |
| Ericsson : ok |
| Huawei: as this is TR not sure why you delete the table of FR2 bands, the reference will update but these were the bands considered in this TR, I think keeping table is better. |

## 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** |
| R4-2015437 | Revise to take into account the changes proposed to Section 10.5 from R4-2016252(remove 5MHz) and R4-2016139. |
| R4-2016252 | *Revise to make changes only to Section 7.4, take into account changes in Section 7.4 in R4-2016139.* |
| R4-2016261 | *Agreeable* |
| R4-2014752 | *Revise to take into account the comments.* |

## Discussion on 2nd round (if applicable)

Continue discussion on the revised CR listed in the table below:

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2015437 |  |
|  |
| Revision of R4-2016252 |  |
|  |
| Revisions of R4-2014752 |  |
|  |

## 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 #4: Tx Power related requirements

A single paper is discussing the relative PC test. Some editorial CRs are included in the CRs/TPs sections, companies are invited to provide comments directly there.

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2016137 | ZTE | **Proposal 1: to** **reuse the existing relative power tolerance requirement in TS 38.101-1/2 for IAB-MT.**  **Proposal 2: to reuse the existing aggregated power tolerance requirement in TS 38.101-1/2 for IAB-MT.** |

## Open issues summary

The relative and aggregate power tolerance are still open, the proposals are discussed in sub-topics 4-1 and 4-2.

There are a lot of fixes proposed for the specifications, companies to provide comments to the proposed changes directly*.*

### Sub-topic 4-1

*Sub-topic description:*

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

**Issue 4-1: Relative Power Tolerance**

* Proposals
  + Option 1: reuse the existing relative power tolerance requirement in TS 38.101-1/2 for IAB-MT
* Recommended WF
  + Agree option 1

### Sub-topic 4-2

*Sub-topic description*

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

**Issue 4-2: Aggregate Power Tolerance**

* Proposals
  + Option 1: reuse the existing aggregated power tolerance requirement in TS 38.101-1/2 for IAB-MT
* Recommended WF
  + Agree option 1

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 4-1:  Sub topic 4-2:  ….  Others: |
| CATT | It seems they’re also discussed in thread [310]. We already commented in [310]. |
| Samsung | Issue 1-1/2: Clarification needed regarding moderator recommendation. Does that mean we will stick to exiting requirement in TS38.174 or it is suggested to update the power control tolerance? |
| Nokia, Nokia Shanghai Bell | Issue 1-1/2: Some of the larger power control steps specified in 38.101-1/2 were intentionally left out of 38.174 because they would exceed the minimum requirement for IAB-MT dynamic range. Therefore we do not think it is reasonable to copy the missing requirements from UE specifications. |
| Huawei | **Issue 1-2:** It’s not clear what the proposal is with regard the existing requirement in the TS, are the values wrong? If so we need to see the proposed new numbers. |

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2016257 | Huawei: are these the power tolerance changes suggested in issue 1-2 ? |
| Company B |
| Ericsson: we see the changes align with option 1 in Issue 1-2. There are two tables in TS38.101-1/2, it should refer to the upper range of output power one. |
| R4-2016139 (section 6.2, 6.3, 6.4, 9.2, 9.3, 9.4) | Nokia, Nokia Shanghai Bell: We do not agree with the changes in section 9.2.4. Configured output power links to RAN1 specification so better to keep this unchanged. |
| Company B |
| Ericsson: 9.2.4, the title change may not reflect the original intention. |
| Huawei: 9.2.2 title change, the fill names should be kept. Configured output power is a specific name we should keep. |
| R4-2016264 |  |
|  |
|  |

## 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** | *Issue 4-1 and 4-2 are also discussed under thread [210], moderator recommends to continue the discussion under that thread.*  Recommendations on the CRs are given below. For the proposals in the “big CR” R4-2016139, moderator recommends not to pursue them. |

*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** |
| R4-2016257 | Revise and continue discussion to try to agree this CRR4-201 |
| R4-2016264 | *Agreeable as no comment was received* |

## Discussion on 2nd round (if applicable)

Continue discussion on the revised CR listed in the table below:

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2016257 |  |
|  |

## 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 #5: Unwanted emissions

Editorial CRs were submitted for this agenda, companies should provide comments in the CRs/TPs section

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
|  |  |  |

## Open issues summary

There are a lot of fixes proposed for the specifications, companies to provide comments to the proposed changes directly

### Sub-topic 5-1

## Companies views’ collection for 1st round

### Open issues

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

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2016258 | ZTE: fine to remove 5MHz for IAB-MT, however this table is also applied for IAB-DU. |
| Company B |
|  |
| R4-2016139 (section 6.6, 9.7) | Company A |
| Company B |
| Nokia, Nokia Shanghai Bell: In these sections 5 MHz bandwidth should be also removed. |
| Huawei: In general all these italic updates are very good (thanks) |
| R4-2016265 | ZTE: fine with that. |
| Huawei: “If” might be better than “when”, when implies that it will be using DL TS. |
| Ericsson: good suggestion, Ok to change “when” to “if”. |

## 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** |
| R4-2016258 | Changes are agreeable, should be merged with the changes to sections 6.6 and 9.7 in R4-2016139. |
| R4-20xxxxx | Allocate new CR to ZTE to incorporate the changes from sections 6.6 and 9.7 in R4-2016139 and R4-2016258. |
| R4-2016265 | Agreeable. |

## Discussion on 2nd round (if applicable)

Continue discussion on the revised CR listed in the table below:

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2016258 |  |
|  |
| R4-20xxxxx (new CR to ZTE) |  |
|  |

## 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 #6: Others

Editorial CRs were submitted for this agenda, companies should provide comments in the CRs/TPs section

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
|  |  |  |

## Open issues summary

There are a lot of fixes proposed for the specifications, companies to provide comments to the proposed changes directly*.*

### Sub-topic 6-1

*Sub-topic description:*

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 6-1:  Sub topic 6-2:  ….  Others: |

### CRs/TPs comments collection

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2015438 | ZTE: fine with that. |
| Company B |
| Ericsson:ok |
| Huawei: clearly there are issues with section numbers all being 7.5.2 but the level is correct they should be level 3 not level 4 under the general section. I assume in this case as the error is with the section headings it is ok to renumber them 7.5.2, 7.5.3, 7.5.4 etc |
| R4-2016253 | ZTE: editorial corrections is fine for us. |
| Company B |
| Nokia, Nokia Shanghai Bell: There is a minor typo in last paragraph of IAB-DU type 2-O section adding “2” in wrong place. |
| R4-2016139 (all other sections not explicitly stated for Topics 1-5) | Nokia, Nokia Shanghai Bell: Overall this document should be noted and the agreeable changes adopted to revised/new draftCRs which are split according to the meeting agenda. This facilitates also the review process. |
| Huawei: This document has many changes but overlaps with other CR’s, which makes review difficult at this stage. Many of the editorial changes (italics etc) are very good and we should somehow keep, but maybe as there are so many CR’s in these sections this meeting they could be done on a more stable version next meeting? |
|  |
| R4-2016256 | ZTE: fine with that. |
| Samsung: for F.2 text other than “TBD” should be added to avoid empty sub-clause which may be voided at last. |
| Ericsson: “TBD” is to be replaced with technical text in next meeting. Companies are encouraged to bring the discussion/CR paper next meeting. |

## 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** | *Recommendations for the CRs can be found in the table below.* |

*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** |
|  |  |
| R4-2015438 | *Revise and keep discussing to reach an agreement* |
| R4-2016253 | *Revise to take int account the Nokia comments* |
| R4-2016139 (all other sections not explicitly stated for Topics 1-5) | *Postpone to next meeting, by then there should be more clarity about the corrections needed.* |
| R4-2016256 | *Revise and keep discussing to have an agreement.* |

## Discussion on 2nd round (if applicable)

Discuss the revisions of the CRs

|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| Revision of R4-2015438 |  |
|  |
| Revision of R4-2016253 |  |
|  |
| Revisions of R4-2016256 |  |
|  |

## 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”* |