**3GPP TSG-RAN WG4 Meeting # 99-e R4-210xxxxx**

**Electronic Meeting, May. 19-27, 2021**

**Agenda item:** 8.33, 8.34

**Source:** Moderator (CMCC)

**Title:** Email discussion summary for [99-e][125] HPUE\_n34\_n39

**Document for:** Information

# Introduction

WI(s) on introduction of PC2 n34 band (RP-210844) and PC2 n39 band (RP-210845) for NR was approved in RAN#91-e meeting.

This email discussion includes contributions in agenda 8.33 and 8.34, the targets of email discussion based on companies’ contributions submitted in this e-meeting are as below:

* 1st round:
  + Discuss RF requirements for PC2 n34 and n39, and provide comments on the CRs and contributions.
* 2nd round:
  + Strive to approve CRs or WF.

# Topic #1: Introduction of PC2 n34 for NR

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| **R4-2108975** | CMCC | **Proposal 1: The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n34 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n34 of power class 2.** |
| **R4-2108943** | CMCC | **CR on PC2 UE RF requirements of n34 in Rel-17 TS 38.101-1** |
| **[R4-2109003](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2109003.zip)** | Nokia, Nokia Shanghai Bell | **Proposal: PC2 n34/n39 MOP lower tolerance should be +2/-2 dB.** |
| **[R4-2109677](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2109677.zip)** | vivo | **Proposal 1:** Considering the power consumption and extra insertion loss of PC 2 UE, the power tolerance +2/-3 for n34 is proposed. |
| **[R4-2110474](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2110474.zip)** | ZTE Corporation | **Proposal 1: Option1, i.e. The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n34 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n34 of power class 2.**  **Proposal 2: If possible, it should revisit the current PC2 single band MOP tolerance requirement defined for band n41/n77/n78/n79.** |

## 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 UE RF Requirements

**Issue 1-1-1: UE MOP and Tx power tolerance for n34 of Power class 2**

* Proposals
  + Option1: The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n34 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n34 of power class 2.
  + Option2: The power tolerance for PC2 for n34 is +2/-3. Regardless of single antenna port or UL MIMO case.
  + Option3: PC2 n34/n39 MOP lower tolerance should be +2/-2 dB.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Issue 1-1-1:  Option 3 |
| ZTE | Option 1.  In addition, we are wondering if option 1 is agreeable, then if it is possible to revisit the current PC2 single band MOP tolerance requirement defined for band n41/n77/n78/n79, since a uniform approach is better for all PC2 single band.  To Nokia:  In your R4-2109003, it seems the reason for Option 3 is: there is no reason to relax the lower tolerance for PC2 MOP without UL MIMO and/or TxD.  It seems it is consitency with the sentence in Option 1: “The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n34 of power class 2”.  Also, according to R4-2109003, “**Observation 1: +2/-3 comes from dual PA configurations.**”, which corresponding to UL-MIMO case.  So after reading the R4-2109003, we would like to check with Nokia, is Option 1 also your preference? |
| Huawei | Issue 1-1-1:  So far all PC2 bands have tolerance of 2/-3 dB. We support option 2. |
| Xiaomi | Prefer Option 2. If most companies are OK with option 1, option 1 is also acceptable to us. |
| CMCC | **Issue 1-1-1: UE MOP and Tx power tolerance for n34 of Power class 2**  We prefer option1 and option 3 |
| Samsung | **Issue 1-1-1: Option 2. It is better to have the same tolerance with other PC2 bands. Changing the lower tolerance for single antenna port can be discussed with other bands in the future.** |
| Skyworks | Issue 1-1-1: for bands above 3.3GHz +2/-3 is used even in LTE. This wider range is also needed because of the large BW (up to 100MHz) for bands n40, n41, n77/78/79 which see more impact from the PA fractional BW. We do not agree to revisit the PC2 single CC tolerance for n41/n77/78/79.  ZTE: Our intention is simply, to find out if it is possible to use a uniform approach for all PC2 band. Also after checking LTE spec, we see for PC2 band 42, +2/-3dB is used. So we are fine to keep the current telorence values for the existing PC2 bands. |

### 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** |
| **R4-2108943** | Huawei: The decision on the CR should depend on the outcome of issue 1-1-1. |
| 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: Introduction of PC2 n39 for NR

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| **R4-2108976** | CMCC | **Proposal 1: The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n39 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n39 of power class 2.**  **Proposal 2: No changes to PC2 A-MPR requirements for n39.** |
| **R4-2108944** | CMCC | **CR on PC2 UE RF requirements of n39 in Rel-17 TS 38.101-1** |
| **R4-2109677** | vivo | **Proposal 2:** Considering the power consumption and extra insertion loss of PC 2 UE, the power tolerance +2/-3 for n39 is proposed. |
| **[R4-2109003](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2109003.zip)** | Nokia, Nokia Shanghai Bell | **Proposal: PC2 n34/n39 MOP lower tolerance should be +2/-2 dB.** |
| **[R4-2109257](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2109257.zip)** | Nokia, Nokia Shanghai Bell | This contribution presents simulated PC2 A-MPR results for additional spurious emission limit NS\_50 on n39. |
| **[R4-2109259](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2109259.zip)** | Nokia, Nokia Shanghai Bell | **Observation 1: PC3 A-MPR regions are sufficient for PC2 A-MPR.**  **Observation 2: PC2 CIM3 A-MPR exceeds PC3 A-MPR when considering 40 MHz channel bandwidth.**  **Proposal 1: Re-use NS\_50 PC3 A-MPR regions for PC2 A-MPR.**  **Proposal 2: For 40 MHz CIM3 A-MPR use values defined in A1 column of the PC3 A-MPR.**  **Observation 3: PC3 A-MPR refers to A-MPR value column A9 which is not defined.** |
| **[R4-2110475](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2110475.zip)** | ZTE Corporation | **Proposal 1: Option1, i.e. The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n39 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n39 of power class 2.** |
| **[R4-2111014](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2111014.zip)** | Apple | **Observation 1:** In the case of DFT-s-OFDM allowance is not always enough to comply with coexistence requirements.  **Proposal 1:** To comply with emission limits, add a new note which allows 2dB power backoff for outer allocations and 1dB for inner allocations in case of RBstart <= 4.32MHz and PC2, DFT-s-OFDM and CBW larger than 5MHz.  In case of CP-OFDM the power backoff need seems to be inside MPR allowance. Therefore, no additional power backoff allowance is required. The simulation results can be found in section 3.  **Proposal 2:** Use allocations regions found in Table 1 and A-MPR proposed in Table 2 for 25MHz, 30MHz and 40MHz CBW NS\_50. |
| **[R4-21XXXX](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_99-e/Docs/R4-2111014.zip)** | Huawei，HiSilicon | **late submission for information**  **https://www.3gpp.org/ftp/tsg\_ran/WG4\_Radio/TSGR4\_99-e/Inbox/Drafts/%5B99-e%5D%5B125%5D%20HPUE\_PC2\_n34\_n39/R4-2111xxx%20AMPR%20for%20n39%20NS\_50%20PC2.docx** |

## 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 UE RF Requirements

**Issue 2-1-1: UE MOP and Tx power tolerance for n39 of Power class 2**

* Proposals
  + Option1: The MOP and Tolerance for single antenna port are to be specified as 26dBm ±2 dB for band n39 of power class 2, and The MOP and Tolerance for UL MIMO are to be specified as 26dBm +2/-3 dB for n39 of power class 2.
  + Option2: The power tolerance for PC2 for n39 is +2/-3. Regardless of single antenna port or UL MIMO case.
  + Option3: PC2 n34/n39 MOP lower tolerance should be +2/-2 dB.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

**Issue 2-1-2: A-MPR**

* Proposals
  + Option1: No changes to PC2 A-MPR requirements for n39.
  + Option2: Re-use NS\_50 PC3 A-MPR regions for PC2 A-MPR.

For 40 MHz CIM3 A-MPR use values defined in A1 column of the PC3 A-MPR.

Table 1. A-MPR regions for NS\_50, together with A-MPR for PC3 and PC2 (PC2 highlighted in yellow)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Channel Bandwidth (MHz)** | **RBstart\*12\*SCS (MHz)** | **LCRB\*12\*SCS (MHz)** | **A-MPR, PC3** | **A-MPR, PC2** |
| 25 MHz | ≤ LCRB\*12\*SCS - 5 | > 5 | A7 | A7 |
|  | ≤ 20 | ≤ 1.44 | A8 |  |
| 30 MHz | ≤ LCRB\*12\*SCS - 5 | > 5 | A7 | A7 |
|  | ≤ 25 | ≤ 1.44 | A8 | A8 |
|  |  | ≤ 3.6 | A9 |  |
| 40 MHz | ≤ 4.32 | > 0 | A1 | A1 |
|  | > 4.32, ≤ 10.44 | ≤ 10.8 | A3 | A3 |
|  | > 4.32, ≤ 18 | > 10.8 | A2 | A2 |
|  | > 18, ≤ 31.68 | > max (31.68 – RBstart\*12\*SCS, 0) | A6 | A6 |
|  | > 31.68 | > 0 | A5 | A1 |
| NOTE 1: The A-MPR values are specified in Table 6.2.3.19-2. | | | | |

Table 2. A-MPR values for NS\_50

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Modulation/Waveform | | A1 (dB) | A2 (dB) | A3 (dB) | A5 (dB) | A6 (dB) | A7 (dB) | A8 (dB) |
|  | | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner |
| DFT-s-OFDM | Pi/2 BPSK | ≤ 11 | ≤ 7 | ≤ 3 | ≤ 5 | ≤ 2 | ≤ 4 | ≤ 2 |
|  | QPSK | ≤ 11 | ≤ 7 | ≤ 3 | ≤ 5 | ≤ 2 | ≤ 5 | ≤ 2 |
|  | 16 QAM | ≤ 11 | ≤ 7 | ≤ 3 | ≤ 5 | ≤ 2 | ≤ 5 | ≤ 2.5 |
|  | 64 QAM | ≤ 11 | ≤ 7 | ≤ 3 | ≤ 5 |  | ≤ 5 |  |
|  | 256 QAM | ≤ 11 | ≤ 7 |  | ≤ 5 |  | ≤ 5 |  |
| CP-OFDM | QPSK | ≤ 12 | ≤ 8 | ≤ 4.5 | ≤ 5 | ≤ 3.5 | ≤ 6.5 |  |
|  | 16 QAM | ≤ 12 | ≤ 8 | ≤ 4.5 | ≤ 5 | ≤ 3.5 | ≤ 6.5 |  |
|  | 64 QAM | ≤ 12 | ≤ 8 | ≤ 4.5 | ≤ 5 |  | ≤ 6.5 |  |
|  | 256 QAM | ≤ 12 | ≤ 8 |  |  |  | ≤ 6.5 |  |

* + Option3: Use allocations regions found in Table 1 and A-MPR proposed in Table 2 for 25MHz, 30MHz and 40MHz CBW NS\_50.

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| Table 1: PC2 A-MPR regions for NS\_50   |  |  |  |  | | --- | --- | --- | --- | | Channel Bandwidth (MHz) | RBstart\*12\*SCS (MHz) | LCRB\*12\*SCS (MHz) | A-MPR | | 25 MHz | ≤ LCRB\*12\*SCS - 5 | > 5 | A7 | | ≤ 20 | ≤ 1.44 | A8 | | ≤ max(0, 6.48 - LCRB \*12\*SCS) | > 1.44, ≤ 5.0 | A6 | | 30 MHz | ≤ LCRB\*12\*SCS - 5 | > 5 | A7 | |  | ≤ 25 | ≤ 1.44 | A8 | |  |  | ≤ 3.6 | A9 | | > LCRB \*12\*SCS – 5, ≤ 5.04 | > 3.6 | A6 | | 40 MHz | ≤ 4.32 | > 0 | A1 | |  | > 4.32, ≤ ~~10.44~~ 12.96 | ≤ 10.8 | A3 | |  | > 4.32, ≤ 18 | > 10.8 | A2 | |  | > 18, ≤ 31.68 | > max (31.68 – RBstart\*12\*SCS, 0) | A6 | |  | > 31.68 | > 0 | A5 | | NOTE 1: The A-MPR values are specified in Table 6.2.3.19-2. | | | |   Table 2: PC2 A-MPR for NS\_50   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Modulation/Waveform | | A1 (dB) | A2 (dB) | A3 (dB) | A5 (dB) | A6 (dB) | A7 (dB) | A8 (dB) | |  | | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | Outer/Inner | | DFT-s-OFDM | Pi/2 BPSK | ≤ ~~11~~ 11.5 | ≤ ~~7~~ 8.0 | ≤ ~~3~~ 4.0 | ≤ ~~5~~ 7.5 | ≤ ~~2~~ 2.5 | ≤ ~~4~~ 5 | ≤ ~~2~~ 2.5 | |  | QPSK | ≤ ~~11~~ 11.5 | ≤ ~~7~~ 8.0 | ≤ ~~3~~ 4.0 | ≤ ~~5~~ 7.5 | ≤ ~~2~~ 2.5 | ≤ ~~5~~ 6 | ≤ ~~2~~  2.5 | |  | 16 QAM | ≤ ~~11~~ 11.5 | ≤ ~~7~~ 8.0 | ≤ ~~3~~ 4.0 | ≤ ~~5~~ 7.5 | ≤ ~~2~~ 2.5 | ≤ ~~5~~ 6 | ≤ ~~2.5~~  3.0 | |  | 64 QAM | ≤ ~~11~~ 11.5 | ≤ ~~7~~ 8.0 | ≤ ~~3~~ 4.0 | ≤ ~~5~~ 7.5 |  | ≤ ~~5~~ 6 |  | |  | 256 QAM | ≤ ~~11~~ 11.5 | ≤ ~~7~~ 8.0 |  | ≤ ~~5~~ 7.5 |  | ≤ ~~5~~ 6 |  | | CP-OFDM | QPSK | ≤ ~~12~~ 12.5 | ≤ ~~8~~ 9.0 | ≤ ~~4.5~~ 5.5 | ≤ ~~5~~ 7.5 | ≤ ~~3.5~~ 4.5 | ≤ ~~6.5~~ 7.5 |  | |  | 16 QAM | ≤ ~~12~~ 12.5 | ≤ ~~8~~ 9.0 | ≤ ~~4.5~~ 5.5 | ≤ ~~5~~ 7.5 | ≤ ~~3.5~~ 4.5 | ≤ ~~6.5~~ 7.5 |  | |  | 64 QAM | ≤ ~~12~~ 12.5 | ≤ ~~8~~ 9.0 | ≤ ~~4.5~~ 5.5 | ≤ ~~5~~ 7.5 |  | ≤ ~~6.5~~ 7.5 |  | |  | 256 QAM | ≤ ~~12~~ 12.5 | ≤ ~~8~~ 9.0 |  | ≤ ~~5~~ 7.5 |  | ≤ ~~6.5~~ 7.5 |  | |

* Recommended WF
  + TBA. Collect companies’ view in 1st round

**Issue 2-1-3: MPR**

* Proposals
  + Option1: No changes to 1Tx PC2 MPR general requirements. (The agreement captured in the WF R4-2105386 has been approved in RAN4#98-bis-e meeting)
  + Option2: To comply with emission limits, add a new note which allows 2dB power backoff for outer allocations and 1dB for inner allocations in case of RBstart <= 4.32MHz and PC2, DFT-s-OFDM and CBW larger than 5MHz.
* Recommended WF
  + TBA. Collect companies’ view in 1st round

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Issue 2-1-1:  Option 3 |
| ZTE | Issue 2-1-1: Same view as Issue 1-1-1: Option 1. |
| Huawei | Issue 2-1-1:  So far all PC2 bands have tolerance of 2/-3 dB. We support option 2.  Issue 2-1-2:  Generally speaking, the A-MPR values in option 2 are too optimistic. According to the contribution paper R4-2109257, the PA was calibrated at MPR=0.5 dB rather than the typical value of 1 dB. Consequently, the PA was less compressed, which might explain the relatively optimistic results.  Based on our simulation results, option 3 seems more reasonable. However, there remain a number of questions:  1) The A-MPR values for A5 are underestimated. Prefer to follow the approach in option 2, i.e. replace A5 with A1;  2) Our simulation suggests about 1 dB higher value is needed for A1 and A2;  3) A9 is defined but no A-MPR value proposed. Suggest to use 2 and 3 dB for DFT-s-OFDM and CP-OFDM, respectively;  4) For BW=25/30 MHz, A-MPR should also be defined for RBs allocated near the upper edge of the CBW (i.e. near the diagonal of the square plots).  More study on the issue is needed.  Issue 2-1-3:  We support to further investigate the issue. Clearly, when determining MPR, only general SEM, ACLR and/or EVM are considered. And the additional emission requirements embedded in the UE coexistence table are ignored. Many of them don’t have an associated network signaling (NS).  There’re more than 40 notes in the coexistence table. Many of them imposes restrictions on RB numbers or frequency range for the sake of facilitating coexistence. And they were defined assuming 23 dBm max output power (PC3), which may not be adequate for PC2.  We suspect the problem is not for n39 PC2 alone. Other PC2 bands may have similar problems, given the complexity of coexistence requirements. And the solution in option 2 may not be the only way. Other options such as modifying NS\_50 to include BW<=20, or adding restrictions in note 33 of the coexistence table could also be considered. We suggest to thoroughly study the problem and take a holistic approach for all high power bands. |
| Xiaomi | Issue 2-1-1: Prefer Option 2. If most companies are OK with option 1, option 1 is also acceptable to us. |
| CMCC | **Issue 2-1-1: UE MOP and Tx power tolerance for n39 of Power class 2**  We prefer option1 and option 3  **Issue 2-1-3: MPR**  The PC2 MPR issue is not just for n39/n34 bands, but for all the defined PC2 bands (n41\n77\n78\n79) and existing UEs on the market. Companies are encouraged to evaluate whether this general requirements needs to be modified, and we need to specify the PC2 MPR carefully to avoid complex specification implications. |
| Samsung | **Issue 2-1-1: Option 2. Same as Issue 1-1-1.** |

### 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** |
| **R4-2108944** | Huawei: The decision on the CR should depend on the outcome of issue 2-1-1. |
| Company B |
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## 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.*

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

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| --- | --- |
| **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”* |

# Recommendations for Tdocs

## 1st round

**New tdocs**

|  |  |  |
| --- | --- | --- |
| **Title** | **Source** | **Comments** |
| AMPR for n39 NS\_50 PC2.docx | Huawei，HiSilicon |  |

**Existing tdocs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tdoc number** | **Title** | **Source** | **Recommendation** | **Comments** |
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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** |
|  |  |  |  |  |

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