**3GPP TSG-RAN WG4 Meeting # 102-e R4-22XXXXX**

**Electronic Meeting, 21 February – 3 March, 2022**

**Agenda item:** 9.29

**Source:** Man Hung Ng (Nokia)

**Title:** Email discussion summary for [102-e][115] LTE\_NR\_HPUE\_FWVM

**Document for:** Information

# Introduction

Email discussion for contributions submitted under agenda item 9.29 for High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, Band 13, Band n5, Band n13, and Band n71.

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

* 1st round: Discussion and potential approval of TR 37.828 v0.2.0, TPs to TR 37.828 on feasibility study and UE RF requirements.
* 2nd round: Approval of TR 37.828 v0.2.0, TPs to TR 37.828 on feasibility study and UE RF requirements.

# Topic #1: General

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2205849 | Nokia, Nokia Shanghai Bell | Proposal 1: Approve TR 37.828 v0.2.0  Observation 1: |

## Open issues summary

### Sub-topic 1-1

**Issue 1-1: TR 37.828 v0.2.0**

* Proposals
  + Option 1: Approve the TR.
  + Option 2: Revise the TR.
* Recommended WF
  + TBA

### Sub-topic 1-2

## Companies views’ collection for 1st round

### Open issues

Sub topic 1-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Option 1: Approve the TR. |

### CRs/TPs comments collection

## 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)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #2: Feasibility study

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2203648 | Nokia, Nokia Shanghai Bell | Proposal 1: Approve TP to TR 37.828: Coexistence study for High-power UE Vs adjacent channel Public Safety operation for fixed-wireless/vehicle-mounted use cases in Band 5 and Band n5  Observation 1: |
| R4-2205926 | T-Mobile USA | Proposal 1: Approve TP for TR 37.828: Filter and PA data for n71, n26 and n12  Observation 1: |

## Open issues summary

### Sub-topic 2-1

**Issue 2-1: TP to TP to TR 37.828: Coexistence study for High-power UE Vs adjacent channel Public Safety operation for fixed-wireless/vehicle-mounted use cases in Band 5 and Band n5**

* Proposals
  + Option 1: Approve the TP.
  + Option 2: Revise the TP.
  + Option 3: Postpone the TP.
* Recommended WF
  + TBA

### Sub-topic 2-2

**Issue 2-2: TP to TP to TR 37.828: Filter and PA data for n71, n26 and n12**

* Proposals
  + Option 1: Approve the TP.
  + Option 2: Revise the TP.
  + Option 3: Postpone the TP.
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 2-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Option 1: Approve the TP. |

Sub topic 2-2

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Option 2: Revise the TP.  1) typo 'may not only be suitable even for' in 7.x.3;  2) tables size in 7.x.4, 7.y.4, 7.z.4 are too large, such that last two columns cannot be viewed even in Print Layout, this would create difficulty for TR maintenance. |

### CRs/TPs comments collection

## 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 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)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# Topic #3: UE RF requirements

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2204786 | Nokia | Proposal 1: TP to 37.828: FWA MPR  Observation 1: |
| R4-2205670 | Huawei Technologies France | Proposal 1: MPR studies for PCI FWA UEs  Observation 1: The MPR simulations show that PC1 MPR values (using a PC3 PA model with ACLR=37dB) could be used for some cases but not all of them such as the case with modulation orders of 256QAM. |

## Open issues summary

### Sub-topic 3-1

**Issue 3-1: TP to 37.828: FWA MPR**

* Proposals
  + Option 1: Approve proposal 1.
  + Option 2: Revise proposal 1.
  + Option 3: Postpone proposal 1.
* Recommended WF
  + TBA

### Sub-topic 3-2

**Issue 3-2: MPR studies for PCI FWA UEs**

* Proposals
  + Option 1: Note the contribution (no proposal or TP included in the contribution for approval).
  + Option 2: Revise the contribution.
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

Sub topic 3-1

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Issue 3-1: Option 1 |
| AT&T | Issue 3-1: Option 1. The existing PC1 MPR table for n14 in Table 6.2.2-5 of 38.101-1 should be updated accordingly to show that the PC1 MPR table is generic. This would be in-line with the discussions concerning PC1 for n14 if the PC1 requirements could be generically applied to other operating bands. |

Sub topic 3-2

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Nokia | Issue 3-2: Question to Huawei, For 256-QAM simulations what are you modulator assumptions? As can be seen from R4-166954 WF on MPR\AMPR simulation assumptions for UL 256QAM when doing MPR simulations for UL 256-QAM standard modulator minimum requirements cannot be used, for-example IQ imbalance needs to much better than 25 dBc. |
| Qualcomm | On the simulation results in R4-2205670, what type of PA model was used? Is this a PC1 PA? ET, APT, or something else? The reported backoff power is 7.4 dB. Is this from Psat, or what reference? Does Huawei expect to run a PA at 7.4 dB backoff to meet ACLR for QPSK? |

### CRs/TPs comments collection

## 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 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)

*Moderator can provide summary of 2nd round here. Note that recommended decisions on tdocs should be provided in the section titled ”Recommendations for Tdocs”.*

# 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** |
| R4-22xxxxx | 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** |
| R4-22xxxxx | CR on … | XXX | Agreeable, Revised, Merged, Postponed, Not Pursued |  |
| R4-22xxxxx | WF on … | YYY | Agreeable, Revised, Noted |  |
| R4-22xxxxx | 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

# Annex

Contact information

|  |  |  |
| --- | --- | --- |
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Note:

1. Please add your contact information in above table once you make comments on this email thread.
2. If multiple delegates from the same company make comments on single email thread, please add you name as suffix after company name when make comments i.e. Company A (XX, XX)