**3GPP TSG-RAN WG4 Meeting # 97-e-Bis R4-2016647**

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

**Agenda item:** 15.1

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

**Title:** Email discussion summary for [97e][145] FS\_LTE\_NR\_HPUE\_FWVM

**Document for:** Information

# Introduction

Email discussion for contributions submitted under agenda item 15 for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71.

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

* 1st round: Approval of updated TR, discussion of submitted Simulation Results and any update on Simulation Assumptions and Work Plan
* 2nd round: Approval of updated Simulation Assumptions and Work Plan, if any

# Topic #1: Updated TR

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2014479 | Nokia, Nokia Shanghai Bell | Proposal 1: Updated TR for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71.  Observation 1: |

## Open issues summary

### Sub-topic 1-1

**Issue 1-1: Updated TR**

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

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Ericsson | Sub topic 1-1: option 1  Sub topic 1-2:  ….  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** |
| XXX | Company A |
| Company B |
|  |
| YYY | Company A |
| Company B |
|  |

## Summary for 1st round

### Open issues

|  |  |
| --- | --- |
|  | **Status summary** |
| **Sub-topic#1** | *Tentative agreements:* Approve updated TR  *Candidate options:*  *Recommendations for 2nd round:* No need |

*Recommendations on WF/LS assignment*

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

### CRs/TPs

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2014479 | *Approved* |

## 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: Simulation Assumptions and Results

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2014480 | Nokia, Nokia Shanghai Bell | Proposal 1: This contribution provides the coexistence simulation results for this scenario according to the agreed assumptions.  Observation 1: The victim NB-IoT UE UL SINR degradation caused by the 23dBm interfering LTE UE and 31dBm interfering HPUE are similar (within 0.5dB difference).  Observation 2: The currently specified -43dBm BS receiver blocking requirement can provide enough protection for the NB-IoT BS receiver against the HPUE transmission. |

## Open issues summary

### Sub-topic 2-1

**Issue 2-1: Agreement on Observation 1**

* Proposals
  + Option 1: Agree the observation
  + Option 2: Wait for more results
  + Option 3: Update the simulation assumptions
* Recommended WF
  + TBA

### Sub-topic 2-2

**Issue 2-2: Agreement on Observation 2**

* Proposals
  + Option 1: Agree the observation
  + Option 2: Wait for more results
  + Option 3: Update the simulation assumptions
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Ericsson | Sub topic 2-1: For the NB-IoT studies, to evaluate the impact of an adjacent RAT aggressor to NB-IoT SA, we agreed the degradation should be less than 1dB, checking at 5%, 50%, 95% and 99% (see TR 36.802). Could you confirm this is also the case here?  Sub topic 2-2:  ….  Others: |
| Nokia | Sub topic 2-1: Reply to Ericsson: We can confirm that the victim NB-IoT UE UL SINR degradation caused by the 31dBm interfering HPUE is less than 1dB at 5%, 50%, 95% and 99% TP points. We can add this observation into the TP which we are planning to request for the 2nd round to capture the agreed conclusion into the TR. |

### 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** |
| XXX | Company A |
| Company B |
|  |
| YYY | 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: Observations 1 and 2 are agreeable, another observation can be added to the TP into the TR that the victim NB-IoT UE UL SINR degradation caused by the 31dBm interfering HPUE is less than 1dB at 5%, 50%, 95% and 99% TP points.*  *Candidate options:*  *Recommendations for 2nd round: Discuss and agree the new TP to include coexistence simulation results and observations for high-power UE operation Vs NB-IoT standalone operation into the TR.* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 | TP to TR 37.880: Coexistence Simulation Results and Observations for High-power UE operation Vs NB-IoT standalone operation | Nokia, Nokia Shanghai Bell |

### 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)

### CRs/TPs/LSs/WFs comments collection

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **Comments collection** |
| XXX | Company A |
| Company B |
|  |

## 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: Work Plan

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-20xxxxx | Company A | Proposal 1:  Observation 1: |

## Open issues summary

### Sub-topic 3-1

**Issue 3-1: Approved Work Plan (R4-2011199)**

**Table 1: Work plan for RAN4 meetings before target completion date**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TSG/WG** | **Meeting Number** | **Date** | **TU** | **Tasks** |
| RAN4RF | #96e | Aug 17-28, 2020 | 0.25 | 1) General  - Approve initial work plan  - Approve skeleton TR  2) Coexistence study  - Agree initial simulation assumptions  - Agree initial simulation results priority  3) UE RF  - Agree initial assumptions for further analyses on UE operation  - Agree initial assumptions for further analyses on new components |
| **RAN** | **#89e** |  |  |  |
| RAN4RF | #97e | Oct 26 to Nov 13, 2020 | 0.25 | 1) General  - Approve revised work plan, if any  - Approve updated TR  2) Coexistence study  - Discuss initial simulation results  - Agree revised simulation assumptions, if any  - Agree revised simulation results priority  3) UE RF  - Discuss initial analyses on UE operation  - Discuss initial analyses on new components  - Agree revised assumptions for further analyses, if any |
| **RAN** | **#90e** |  |  |  |
| RAN4RF | #98e | March 1-5, 2021 | 0.25 | 1) General  - Approve updated TR  - Agree on conclusion of the study item  2) Coexistence study  - Further discuss simulation results  - Agree on conclusion of considered UE requirements from results  3) UE RF  - Further discuss analyses on UE operation  - Further discuss analyses on new components  - Agree on conclusion of considered UE requirements from analyses |
| **RAN** | **#91** |  |  |  |

* Proposals
  + Option 1: Keep current Work Plan
  + Option 2: Update Work Plan according to progress
* Recommended WF
  + TBA

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Ericsson | Sub topic 3-1: As RAN4 98e meeting will now be in Jan/Feb and no more meeting in March, it might be good to clarify this.  Still, we might not need to update the Work Plan, but just clarify here by answering our comment?  Sub topic 3-2:  ….  Others: |
| Nokia | Sub topic 3-1: Reply to Ericsson: It is correct that RAN4 98e meeting will be in Jan/Feb but not Mar of 2021. We might not need to update the Work Plan for the date change, but we might need to update the Work Plan according to progress, especially on UE RF tasks. |

### 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** |
| XXX | Company A |
| Company B |
|  |
| YYY | 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:* *No need to update the Work Plan for the RAN4 98e meeting date change but might need to update the Work Plan according to progress.*  *Candidate options:*  *Recommendations for 2nd round: Continue discussion on the need to update the Work Plan according to progress.* |

*Suggestion on WF/LS assignment*

|  |  |  |
| --- | --- | --- |
|  | **WF/LS t-doc Title** | **Assigned Company,**  **WF or LS lead** |
| #1 | Updated Work Plan for Study on High-power UE operation for fixed-wireless/vehicle-mounted use cases in Band 12, Band 5, and Band n71 | Nokia, Nokia Shanghai Bell |

### 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)

### CRs/TPs/LSs/WFs comments collection

|  |  |
| --- | --- |
| **CR/TP/LS/WF number** | **Comments collection** |
| XXX | Company A |
| Company B |
|  |

## 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”* |