**3GPP TSG-RAN WG4 Meeting #96-e R4-**

**Electronic Meeting, 17 August – 28 August, 2020**

**Agenda item:** 7.4.3

**Source:** Moderator (ZTE Corporation)

**Title:** Email discussion summary for [96e][211] NR\_IAB\_RRM

**Document for:** Information

# Introduction

The scope of this email discussion summary covers following agenda items.

7.4.3 RRM core requirements (38.133)

7.4.3.1 RLM requirements

7.4.3.2 Other requirements maintenance

# Topic #1: RLM requirements

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2009670 | Samsung | Observation 1: The link between MT and DU cannot easily experience radio link failure so that evaluation period can be relaxed.  Observation 2: As the IAB radio link failure is mainly caused by unexpected link blockage, IAB channel between MT and DU on FR2 is comparatively susceptible to blockage than FR1.  **Proposal 1: Since the situations for FR1 and FR2 are different, smaller scaling factor should be applied to relaxing the RLM evaluation period for FR2.**  Observation 3: Too large K2 leads to unreasonable long evaluation period (e.g. 24s) for RLM on FR2.  **Proposal 2: Compared to UE, the evaluation period for IAB RLM requirement could be relaxed by 2 times for FR2, i.e. K2 = 2.** |
| R4-2009679 | ZTE Corporation | Proposal 1: K2 = K1 = 5. |
| R4-2009990 | Qualcomm Incorporated | Observation 1: In an IAB network, if one backhaul node’s link quality becomes very poor, all UEs that are in the downstream of the backhaul node suffer.  Observation 2: Assuming sharing factor to be 1 and SSB periodicity to be 20 ms, a relaxation factor of 5 will make FR2 RLM evaluation period for IAB-MTs to be 4 second.   * This will impact the communication of downstream UEs during radio link failure.   **Proposal 1: For FR2, the relaxation factor for both SSB and CSI-RS based RLM evaluation period of IAB-MTs should be 2.** |
| R4-2011071 | Huawei, HiSilicon | Observation 1: For the temperate blockage, it is more likely to be recovered by the link recovery procedure for FR2 where the corresponding performance is guaranteed by the requirements defined for BFD and CBD.  Observation 2: For other severer cases with new constructed buildings, there is no big different for FR1 and FR2 cases which could rarely happen.  **Proposal 1: Relax the evaluation period for SSB-based and CSI-RS based RLM for FR2 by k2 = 5.** |

## Open issues summary

### Sub-topic 1-1

**Issue 1-1: Relaxation factor K2**

* Proposals
  + Option 1: K2 = 5 (ZTE, Huawei)
  + Option 2: K2 = 2 (Samsung, Qualcomm)
* Recommended WF
  + Discussion is needed to reach consensus

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Sub topic 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** |
| R4-2009679 | 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:*  *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: Transmit timing of IAB-MTs in CA scenarios

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2009680 | ZTE Corporation | Proposal 1: Do not define transmit timing requirements for wide area IAB-MTs. |
| R4-2011431 | Nokia, Nokia Shanghai Bell | **Observation 1:** CA scenarios is supported for wide area IAB-MT class.   1. Specify CA scenarios requirements for transmit timing for wide area IAB-MT class. |

## Open issues summary

### Sub-topic 2-1

**Issue 2-1: Whether define transmit timing requirements for wide area IAB-MTs in CA scenarios**

* Proposals
  + Option 1: No (ZTE)
  + Option 2: Yes (Nokia)
* Recommended WF
  + Discussion is needed to reach consensus

## Companies views’ collection for 1st round

### Open issues

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

### 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** |
| R4-2011431 | 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:*  *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*

|  |  |
| --- | --- |
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|  |  |
| --- | --- |
| **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: Maintenance for R16 Core

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| R4-2009991 | Qualcomm Incorporated | Observation 1: No CR has yet been proposed for the following issues:   1. To align the accuracy requirement for absolute power applied to the first preamble and the relative power applied to the additional preamble with RF’s conclusion; and 2. To revise the terminology of “downlink” and “uplink” and align with RF conclusion.   **Observation 2: RAN4 has not yet agreed to define IAB MT timer accuracy requirements.** |
| R4-2010150 | Samsung | TP for TR38.809: IAB RRM general |
| R4-2011072 | Huawei, HiSilicon | TP to TS 38.174 on RRC release with redirection for IAB-MT |

## Open issues summary

### Sub-topic 3-1

Companies are encouraged to provide feedback for each TP directly in 3.3.2.

## Companies views’ collection for 1st round

### Open issues

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

### CRs/TPs comments collection

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|  |  |
| --- | --- |
| **CR/TP number** | **Comments collection** |
| R4-2009991 | Company A |
| Company B |
|  |
| R4-2010150 | Company A |
| Company B |
|  |
| R4-2011072 | 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

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| --- | --- |
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## Summary on 2nd round (if applicable)

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