**3GPP TSG-RAN WG4 Meeting #** **98-e R4-**

**Electronic Meeting, Jan. 25-Feb. 5, 2021**

**Agenda item:** 7.4.4, 7.4.5

**Source:** Moderator (ZTE Corporation)

**Title:** Email discussion summary for [98e][209] NR\_IAB\_RRM

**Document for:** Information

# Introduction

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

7.4.4 RRM core requirements maintenance

7.4.5 RRM perf. requirements

7.4.5.1 General

7.4.5.2 Test cases

# Topic #1: Core requirements maintenance

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| **[R4-2100041](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100041.zip)** | ZTE Corporation | **Observation 1:** It was not the intention to add gap based requirements rather a mistake when preparing the TP.  **Proposal 1: Remove gap aspects from requirements in TS 38.174.** |
| **[R4-2100042](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100042.zip)** | ZTE Corporation | [CR] IAB Core Maintenance |
| **[R4-2101626](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101626.zip)** | Huawei, HiSilicon | **Proposal 1: Remove the gap aspects from the requirements and clarify that the evaluation period could be longer when MG is configured.** |
| **[R4-2101627](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101627.zip)** | Huawei, HiSilicon | CR on RRM core requirements maintenance for MG for IAB |
| **[R4-2102487](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102487.zip)** | Nokia, Nokia Shanghai Bell | **Proposal 1: Remove measurement gap aspects from requirements in 38.174** |
| **[R4-2102488](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102488.zip)** | Nokia, Nokia Shanghai Bell | CR on removing gap aspects from IAB-MT RRM requirements |
| **[R4-2102635](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102635.zip)** | Ericsson | * **Observation 1:** IAB-MT RLM and link recovery requirements are impacted by the measurement gap configuration. But applicable measurement gaps for local area IAB-MT for meeting RLM and link recovery requirements are missing in TS 38.174. * **Proposal 1:** Specify one applicable measurement gap configuration for local area IAB-MT for meeting RLM and link recovery requirements in TS 38.174 as shown in table 1. * **Table 1: Measurement Gap Pattern Configurations**  |  |  |  | | --- | --- | --- | | **Gap Pattern Id** | **Measurement Gap Length (MGL, ms)** | **Measurement Gap Repetition Period (MGRP, ms)** | | 0 | 6 | 40 | |
| **[R4-2102636](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102636.zip)** | Ericsson | Measurement gaps for Local Area IAB-MT |

## Open issues summary

### Sub-topic 1-1

**Issue 1-1: Whether to remove gap patterns for IAB-MTs**

* Proposals
  + Option 1: Yes (ZTE, Huawei, Nokia)
    - Option 1a: Yes, and clarify that the evaluation period could be longer when MG is configured (Huawei)
  + Option 2: No, specify that gap pattern 0 applies (Ericsson)
* Recommended WF
  + Can Option 1 be agreed?

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 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** |
| **[R4-2100042](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100042.zip)** | Company A |
| Company B |
|  |
| **[R4-2101627](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101627.zip)** | Company A |
| Company B |
|  |
| **[R4-2102488](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102488.zip)** |  |
|  |
|  |
| **[R4-2102636](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102636.zip)** |  |
|  |

## 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: General aspects of Perf. requirements and test cases for IAB-MTs

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

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| **[R4-2100253](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100253.zip)** | ZTE Corporation | **Proposal 1: Discuss and finalize the above work split. Also discuss and finalize on the skeleton of the test cases in the specification.**   |  |  | | --- | --- | | **Draft CRs / Big CRs** | **Source Company** | | **RRC\_CONNECTED state mobility for IAB-MTs** |  | | **Timing** |  | | **RLM** |  | | **Link recovery** |  | | **Test configurations** |  |   **Proposal 2: Discuss and settle down on the test configurations first.**  **Proposal 3: Test configurations for IAB-MTs shall take that of R16 UEs as baseline. IAB-MTs are to be tested under same test configurations which are specified for R16 UEs.** |
| **[R4-2101628](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101628.zip)** | Huawei, HiSilicon | **Proposal 1: The test cases and configurations related to the DRX should be removed.**  **Proposal 2: The test cases and configurations related to DC and CA shall be removed.**  **Observation 1: It is preferred to follow the BS manner that the performance could be evaluated using one supported TDD patterns.**  **Proposal 4: It is suggested that the TDD pattern and related configurations shall be configurable and left for implementation including:**   * **DL/UL scheduling related configuration** * **PRACH and SRS configuration** * **SSB/CSI-RS offset**   **Proposal 5: The performance requirements for IAB RRM are independent with the UE conformance testing spec and the corresponding part shall be removed when taking the TS 38.133 annex as the baseline.**  **Proposal 6: AoA related configurations are based on declaration. Only indicate the number of AoAs in the test cases.**  **Proposal 7: It is suggested not to have separate test cases for timing advance for both type of IAB-MT.**  **Proposal 8: Only define performance test cases for LA IAB-MT.**   |  |  |  |  | | --- | --- | --- | --- | | **RRM Test cases** | **Related RRM Requirements** | **Applicability** | **Companies** | | RRC Re-establishment in FR1 | 12.1.1.1 SA: RRC Re-establishment | 1-H LA |  | | RRC Re-establishment in FR2 | 2-O LA | | RRC Connection Release with Redirection to NR in FR1 | 12.1.1.3 SA: RRC Connection Release with Redirection to NR | 1-H LA | Huawei | | RRC Connection Release with Redirection to NR in FR2 | 2-O LA | | IAB-MT transmit timing in FR1 | 12.2.1 IAB-MT transmit timing | 1-H LA |  | | IAB-MT transmit timing in FR2 | 2-O LA | | RLM OOS with SSB in FR1 | 12.3.1.2 Requirements for SSB based radio link monitoring | 1-H LA |  | | RLM OOS with SSB in FR2 | 2-O LA | | RLM IS with SSB in FR1 | 1-H LA | | RLM IS with SSB in FR2 | 2-O LA | | RLM OOS with CSI-RS in FR1 | 12.3.1.3 Requirements for CSI-RS based radio link monitoring | 1-H LA |  | | RLM OOS with CSI-RS in FR2 | 2-O LA | | RLM IS with CSI-RS in FR1 | 1-H LA | | RLM IS with CSI-RS in FR2 | 2-O LA | | Beam Failure Detection and Link Recovery with SSB in FR1 | 12.3.2.2 Requirements for SSB based beam failure detection  12.3.2.5 Requirements for SSB based candidate beam detection | 1-H LA |  | | Beam Failure Detection and Link Recovery with CSI-RS in FR1 | 12.3.2.3 Requirements for CSI-RS based beam failure detection  12.3.2.6 Requirements for CSI-RS based candidate beam detection | 1-H LA |  | | Beam Failure Detection and Link Recovery with SSB in FR2 | 12.3.2.2 Requirements for SSB based beam failure detection  12.3.2.5 Requirements for SSB based candidate beam detection | 2-O LA |  | | Beam Failure Detection and Link Recovery with CSI-RS in FR2 | 12.3.2.3 Requirements for CSI-RS based beam failure detection  12.3.2.6 Requirements for CSI-RS based candidate beam detection | 2-O LA |  |   **Proposal 9: Define the test cases in the above Table I for IAB.** |
| **[R4-2101629](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101629.zip)** | Huawei, HiSilicon | draftCR to introduce test configurations for IAB-MT RRM performance test |
| **[R4-2102489](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102489.zip)** | Nokia, Nokia Shanghai Bell | 1. **Proposal 1:** High level split for RRM IAB-MT test cases could be defined as below:  |  |  |  |  | | --- | --- | --- | --- | | **Draft CRs / Big CRs for the test cases** | **Related RRM core requirements** | **Applicable Rule** | **Volunteer Company** | | **RRC\_CONNECTED state mobility for IAB-MTs** | 12.1.1.1 SA: RRC Re-establishment  12.1.1.3 SA: RRC Connection Release with Redirection | Use 38.133 RLM test cases as baseline and extend the evaluation period |  | | **Timing** | 12.2.1 IAB-MT transmit timing  12.2.3 IAB-MT timing advance | Refer to 38.133 link recovery test cases in SA |  | | **RLM** | 12.3.1 Radio Link Monitoring | Use 38.133 RLM test cases as baseline and extend the evaluation period | Nokia | | **Link recovery** | 12.3.2 Link Recovery Procedure | Refer to 38.133 link recovery test cases in SA |  | | **Test configurations** |  | Use 38.133 test configuration as baseline, define the IAB-MT’s specific test configurations in 38.174, others can refer to 38.133 directly. |  |   **Proposal 2: Use UE test configurations as baseline and define the specific and simplified test configurations for IAB-MT.** |
| **[R4-2102640](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102640.zip)** | Ericsson | * **Proposal 1:** In IAB-MT RRM test requirements are derived using the corresponding configuration parameters as example. * **Proposal 2:** The actual IAB-MT RRM test can be conducted by any set of configuration parameters and corresponding test requirements shall be based on the actual configuration parameters used in the test. * **Proposal 3:** In IAB-MT RRM tests only one serving cell shall be considered. |
| **[R4-2102936](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102936.zip)** | Qualcomm CDMA Technologies | **Observation: more study is needed to find a compromise between fulfilling the IAB-RRM performance requirement and the time it takes to publish the performance specification.** |

## 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 Test configurations

**Issue 2-1-1: Principles for test configurations**

* Proposals
  + Option 1: Test configurations for IAB-MTs shall take that of R16 UEs as baseline. IAB-MTs are to be tested under specific and simplified test configurations which are specified for R16 UEs. (ZTE, Nokia)
* Recommended WF
  + Is Option 1 agreeable as a general principle?

**Issue 2-1-2: TDD configuration**

* Proposals
  + Option 1 (Huawei, Ericsson): Tests can be done for any TDD configuration. TDD pattern and related configurations shall be configurable and left for implementation including
    - DL/UL scheduling related configuration
    - PRACH and SRS configuration
    - SSB/CSI-RS offset
* Recommended WF
  + Discussions are needed

**Issue 2-1-3: Number of serving cells**

* Proposals
  + Option 1: In IAB-MT RRM tests only one serving cell shall be considered. However, there can be more than one cell in some tests to account for a target cell e.g. RRC re-establishment and RRC release with redirection. (Ericsson)
* Recommended WF
  + Discussions are needed

**Issue 2-1-4: Requirements in test cases**

* Proposals
  + Option 1: In IAB-MT RRM test requirements are derived using the corresponding configuration parameters as example. The actual IAB-MT RRM test can be conducted by any set of configuration parameters and corresponding test requirements shall be based on the actual configuration parameters used in the test. (Huawei, Ericsson)
* Recommended WF
  + Can Option 1 be agreed?

**Issue 2-1-5: AoA**

* Proposals
  + Option 1: AoA related configurations are based on declaration. Only indicate the number of AoAs in the test cases. (Huawei)
* Recommended WF
  + Discussions are needed

### Sub-topic 2-2 Scope and Work split

**Issue 2-2-1: DRX, CA and DC**

* Proposals
  + Option 1: No test cases and configurations defined with DRX, CA or DC. (Huawei)
* Recommended WF
  + Can Option 1 be agreed?

**Issue 2-2-2: Conformance tests**

* Proposals
  + Option 1: The performance requirements for IAB RRM are independent with the UE conformance testing spec and the corresponding part shall be removed when taking the TS 38.133 annex as the baseline. (Huawei)
* Recommended WF
  + As previously agreed, no conformance tests are specified for IAB-MTs. If that’s what Option 1 is proposing then no need to further discuss.

**Issue 2-2-3: Timing advance**

* Proposals
  + Option 1: Not to have separate test cases for timing advance for both type of IAB-MT. (Huawei)
* Recommended WF
  + Discussions are needed.

**Issue 2-2-4: Applicability of test cases**

* Proposals
  + Option 1: Only define performance test cases for LA IAB-MT. (Huawei)
* Recommended WF
  + Discussions are needed.

**Issue 2-2-5: Scope and work split**

* Proposals
  + Option 1: Only split for different features (ZTE)

|  |  |
| --- | --- |
| **Draft CRs / Big CRs** | **Source Company** |
| **RRC\_CONNECTED state mobility for IAB-MTs** |  |
| **Timing** |  |
| **RLM** |  |
| **Link recovery** |  |
| **Test configurations** |  |

* + Option 2: (Huawei)

|  |  |  |  |
| --- | --- | --- | --- |
| **RRM Test cases** | **Related RRM Requirements** | **Applicability** | **Companies** |
| RRC Re-establishment in FR1 | 12.1.1.1 SA: RRC Re-establishment | 1-H LA |  |
| RRC Re-establishment in FR2 | 2-O LA |
| RRC Connection Release with Redirection to NR in FR1 | 12.1.1.3 SA: RRC Connection Release with Redirection to NR | 1-H LA | Huawei |
| RRC Connection Release with Redirection to NR in FR2 | 2-O LA |
| IAB-MT transmit timing in FR1 | 12.2.1 IAB-MT transmit timing | 1-H LA |  |
| IAB-MT transmit timing in FR2 | 2-O LA |
| RLM OOS with SSB in FR1 | 12.3.1.2 Requirements for SSB based radio link monitoring | 1-H LA |  |
| RLM OOS with SSB in FR2 | 2-O LA |
| RLM IS with SSB in FR1 | 1-H LA |
| RLM IS with SSB in FR2 | 2-O LA |
| RLM OOS with CSI-RS in FR1 | 12.3.1.3 Requirements for CSI-RS based radio link monitoring | 1-H LA |  |
| RLM OOS with CSI-RS in FR2 | 2-O LA |
| RLM IS with CSI-RS in FR1 | 1-H LA |
| RLM IS with CSI-RS in FR2 | 2-O LA |
| Beam Failure Detection and Link Recovery with SSB in FR1 | 12.3.2.2 Requirements for SSB based beam failure detection  12.3.2.5 Requirements for SSB based candidate beam detection | 1-H LA |  |
| Beam Failure Detection and Link Recovery with CSI-RS in FR1 | 12.3.2.3 Requirements for CSI-RS based beam failure detection  12.3.2.6 Requirements for CSI-RS based candidate beam detection | 1-H LA |  |
| Beam Failure Detection and Link Recovery with SSB in FR2 | 12.3.2.2 Requirements for SSB based beam failure detection  12.3.2.5 Requirements for SSB based candidate beam detection | 2-O LA |  |
| Beam Failure Detection and Link Recovery with CSI-RS in FR2 | 12.3.2.3 Requirements for CSI-RS based beam failure detection  12.3.2.6 Requirements for CSI-RS based candidate beam detection | 2-O LA |  |

* + Option 3 (Nokia)

|  |  |  |  |
| --- | --- | --- | --- |
| **Draft CRs / Big CRs for the test cases** | **Related RRM core requirements** | **Applicable Rule** | **Volunteer Company** |
| **RRC\_CONNECTED state mobility for IAB-MTs** | 12.1.1.1 SA: RRC Re-establishment  12.1.1.3 SA: RRC Connection Release with Redirection | Use 38.133 RLM test cases as baseline and extend the evaluation period |  |
| **Timing** | 12.2.1 IAB-MT transmit timing  12.2.3 IAB-MT timing advance | Refer to 38.133 link recovery test cases in SA |  |
| **RLM** | 12.3.1 Radio Link Monitoring | Use 38.133 RLM test cases as baseline and extend the evaluation period | Nokia |
| **Link recovery** | 12.3.2 Link Recovery Procedure | Refer to 38.133 link recovery test cases in SA |  |
| **Test configurations** |  | Use 38.133 test configuration as baseline, define the IAB-MT’s specific test configurations in 38.174, others can refer to 38.133 directly. |  |

* Recommended WF
  + Discussions are needed

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 2-1-1:  Issue 2-1-2:  Issue 2-1-3:  Issue 2-1-4:  Issue 2-1-5:  Issue 2-2-1:  Issue 2-2-2:  Issue 2-2-3:  Issue 2-2-4:  Issue 2-2-5: |

### 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** |
| R4-2101629 | 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*

|  |  |
| --- | --- |
| **CR/TP number** | **CRs/TPs Status update recommendation** |
| R4-2101629 | *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 #3: Specifying test cases

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| **[R4-2100046](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100046.zip)** | ZTE Corporation | [draft CR] Test cases for timing for IAB-MT |
| **[R4-2101630](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101630.zip)** | Huawei, HiSilicon | draftCR to introduce test cases for RRC release with redirection for IAB-MT |
| **[R4-2102490](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102490.zip)** | Nokia, Nokia Shanghai Bell | draftCR on IAB RLM test cases |
| **[R4-2102637](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102637.zip)** | Ericsson | Big CR: IAB-MT RRM test cases in 38.174 |
| **[R4-2102638](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102638.zip)** | Ericsson | * **Proposal 1:** Following test cases are defined to verify RRC re-establishment requirements in clause 12.1.1.1, TS 38.174:   1. TC1: Inter-frequency RRC Re-establishment in FR1 for LA IAB-MT and IAB type 1-H   2. TC2: Intra-frequency RRC Re-establishment in FR1 without serving cell timing for LA IAB-MT and IAB type 1-H   3. TC3: Inter-frequency RRC Re-establishment in FR2 for LA IAB-MT and IAB type 1-O   4. TC4: Intra-frequency RRC Re-establishment in FR2 without serving cell timing for LA IAB-MT and IAB type 1-O |
| **[R4-2102639](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102639.zip)** | Ericsson | RRC re-establishment tests for LA IAB-MT |

## Open issues summary

### Sub-topic 3-1

**Issue 3-1: TCs for RRC re-establishment**

* Proposals
  + Option 1: (Ericsson)
  + Following test cases are defined to verify RRC re-establishment requirements in clause 12.1.1.1, TS 38.174:
  + TC1: Inter-frequency RRC Re-establishment in FR1 for LA IAB-MT and IAB type 1-H
  + TC2: Intra-frequency RRC Re-establishment in FR1 without serving cell timing for LA IAB-MT and IAB type 1-H
  + TC3: Inter-frequency RRC Re-establishment in FR2 for LA IAB-MT and IAB type 1-O
  + TC4: Intra-frequency RRC Re-establishment in FR2 without serving cell timing for LA IAB-MT and IAB type 1-O
* Recommended WF
  + Can Option 1 be agreed?

## Companies views’ collection for 1st round

### Open issues

|  |  |
| --- | --- |
| **Company** | **Comments** |
| XXX | Issue 3-1: |

### 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** |
| **[R4-2100046](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2100046.zip)** | Company A |
| Company B |
|  |
| **[R4-2101630](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2101630.zip)** | Company A |
| Company B |
|  |
| **[R4-2102490](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102490.zip)** |  |
|  |
|  |
| **[R4-2102637](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102637.zip)** |  |
|  |
|  |
| **[R4-2102639](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_98_e/Docs/R4-2102639.zip)** |  |
|  |
|  |

## 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”* |