**3GPP TSG-RAN WG4 Meeting # 111 R4-2410124**

**Fukuoka City, Fukuoka, Japan, May 20th – 24th, 2024**

**Agenda item:** 7.23.6

**Source:** Moderator (Ericsson)

**Title:** Topic summary for [111][331] NR\_mobile\_IAB\_demod

**Document for:** Information

# Introduction

In previous meeting, the discussion for mobile IAB demodulation requirements was ongoing. Following WF were achieved:

* RAN4#109: R4-2321144
* RAN4#110: R4-24032871
* RAN4#110bis: R4-2406058

# Topic #1: General for mobile IAB

*The applicability rule and specification impact for mobile IAB node.*

## Companies’ contributions summary

|  |  |  |
| --- | --- | --- |
| **T-doc number** | **Company** | **Proposals / Observations** |
| [**R4-2408749**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408749.zip) | Ericsson | ***Proposal 1: Add the following part into the applicability rule for mIAB-MT in TS38.176-1:***  Requirements listed in the table 8.2.2.1.1.1-1 should be skipped for mIAB-MT  **Table 8.2.2.1.1.1-1: Test case to be skipped for mIAB-MT**   |  |  | | --- | --- | |  | **Test case to be skipped** | | PDSCH | Test number 1-2 in Table 8.2.2.1.5-2 | | PDCCH | Test number [2]in Table 8.2.2.3.5-1 | | Test number [3] in Table 8.2.2.3.5-1 |   ***Proposal 2: Add the following part into the applicability rule for mIAB-MT in TS38.176-2:***  Requirements listed in the table 8.2.2.1.1.1-1 should be skipped for mIAB-MT  **Table 8.2.2.1.1.1-1: Test case to be skipped for mIAB-MT**   |  |  | | --- | --- | |  | **Test case to be skipped** | | PDSCH | Test number 1-2 in Table 8.2.2.2.5.1-1 | | Test number 1-2 in Table 8.2.2.2.5.2-1 | | Test number 2-1 in Table 8.2.2.2.5.2-2 | | PDCCH | Test number 3 in Table 8.2.2.3.5.1-1 | | Test number 2 in Table 8.2.2.3.5.2-1 |   ***Proposal 3: Consider the following as the manufactory declaration for mIAB node for demodulation requirements:***   |  |  |  |  |  | | --- | --- | --- | --- | --- | | D.xB | Mobile IAB-node | Declaration of support of mobile feature for an IAB-node | x | x | |
| [**R4-2408968**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408968.zip) | Huawei,HiSilicon | Proposal 1: Use D.x rather than D.xB for the mobile IAB node manufactory declaration numbering. |
| [**R4-2408410**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408410.zip) | Qualcomm Germany | draftCR to TS 38.174 addition of FRCs for mIAB-MT demod requirements |
| [**R4-2408411**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408411.zip) | Qualcomm Germany | draftCR to TS 38.176-1 mIAB demod requirements applicability and FRCs |
| [**R4-2408412**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408412.zip) | Qualcomm Germany | draftCR to TS 38.176-2 mIAB demod requirements applicability and FRCs |
| **R4-2408409** | Qualcomm Germany | BigCR for 38.174 addition of mobile IAB demodulation requirements |
| [**R4-2408748**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408748.zip) | Ericsson | Draft CR to 38.174 mIAB-MT conducted performance requirement |
| [**R4-2408661**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408661.zip) | Nokia | DraftCR to 38.176-2 on mIAB-MT radiated performance requirements |
| [**R4-2408969**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408969.zip) | Huawei,HiSilicon | Draft CR on mIAB-MT radiated performance requirement (TS38.174, Rel-18) |
| [**R4-2408970**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2408970.zip) | Huawei,HiSilicon | BigCR on mIAB-MT radiated conformance requirement (TS38.176-2, Rel-18) |
| [**R4-2409485**](https://www.3gpp.org/ftp/TSG_RAN/WG4_Radio/TSGR4_111/Docs/R4-2409485.zip) | Samsung | Draft CR on mIAB-MT conducted performance requirement |

## Open issues summary

### Sub-topic 1-1 Applicability rule

**Issue 1-1-1: Applicability rule for mobile IAB node**

* Proposals
  + Option 1 (Ericsson): Add following table in applicability rule to indicate the skipped IAB-MT test case.
    - ***TS38.176-1:*** Requirements listed in the table 8.2.2.1.1.1-1 should be skipped for mIAB-MT

**Table 8.2.2.1.1.1-1: Test case to be skipped for mIAB-MT**

|  |  |
| --- | --- |
|  | **Test case to be skipped** |
| PDSCH | Test number 1-2 in Table 8.2.2.1.5-2 |
| PDCCH | Test number [2]in Table 8.2.2.3.5-1 |
| Test number [3] in Table 8.2.2.3.5-1 |

* + - ***TS38.176-2:*** Requirements listed in the table 8.2.2.1.1.1-1 should be skipped for mIAB-MT

**Table 8.2.2.1.1.1-1: Test case to be skipped for mIAB-MT**

|  |  |
| --- | --- |
|  | **Test case to be skipped** |
| PDSCH | Test number 1-2 in Table 8.2.2.2.5.1-1 |
| Test number 1-2 in Table 8.2.2.2.5.2-1 |
| Test number 2-1 in Table 8.2.2.2.5.2-2 |
| PDCCH | Test number 3 in Table 8.2.2.3.5.1-1 |
| Test number 2 in Table 8.2.2.3.5.2-1 |

* Recommended WF
  + *Moderator’s observation:* 
    - *There is no test case number for IAB-MT requirements. So corresponding CR to legacy IAB-MT requirements is needed to add test case number is Option 1 is agreed.*
  + Companies to check if Option 1 can be accepted:

### Sub-topic 1-2 Manufactory declaration

**Issue 1-2-1: manufactory declaration statement for mIAB node**

* Proposals
  + - Option 1 (Qualcomm, Ericsson):

|  |  |  |  |
| --- | --- | --- | --- |
| D.xB | Mobile IAB-node | Declaration of support of mobile feature for an IAB-node | x |

* + - Option 2 (Huawei):

|  |  |  |  |
| --- | --- | --- | --- |
| D.x | Mobile IAB-node | Declaration of support of mobile feature for an IAB-node | x |

* Recommanded WF
  + - *Moderator’s observation:* 
      * *There is no manufactory decalaration for IAB-node demodulation in current specification.*
      * *The definition of suffix B is only existing in 38.174 to indicate the requirement clauses for mobile IAB.*
    - Companies to discuss following proposal.
      * Firstly, discuss if similar declaration as 38.174 on ”suffix B” can be introduced to conformance test specifications.
      * Secondly, discuss which option above is preferred.

# Tdoc recommandation

|  |  |  |  |
| --- | --- | --- | --- |
| Tdoc number | Source | Suggested status | Comments |
| R4-2408968 | Huawei, HiSilicon | Noted |  |
| R4-2408749 | Ericsson | Noted |  |
| Draft CR | | | |
| R4-2408410 | Qualcomm Germany | Revised |  |
| R4-2408411 | Qualcomm Germany | Revised |  |
| R4-2408412 | Qualcomm Germany | Revised |  |
| R4-2408661 | Nokia | Revised |  |
| R4-2408969 | Huawei, HiSilicon | Revised |  |
| R4-2408970 | Huawei, HiSilicon | Revised | Moderator: Formal big CR is delivered before the meeting. |
| R4-2408748 | Ericsson | Revised |  |
| R4-2409485 | Samsung | Revised |  |