3GPP TSG-RAN WG2 Meeting #109bis-e draft-R2-2004038

Online, 20th - 30th April 2020

**Agenda item: 4.1**

**Source: MediaTek (offline email discussion rapporteur)**

**Title: Report of [AT109bis-e][303][NBIOT] Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT (Mediatek)**

**Document for: Report**

# 1 Scope of the offline email discussion

This document contains the summary of the offline email discussion “[AT109bis-e][303][NBIOT] Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT (Mediatek)”, as indicated below:

* [AT109bis-e][303][NBIOT] Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT (Mediatek)

Scope: Check if there is support and update based on the comments if the CR is agreeable.

Intended outcome: Report from the discussion and, if agreeable, in-principle agreed CR. The report can be provided in R2-2004038

Deadline: 27-04-2020, 10:00 UTC

Timeline:

* + - Companies input: Monday, April 27th 10:00 UTC
    - Rapporteur summary and updated CR (if needed): Monday, April 27th 15:00 UTC
    - Wording comment, if any, on updated CR: Wednesday, April 29th 10:00 UTC

# 2 Offline email discussion

[R2-2003619](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003619.zip) Discussion on dedicated frequency search after connection rejection MediaTek Inc. discussion Rel-15 NB\_IOTenh2-Core

**Proposal 1: Cell selection on the dedicated frequency after connection rejection.**

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with proposal?** | **Detailed comments** |
| Huawei, HiSilicon | No | We do not see this as a correction but as a new feature and we do not think it is appropriate to introduce this in Rel-15.  We do not see a particular problem. If a particular frequency is overloaded, eNB can redirect a number of UEs at RRC Connection release to other frequencies. This should be sufficient considering the short live of RRC Connection in NB-IoT. This is also more efficient as the eNB knows which frequencies are supported by the UE when the UE is in connected mode.  We do not understand why this makes a difference if the extendedWaitTime parameter is handled in NAS or in AS as described in the document. |
| Qualcomm | **No** | Agree with Huawei, this is not a correction.  The exmaple why eNB may want to reject this UE does not make sense i.e. eNB ran out of C-RNTI. rNB has already allocated Temporary C-RNTI in RAR hence eNB has not run-out.  Blindly redirecting the UE to another frequency/cell can lead to increased network signalling i.e. UE has to do TAU when it is redirected and then again when it returns back to old cell.  In any case, access barring mehcanism is there to manage eNB load and that should be sufficient. |
| MediaTek | Yes | This proposal is try to redirect the UE when it was rejected. The reason doesn’t has to be RAN overload, it just could be one of them. RRC connection release and access barring can not help on this case. Redirection at connection rejection can provide UE another chance, to try to establish the connection in another freqency instead of keeping trying in the same cell. |

Conclusion: TBC

Proposal: TBC

**Proposal 2: Dedicated frequency Qoffset can keep UE on the dedicated frequency for T322 time length from cell reselection after a successful cell selection on the dedicated frequency.**

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with proposal?** | **Detailed comments** |
| Huawei, HiSilicon | no | see answer to Proposal 1 |
| Qualcomm | **No** | As per our response to Proposal 1, legacy mechanims are sufficient to address the highlighted issue. |
| MediaTek | **yes** |  |

Conclusion: TBC

Proposal: TBC

[R2-2003621](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003621.zip) Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT in 36.304 MediaTek Inc. CR Rel-15 36.304 15.5.0 0787 - F NB\_IOTenh2-Core

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with the intent of the CR?** | **Detailed comments** |
| Qualcomm | **No** | See answer to Proposal 1. |
| MediaTek | **yes** |  |

Conclusion: TBC

Proposal: TBC

[R2-2003622](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003622.zip) Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT in 36.331 MediaTek Inc. CR Rel-15 36.331 15.9.0 4280 - F NB\_IOTenh2-Core

Companies are requested to provide comments in the table below (one row for each new comment to better keep track of the discussion – please don’t edit the previous comments).

|  |  |  |
| --- | --- | --- |
| **Company** | **Do you agree with the intent of the CR?** | **Detailed comments** |
| Huawei, HiSilicon | no | We do not agree that there is no interoperability issue if the eNB is implemented according to the CR and the UE is not. The UE does not expect to receive an IE that it does not support. Thus the change requires to introduce a capability. |
| Qualcomm | **No** | See answer to Proposal 1. |
| MediaTek | **yes** | If UE does not support this proposal, UE would not decode the IE in the non-critical extension, so there is no interoperability issue. |

Conclusion: TBC

Proposal: TBC

# 3 Conclusion

**Conclusion:**

TBC

**In principle agreed CR:**

TBC –In principle agreed Rel-15 CR.

# 4 List of referenced documents

[1][R2-2003619](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003619.zip) Discussion on dedicated frequency search after connection rejection MediaTek Inc. discussion Rel-15 NB\_IOTenh2-Core

[2][R2-2003621](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003621.zip) Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT in 36.304 MediaTek Inc. CR Rel-15 36.304 15.5.0 0787 - F NB\_IOTenh2-Core

[3][R2-2003622](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003622.zip) Cell selection on the dedicated frequency after RRC connection rejection for NB-IoT in 36.331 MediaTek Inc. CR Rel-15 36.331 15.9.0 4280 - F NB\_IOTenh2-Core