3GPP TSG RAN WG2 Meeting #119-e R2-22xxxxx

**Electronic, 17th – 26th Aug. 2022**

**Agenda item:** 8.6.2

**Source:** MediaTek

**Title:** Report of [AT119-e][ IoT-NTN] LS to RAN1 (Mediatek)

**Document for:**  Discussion and decision

# Introduction

This report summarizes the email discussion below that took place during RAN2#119-e meeting:

* [AT119-e][119][IoT-NTN] LS to RAN1 (Mediatek)

Initial scope: Discuss whether to send an LS to RAN1 to inform of the RAN2 decision for eMTC (on enabling/disabling HARQ feedback via UE specific RRC signalling), saying that we are still discussing for NB-IoT, and checking if they have any concern with using RRC (in which case we can reconsider)

Initial intended outcome: LS to RAN1.:

Initial deadline (for companies' feedback): Thursday 2022-08-25 1800 UTC

Initial deadline (for rapporteur's summary): Friday 2022-08-26 1000 UTC

# Reference

[1] R2-22078701 Report from Break-out session on NR-NTN, IoT-NTN, REDCAP and CE

# Contact information

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# Discussion

In R18, IoT-NTN operation is extended to include User Plane Enhancements, containing signalling details for selectively enabling/disabling HARQ feedback in individual HARQ processes to mitigate impact of HARQ stalling on UE data rates. During RAN2 119-e the following agreements are made:

Agreements:

1. Disabling DL HARQ feedback is supported for NB-IoT and eMTC NTN. FFS on UE capability
2. For UL HARQ operation, introduce two HARQ modes, i.e., HARQ mode A and HARQ mode B in IoT NTN (both NB-IoT and eMTC NTN), similarly to NR NTN
3. From RAN2 perspective, at least for eMTC, enabling/disabling HARQ feedback can be configured per DL HARQ process at least via UE specific RRC signalling. FFS for NB-IoT (and especially for CP solution for NB-IOT).

Based on the above discussions it was agreed to discuss whether there is a need to send an LS to RAN1 to inform of the RAN2 decision for eMTC (on enabling/disabling HARQ feedback via UE specific RRC signalling), saying that RAN2 is still discussing for NB-IoT, and checking if RAN1 have any concern with using RRC (in which case we can reconsider). Hence, the rapporteur would like to raise the following question:

**Question 1: Do the companies think that RAN2 should send an LS informing RAN1 about RAN2’s decision mentioned above (i.e., enabling/disabling HARQ feedback via UE specific RRC signaling for eMTC-based NTN and further mentioning that RAN2 is still discussing for NB-IoT and checking if RAN1 have any concern with it)?**

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| **Company** | **Yes/No** | **Additional comments** |
| CMCC | NO | The discussion on the following potential solutions is ongoing. And the enabling/disabling HARQ feedback via UE specific RRC signalling is within the candidate scope, and RAN1 has expertise in evaluating whether DCI is needed or not. Hence, in our understanding, RAN2’s LS cannot accelerate the progress of RAN1’s discussion.   * Option 1: per HARQ process via UE specific RRC signaling * Option 2: per HARQ process via SIB signaling * Option 3: explicitly indicated by DCI (e.g., new field or reusing existing field) * Option 4: implicitly determined by existing configured/indicated parameter(s) (e.g., repetition number, TBS) * Option 5: per HARQ process via MAC CE * Other options or combinations are not excluded   Note: Option(s) for eMTC and NBIoT can be separately discussed. |
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**Question 2: If the answer to Question 1 is “yes”, companies are requested to check the draft LS uploaded in the same folder and inform if they are okay with the draft or provide their comments/edits in the draft LS.**

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| **Company** | **Yes/No** | **Additional comments** |
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# Conclusion

<To be updated based on inputs from different companies>