3GPP TSG-RAN WG2 Meeting #111-e draft\_R2-2008232

Online, 17th – 28th August 2020

**Agenda item: 4.2**

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

**Title: Report of [AT111-e][402][NB-IoT/eMTC R15] UP EDT for DRB using RLC AM (Huawei)**

**Document for: Report**

# 1 Introduction

This document is the report of the following e-mail discussion:

* [AT111-e][402][NB-IoT/eMTC R15] UP EDT for DRB using RLC AM (Huawei)

Status: Started

      Scope: Progress the discussion and formulate the common understanding.

      Intended outcome: Report from the discussion in R2-2008232

      Deadline: Tuesday 25 1100 UTC.

# 2 Discussion

The document below was discussed online with the following comments:

[R2-2007327](http://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_111-e/Docs/R2-2007327.zip) Discussion of UP EDT for DRB using RLC AM Huawei, HiSilicon discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

* Ericsson wonders what HW has observed in IODT. HW explains that UL grant is given for the UE to provide the report. The other case is sending the poll bit witn no UL grant.
* Ericsson asks whether the default configuration for PUCCH/PUSCH would still be used for such transnmission. HW thinks that would only be for Msg3.
* QC thinks this may be addressed by stating that UE should not be polled in Msg4 when RRC connection is released.

It was agreed to have an e-mail discussion to progress and formulate a common understanding.

Proposals 1 – 7 hereafter are based on the proposals in the above document.

**Proposal 1: The poll bit shall not be set in the RLC PDU carrying RRCConnectionRelease message for UP-EDT.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Sequans | Yes |  |
| ZTE | Yes |  |

Conclusion:

**Proposal 2: A positive HARQ feedback (HARQ ACK) is an implicit RLC ACK of all the RLC PDUs included in the UP-EDT DL transmission**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Sequans | Yes |  |
| ZTE | Yes |  |

**Conclusion**:

**Proposal 3: Follow the legacy RLC procedure for poll bit setting in the RLC PDU(s) carrying the UL user data for UP-EDT.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes with revised proposal. | Existing procedures for setting POLL bit in plink RLC PDU shall be follows. |
| Huawei, HiSilicon | Yes | Fine with the revision |
| Sequans | Yes | Revision is fine |
| ZTE | No | Even we think data reliability is important, we still think it’s not so necessary to set POLL bit for UL data for EDT or PUR. This may be a little different from the DL transmission.  For UL transmission, if Msg3/UL data is not received successfully, retransmission should be triggered instead of sending MSG4. UE can assume that reception of *RRCConnectionRelease* is an implicit RLC ACK of all the RLC PDUs included in the UL transmission. |

Conclusion:

**Proposal 4: The poll bit shall be set in the RLC PDU(s) carrying the UL user data for UP-EDT.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | No | This contradicts Proposal 2.  In any case, as UE does not have PUSCH configuration then UE can not send RLS STATUS message if polled by any of the RLC PDUs in MSG4. |
| Huawei, HiSilicon | Yes. |  |
| Sequans | Yes |  |
| ZTE | No |  |

Conclusion:

**Proposal 5: A RLC STATUS PDU is included in MSG4 (carrying RRCConnectionRelease) for each POLL in RLC PDU included in the uplink transmission.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes with the modified proposal. | eNB only required to send RLC STATU PDU if UE polled the eNB, otherwise it is not necessary for eNB to send RLC STATUS PDU. |
| Huawei, HiSilicon | Yes | We are fine with the rewording. we assume this covers the case where two RLC PDUs for the same DRBs are included in the UL transmission |
| Sequans | Yes | Revision is fine |
| ZTE | No |  |

Conclusion:

**Proposal 6: Proposals 1..3 also apply to MT-EDT.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes with the modified proposals. |  |
| Huawei, HiSilicon | Yes |  |
| Sequans | Yes |  |
| ZTE | No | Only proposals 1..2 can apply to MT-EDT |

Conclusion:

**Proposal 7: Proposals 1..5 also apply to PUR.**

**Company views**

|  |  |  |
| --- | --- | --- |
| **Company** | **do you agree**  **(yes/no)** | **Comments** |
| Qualcomm | Yes with the modified proposals. |  |
| Huawei, HiSilicon | Yes |  |
| Sequans | Yes |  |
| ZTE | No | Only proposals 1..2 can apply to PUR. |

Conclusion:

**Proposal 8: Do you think clarifications in the specifications are needed.**

**Company views**

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Qualcomm | Clarification in section 5.2.2 of TS 36.322 would be useful for proper eNB implementation. Perhaps following note can be added in section 5.2.2.  Note: UE is unable to respond to a poll received in MAC PDU containing *RRCConnectionRelease* message during UP-EDT or UP-PUR, see TS 36.331 [5] clause 5.3.3.1. |
| Huawei, HiSilicon | We think that clarification is needed for proposals 1 and 2. For the other proposals, this follows the legacy behaviour.  As proposals 1 and 2 are related to to eNB behaviour, we think this can be clarified in stage 2. |
| Sequans | Yes, for proposals 1,2. We are not quite sure how to capture yet – First, these are not stage 2 details, so we would prefer to capture in stage 3 spec. In addition, the use of shall suggests we should not use a note, but on the other hand we find no natural place for these assertions.  We agree proposal 4 follows from legacy procedure but it would be good to capture e.g. in a note. |
| ZTE | For proposal 1 and 2, we are fine with a Note in TS 36.322, maybe as proposed by QC. |

Conclusion:

**Other comments.**

|  |  |
| --- | --- |
| **Company** | **Comments** |
| Huawei, HiSilicon | We think it could be useful to clarify in the chair’s notes that if a RLC ACK for the DL data is is needed, the UE should be moved to RRC\_CONNECTED |
| Sequans | w.r.t HW’s comment: It seems to follow from proposal 1, but it could be good to clarify in the chair notes. It also depends on how we actually capture proposal 1 |
| ZTE | Proposal 1 and 2 are enough, other things can be left to eNB implementation and no need to explicitly mention. |

Conclusion:

# 3 Summary

# 4 List of referenced documents

# 5 Participants

|  |  |  |
| --- | --- | --- |
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