**3GPP TSG-RAN WG2 Meeting #130 R2-250xxxx**

**St Julian, Malta, 19th – 23rd May 2025**

**Source: vivo**

**Title: Discussion summary and list of open issue for XR Enhancements in RLC**

**Agenda Item: 8.7.1**

**Document for: Discussion and Decision**

1. Introduction

This document summarizes the discussion of the following email discussion and collects the open issues for XR Enhancements in RLC

* [POST129bis][505][XR] RLC running CR and open issues (vivo)

 Scope:

* Update and review the CR
* List open issues related to the CR

 Intended outcome:

* Running CR for endorsement in the next meeting
* List of open issues for discussion at the next meeting

 Deadline: Long

Companies are invited to provide comments/additional open issues in the below table.

# Contact information

|  |  |
| --- | --- |
| Company | Name, Email |
| Vivo | Chenli, chenli5g@vivo.com |
|  |  |
|  |  |
|  |  |
|  |  |

# Discussion

* 1. Issues related to running CR

In the current RLC running CR, there is an EN as below:

Editor’s Note: FFS on the term, whether it should be “obsolete”, or “outdated”, or “discard”. Same as below.

Current RLC running CR use the term from RRC running CR “*stopReTxObsoleteSDU”*, “*t-RxDiscard*” . Meanwhile, some corresponding description is used, e.g. “This timer is used by the receiving side of an AM RLC entity in order to abandon an obsolete SDU”.

During the discussion, companies have different preference on the term regarding the enhancement to avoid unnecessary RLC retransmission, e.g. “obsolete”, or “outdated”, or “discard”.

**Companies are invited to provide your preference on the term to be used for the enhancement to avoid unnecessary RLC retransmission for both UL and DL operations, e.g. “obsolete”, or “outdated”, or “discard”, or others, please specify:**

|  |  |  |
| --- | --- | --- |
| **Company** | **Preference(s)** | **Comments, if any** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

In the current RLC running CR, there is an EN as below:

Editor’s Note: FFS whether any further changes are needed for SR triggered by *t-RxDiscard* expires. Companies are invited to provide views (if any) in the summary.

RAN2 agreement is:

*When the t-RxDiscard expires, the expiration of t-RxDiscard triggers an SR. FFS whether this is just usual SR or some changes are needed, or if UE implementation can decide (to be discussed during CR review)*

Current RLC running CR captured the SR is triggered when *t-RxDiscard* expires as below:

|  |
| --- |
| Triggers to initiate STATUS reporting include:….- Detection of obsolescence of an AMD PDU:- The receiving side of an AM RLC entity shall trigger a STATUS report when *t-RxDiscard* expires. |

**Companies are invited to provide comments on any further changes are needed for SR triggered by *t-RxDiscard* expires.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Comments, if any** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

In the current RLC running CR, there is an EN for autonomous retransmission procedure in clause 5.x as below:

Editor’s Note: FFS on whether to merge this section into 5.3.2 or capture it separately.

During the discussion, some companies prefer to merge the whole autonomous retransmission procedure in 5.x into section 5.3.2 “retransmission”, noticing large portion of behaviour/content are same, and we can treat the autonomous retransmission trigger as same as receiving a NACK feedback. While some companies prefer to keep the autonomous retransmission procedure in 5.x as a separate section as autonomous retransmission does not rely on feedback or request, and it is a little odd to add autonomous retransmission to the ARQ section.

**Companies are invited to provide comments on whether to merge autonomous retransmission procedure in 5.x into section 5.3.2 “retransmission” or keep it as a separate section.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Merge or separate section** | **Comments, if any** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

In the current RLC running CR, there is an EN for autonomous retransmission procedure in clause 5.x as below:

Editor’s Note: FFS on the terminology of “autonomous retransmission”, as it was already used for NR-U.

During the discussion, some companies mentioned that we have existing “autonomous retransmission” procedure in Rel-16 NR-U. TS 38.300 uses “autonomous retransmission” terminology for the NR-U feature. RAN2 may need to consider to use a new terminology for this Rel-19 feature, and “autnomous retranmsision” for Rel-19 XR is a working teminology, a standardized terminology should be discussed later.

With this, rapporteur suggests to change it to another name, e.g. timer-based retransmission, etc.

**Companies are invited to provide comments on whether to change the “autonomous retransmission” to another term in the specification, if “yes”, please provide your suggestion.**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No to change** | **Suggestion on the term, e.g. timer-based retransmission** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

* 1. Open issue list

**Rapporteur understands the open issues listed as below could be further discussed based on contributions or resoved based on further progress. Companies are invited to provide comments on whether it is open issue and any additional open issue(s) which are not listed here.**

|  |  |
| --- | --- |
| **Company** | **Comments, if any** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

### DSR enhancements

Editor’s Note: Same as PDCP open issue: it is FFS which delay-reporting RLC data volume shall consider RLC data PDUs to be retransmitted.

Editor’s Note: It is FFS which delay-reporting RLC data volume shall consider STATUS PDU to be transmitted.

### Avoid unnecessary RLC retransmissions

Editor’s Note: FFS whether there are any RLF detection impacts when avoiding unnecessary retransmissions is introduced.

### Ensure timely RLC retransmissions

Editor’s Note: It is still open how Autonomous Retransmission coexists with ARQ procedures, i.e. whether/how to increment the RETX\_COUNT for Autonomous Retransmission.

Editor’s Note: It is still open on how to avoid excessive polling for the polling enhancement, e.g. only one polling or multiple.

Editor’s Note: FFS whether/what additional conditions are needed to prevent too early and/or unnecessary retransmission due to polling enhancement.

* 1. Others, please specify

|  |  |
| --- | --- |
| **Company** | **Comments** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# Conclusion

In this contribution, we collect the open issues for XR enhancements in RLC as below:

***DSR enhancements***

***Avoid unnecessary RLC retransmissions***

***Ensure timely RLC retransmissions***

# References

1. R2-25xxx, RLC running CR for XR, vivo.