3GPP TSG-RAN WG2 Meeting #109bis-e draft-R2-2004036

Online, 20th - 30th April 2020

**Agenda item: 4.1**

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

**Title: Report of [AT109e][301][** **NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)**

**Document for: Report**

# 1 Scope of the offline email discussion

This document contains the summary of the offline email discussion “[AT109bis-e][301][NBIOT] Clarification on RLC UM SN size for NB-IoT”, as indicated below:

* [AT109bis-e][301][NBIOT] Clarification on RLC UM SN size for NB-IoT (Huawei)

Status: Starts Monday April 20th at 7:00 UTC

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 R2-2004036

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

[R2-2003246](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003246.zip) Clarification on RLC UM SN size for NB-IoT Huawei, HiSilicon CR Rel-15 36.322 F

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 | **Partially** | Agree change is needed to 36.322 to state SN field size for RLC UM for NB-IoT.  But this could be clarified in section 6.2.1.3 in the same way it has been done for RLC AM, e.g.  “Except for NB-IoT, an UM RLC entity is configured by RRC to use either a 5 bit SN or a 10 bit SN. For NB-IoT, an UM RLC entity uses SN field length of 5 bits. When the 5 bit SN is configured, the length of the fixed part of the UMD PDU header is one byte. When the 10 bit SN is configured, the fixed part of the UMD PDU header is identical to the fixed part of the AMD PDU header, except for D/C, RF and P fields all being replaced with R1 fields. The extension part of the UMD PDU header is identical to the extension part of the AMD PDU header (regardless of the configured SN size).”  Coversheet update:  “However, the size of the RLC SN for RLC UM for DRB is not captured in the specification.”  Inter-operability:  If the UE is implemented according to the CR and the NW is not, then the RLC PDU will not be decoded properly and the data will not be received correctly.  If the NW is implemented according to the CR and the UE is not, then the RLC PDU will not be received correctly.  Consequences text:  The RLC SN field size is not specified for RLC UM in NB-IoT leading to data loss. |
| Sequans | **Yes** | Agree with the intent and Qualcomm’s comments, section 6.2.1.3 seems to be the more appropriate location for this. |
| ZTE | Yes | Agree with the intent and Qualcomm’s suggestions.  We can see the difference for NB-IoT is there has no RRC configuation for RLC UM SN length. Then do we need to further modify like the following:  “Except for NB-IoT, an UM RLC entity is configured by RRC to use either a 5 bit SN or a 10 bit SN. For NB-IoT, an UM RLC entity uses SN field length of 5 bits. When the 5 bit SN is used, the length of the fixed part of the UMD PDU header is one byte. When the 10 bit SN is used, the fixed part of the UMD PDU header is identical to the fixed part of the AMD PDU header,….” |
| Lenovo | Yes | We agree with the intent and further updating from ZTE based on QC views as follows:  “Except for NB-IoT, an UM RLC entity is configured by RRC to use either a 5 bit SN or a 10 bit SN. For NB-IoT, an UM RLC entity uses SN field length of 5 bits. When the 5 bit SN is used, the length of the fixed part of the UMD PDU header is one byte. When the 10 bit SN is used, the fixed part of the UMD PDU header is identical to the fixed part of the AMD PDU header,….” |
| LG | Yes | Agree with the intent of the CR, and Qualcomm, ZTE’s comments. The parameter description in 7.4 is to specify the ones configured by RRC. |
| Ericsson | Yes | We agree with the changes proposed by Qualcomm and ZTE. A similar change may also be needed in the subclause below:  In subclause 7.2:  b) UM\_Window\_Size  This constant is used by the receiving UM RLC entity to define SNs of those UMD PDUs that can be received without causing an advancement of the receiving window. UM\_Window\_Size = 16 when a 5 bit SN is configured, UM\_Window\_Size = 512 when a 10 bit SN is configured and UM\_Window\_Size = 0 when the receiving UM RLC entity is configured for MCCH, MTCH, SC-MCCH, SC-MTCH or STCH for sidelink communication. |

Conclusion:

Proposal:

# 3 Conclusion

**Conclusion:**

TBC

**In principle Agreed CR:**

TBC – in principle agreed Rel-15 CR.

# 4 List of referenced documents

[1] [R2-2003246](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_109bis-e/Docs/R2-2003246.zip) Clarification on RLC UM SN size for NB-IoT Huawei, HiSilicon CR Rel-15 36.322 15.3.0 0145 - F NB\_IOTenh2-Core