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

**St Julian, Malta, 19 - 23 May 2025**

**Agenda item: 8.4.1**

**Source: Apple**

**Title: Collection of comments and Open issues to 38.321 CR for LP-WUS**

**WID/SID: NR\_LPWUS-Core – Release 19**

**Document for: Discussion and Decision**

# 1 Introduction

This is a summary document on collection of comments to TS 38.321 CR for LP-WUS during below running CR discussion:

* [Post129][210][LPWUS] Running CR for TS 38.321 (Apple)

Intended outcome: Running CR for submission to the next meeting

Deadline: Long

# 2 Collection of comments

Please provide your comments in below table, and Rapporteur will response. Please do not insert any comments in running CR directly, which is hard for Rapporteur to follow all comments.

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| **Company** | **Detailed comments** | **Rapporteur response** |
| OPPO | Thanks Fangli for handling this Email discussion. Two comments from my side:  1st: the following branch, i.e., LP-WUS Option 1-1 is not correct, because not configuring lpwus\_PDCCHMonitoringTimer means either LP-WUS 1-1 OR LP-WUS does not configured at all.  2> else if the *lpwus\_PDCCHMonitoringTimer* is not configured (i.e., LP-WUS Option 1-1):  I guess, the following 2nd level branch should not be removed, as the reason given above. Instead, the 3rd level branch should be removed.  2nd: the following 2nd level branch condition is duplicated with the 1st level branch, thus suggest to remove.  1> if LP-WUS monitoring is configured and the *lpwus\_PDCCHMonitoringTimer* for this DRX group is configured (i.e., LP-WUS Option 1-2):  2> if *lpwus\_PDCCHMonitoringTimer* is configured (i.e., LP-WUS Option 1-2):  3rd: do we have the agreement that the new timer applies to each DRX group or it’s common for both?  2> stop *lpwus\_PDCCHMonitoringTimer* for each DRX group*.* |  |
| CATT | C001  1> if the Long DRX cycle is used for a DRX group and the *drx-NonIntegerLongCycleStartOffset* is configured, and floor([(*DRX\_SFN\_COUNTER* × 10240) + (SFN × 10) + subframe number] modulo (*drx-NonIntegerLongCycle*)) = *drx-StartOffset*:  2> if DCP monitoring is configured for the active DL BWP as specified in TS 38.213 [6], clause 10.3:  /omitted/  2> else if the *lpwus\_PDCCHMonitoringTimer* is not configured (i.e., LP-WUS Option 1-1):  3> if LP-WUS monitoring is configured as specified in TS 38.213 [6], clause 10.X:  [CATT]We think above branch can be simply that LP-WUS is configured. And Option 1-1 is moved under the branch that LP-WUS is configured to indicate Option 1-1, which is shown below:  2> else if LP-WUS monitoring is configured as specified in TS 38.213 [6], clause 10.X:  3> if the *lpwus\_PDCCHMonitoringTimer* is not configured (i.e., LP-WUS Option 1-1):  /omitted/  3> else:  4> start *drx-onDurationTimer* for this DRX group after *drx-SlotOffset* from the beginning of the subframe.  [CATT]This can the branch that neigher DCP nor LP-WUS is configured, which can be changed as following:  2> else:  3> start drx-onDurationTimer for this DRX group after drx-SlotOffset from the beginning of the subframe.  C002  For the following text highlighted in yellow, we share the same view as OPPO that it is duplicated for *lpwus\_PDCCHMonitoringTimer* configuration. One of the conditions can be removed.  1> if LP-WUS monitoring is configured and the *lpwus\_PDCCHMonitoringTimer* for this DRX group is configured (i.e., LP-WUS Option 1-2):  2> if *lpwus\_PDCCHMonitoringTimer* is configured (i.e., LP-WUS Option 1-2): |  |
| Ericsson | E001  Similar comments as OPPO and CATT above about “Not LP-WUS Option 1-2” branch. Suggest to consider using e.g. if neither *lpwus-Offset11* nor *lpwus-Offset12* is configured:  E002  Use more descriptive names instead of option 1-1 and option 1-2. For example: e.g. *lpwus-BeforeOnDuration*and *lpwus-Periodically* or *lpwus-WithOnDurationTimer* and *lpwus-WithPDCCH-MonitoringTimer*.  E003  Suggest to refer to 38.331 w.r.t. configuration and 38.213 w.r.t. LP-WUS indication:  3> if LP-WUS-config is present:  4> if LP-WUS indication associated with the current DRX cycle received from lower layer indicated to start *drx-onDurationTimer*, as specified in clause 10.X in TS 38.213 [6]; or  Editorial: italic lpwus\_PDCCHMonitoringTimer |  |
| Sharp | We understand the intention is both DCPparameter and LP-WUS parameterare not configured with value *true*, UE doesn’t report periodic CSI. Sugget to change as follow:  3> if neither *ps-TransmitPeriodicL1-RSRP* ~~or~~nor *lpwus-TransmitPeriodicL1-RSRP* is ~~not~~ configured with value *true*:  4> not report periodic CSI that is L1-RSRP on PUCCH.  3> if neither *ps-TransmitOtherPeriodicCSI* ~~or~~nor *lpwus-TransmitOtherPeriodicCSI* is ~~not~~ configured with value *true*:  4> not report periodic CSI that is not L1-RSRP on PUCCH. |  |
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# 2 Open issue list

Followings are the Editor’s NOTE in the running CR.

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| Editor’s NOTE: The terminology for LP-WUS may be further updated to align with other specifications.  Editor’s NOTE: The parameter name may be further updated to align with the name used in RRC specification.  Editor’s NOTE: FFS whether the maintenance of *lpwus\_PDCCHMonitoringTimer* is per DRX group or per MAC entity.  Editor’s NOTE: FFS whether/how to support LP-WUS (including Option 1-1 and 1-2) and dual DRX group.  Editor’s NOTE: FFS whether *lpwus\_PDCCHMonitoringTimer* is configured per DRX group or common to DRX groups.  Editor’s NOTE: The DRX operation in LP-WUS Option 1-1 takes DCP description as baseline.  Editor’s NOTE: The LP-WUS based DRX model is that LP-WUS monitoring and sending LP-WUS indication (together with the timepoint to start timer in Option 1-2) to MAC is captured in RAN1 spec (38.213), and the DRX operation based on the LP-WUS indication is captured in MAC spec.  Editor’s NOTE: The relationship between UE's LP-WUS monitoring and DRX active time is assumed to be reflected in RAN1 spec (38.213), so we will not capture this part in MAC spec. |

Amongst the EN, there is only one MAC specific open issue that needs further discussion, as follows:

**Open issue 1: Whether/How to support the LP-WUS (including Option 1-1 and 1-2) and dual DRX group.**

In addition to the above Open issue 1, please provide your comments on any other MAC specific open issues, and Rapporteur will response.

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| **Company** | **Open issue** | **Rapporteur response** |
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# 3 Conclusion

Based on post-meeting email discussion, Rapporteur identify the following stage 3 open issues: