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

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

**Source: vivo**

**Title: Remaining RRC open issue for LP-WUS/WUR**

**Agenda Item: 8.4.1**

**Document for: Discussion and Decision**

1. Introduction

The following document includes a list of RRC open issues for LP-WUS/WUR according to the following email discussion:

* [Post129bis][209][LPWUS] Running CR for 38.331 (vivo)

Intended outcome:

1. Updated running CR based on new agreements for endorsement
2. open issue list

Deadline: Long

Companies are invited to provide comments/additional issues in the below table by 2nd May, 2025

# Discussion

* 1. Easily addressed open issues

**Open issue RRC-1 (essential): whether whether RRM relaxation configuration is provided in SIB2**

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

Editor’s NOTE: FFS on whether RRM relaxation configuration is provided in SIB2.

In legacy Rel-16/17 neighboring cell measurement relaxation, the corresponding conditions and parameters are configured in SIB2. Rapporetur understands it is straightforward to follow the same design for Rel-19 RRM offloading/relaxation conditions and parameters.

**Companies are invited to provide comments on whether RRM relaxation configuration is provided in SIB2.**

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| **Company** | **Yes/No** | **Comments, if any** |
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**Open issue RRC-2 (essential): whether entry/exit condition is mandatory or optional**

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

Editor’s NOTE: FFS on whether entry/exit condition is mandatory or optional.

During the discussion, some companies think Some companies think if the MR and LR have the same coverage, the entry/exit condition for LP-WUS monitoring seems not always need to be configured. If entry/exit condition for PDCCH monitoring is absent in LP-WUS configuration, UE assumes that entry condition is always met and whether to monitor LP-WUS is up to UE implementation. While some companies think the entry/exit condition should be mandatorily configured to make UE correctly check whether the entry/exit condition for LP-WUS monitoring is met or not.

**Companies are invited to provide comments on whether the entry/exit condition for LP-WUS monitoring is mandatorily configured if the network is intended to support the LP-WUS feature.**

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| **Company** | **Yes/No** | **Comments, if any** |
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* 1. Other open issue list

**Rapporteur provides the list of open issues as below, and the corresponding suggestions on how to address them. Some of them 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 whether the suggestions from reapporteur is accuracy enough.**

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| **Company** | **Comments** |
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### LP-WUS in idle/inactive mode

N/A

### LP-WUS in connected mode

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| **Index** | **Issue description** | **Rapporteur suggestion** |
| RRC-3 | **whether/how to support LP-WUS (including Option 1-1 and 1-2) and dual DRX group**Editor’s NOTE: FFS on whether/how to support LP-WUS (including Option 1-1 and 1-2) and dual DRX group.  | **Issue Type:** not essential but important**How to address it:** can be discussed based on companies’ contribution |
| RRC-4 | **value range for offset UAI for LP-WUS monitoring for option 1-1 and option 1-2**Editor’s NOTE: FFS on the value range for offset UAI for LP-WUS monitoring for option 1-1 and option 1-2. | **Issue Type:** essential **How to address it:** can be easily addressed based on RAN1 inputs |
| RRC-5 | **whether it is allowed to report an empty UAI on offset for LP-WUS monitoring for both option 1-1 and option 1-2**Editor’s NOTE: There is no conclusion on whether it is allowed to report an empty UAI on offset for LP-WUS monitoring for both option 1-1 and option 1-2.  | **Issue Type:** not essential **How to address it:** can be discussed based on companies’ contribution |

### RRM relaxation/offloading

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| **Index** | **Issue description** | **Rapporteur suggestion** |
| RRC-6 | **the value range of ThresholdPLP and ThresholdQLP for LR measurement based threshold for serving cell relaxation/offloading and neighboring cell relaxation**Editor’s NOTE: FFS on the value range of *ThresholdPLP* and *ThresholdQLP* for LR measurement based threshold for serving cell relaxation/offloading and neighboring cell relaxation.  | **Issue Type:** essential **How to address it:** can be addressed based on RAN1/RAN4 inputs or companies’ contribution |
| RRC-7 | **FFS on exit condition for serving cell RRM relaxation**Editor’s NOTE: FFS on exit condition for serving cell RRM relaxation, e.g., whether a separate exit condition other than ‘not fulfilling the entry condition’ is needed, or whether exit condition include MR and/or LR-based measurements.  | **Issue Type:** not essential but important**How to address it:** can be discussed based on companies’ contribution |
| RRC-8 | **FFS on whether/how to reduce the threshold number for LP-WUS/WUR**Editor’s NOTE: FFS on the relationship between the thresholds for serving cell relaxation and offloading. FFS on the relationship between the thresholds for serving cell relaxation/offloading, neighboring cell relaxation and *s-IntraSearchP/s-NonIntraSearchP*. Editor’s NOTE: FFS on the relationship between the thresholds for serving cell relaxation/offloading, neighboring cell relaxation and entry/exit condition of using LP-WUS, [and potential pre-condition between RRM relaxation/offloading criteria and entry/exit condition of using LP-WUS].  | **Issue Type:** not essential but important**How to address it:** can be discussed based on companies’ contribution |
| RRC-9 | **FFS on whether/how RRM relaxation is applicable for high priority frequency**Editor’s NOTE: FFS on whether/how RRM relaxation is applicable for high priority frequency.  | **Issue Type:** not essential but important**How to address it:** can be discussed based on companies’ contribution |
| RRC-10 | **FFS on low mobility criteria**Editor’s NOTE: FFS on “low mobility” criteria.  | **Issue Type:** not essential not important**How to address it:** can be discussed based on companies’ contribution |

* 1. Others, please specify

Companies are invited to describe any other identified open issues not currently included within this document.

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| **Company** | **Other identified open issues? (please describe) or other comments** |
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# Conclusion

In this contribution, we collect the open issues for LP-WUS/WUR in RRC as below:

***LP-WUS in idle/inactive mode***

***LP-WUS in connected mode***

***RRM relaxation/offloading***

# References

1. R2-25xxx, RRC running CR for LP-WUS/WUR, vivo.