**3GPP TSG RAN WG2 Meeting #130 R2-25xxxxx**

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

**Agenda item: 8.4.1**

**Source: ZTE Corporation, Sanechips**

**Title: Summary of [Post129bis][206] LP-WUS in MR-DC**

**WID/SID: NR\_LPWUS-Core**

**Document for: Discussion and Decision**

# 1 Introduction

This is a summary on 37.340 related issues for LP-WUS in MR-DC:

* [Post129bis][206][LPWUS] Running CR for 37.340 (ZTE)

Intended outcome: Updated running CR based on new agreements for endorsement

Deadline: Long

# 2 Discussion

At RAN2#129bis, we have confirmed the support of LP-WUS in MR-DC with the following agreements:

* For NR-DC, the LP-WUS can be configured to be monitored at least on the PCell and PSCell. Wait for RAN1 progress on whether to allow LP-WUS configuration and monitoring on other Cells.
* For NR-DC, the LP-WUS in MCG and SCG can be configured independently.
* Apart from NR-DC, LP-WUS can also be supported in NE-DC, EN-DC, NGEN-DC. And proposal 1 and 2 also apply to NE-DC, EN-DC, NGEN-DC.

In parallel, the following agreements have been achieved in RAN1#120bis on the LP-WUS monitoring for NR-DC and CA:

**Agreement**

* For the case when UE is configured with CA without dual DRX groups in RRC CONNECTED mode, LP-WUS can be configured only on PCell
* For the case when UE is configured with NR-DC with CA without dual DRX groups or without CA in RRC CONNECTED mode, LP-WUS can be configured only on PCell/PSCell per cell-group

And the rapporteur understands that the above RAN1 agreement for NR-DC can be extended to NE-DC, EN-DC, NGEN-DC case, which means the LP-WUS can be configured only on PCell/PSCell for NE-DC, EN-DC, NGEN-DC when the MN or SN is a gNB.

**Question: Based on the latest RAN1 agreement for LP-WUS in NR-DC, do companies agree that it can be extended to cover all the MR-DC cases, i.e.** **the LP-WUS can only be configured to be monitored on the PCell, if the MN is a gNB (i.e. for NE-DC and NR-DC) and/or with LP-WUS to be monitored on the PSCell, if the SN is a gNB (i.e. for EN-DC, NGEN-DC and NR-DC)?**

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| --- | --- | --- |
| **Company** | **Yes/No** | **Comments** |
| Ericsson | Yes | Support of LP-WUS on MCG and SCG, i.e. 2 LP-WUS, may be subject to additional optional UE capability, but we assume that the UE capability is a separate discussion. Perhaps it should be discussed further that in case the UE supports only 1 LP-WUS whether this is on MCG only or that it could be etierh MCG or SCG. |
| Apple | See comments | It's possible to support LP-WUS in NR-CG in other MR-DC cases, but this depends on the discussion of UE capabilities. |
| Lenovo | Yes | In general, we think that if LP-WUS is extended to all MR-DC cases, then LP-WUS can be monitored on the PCell if MN is a gNB and/or PSCell if the SN is a gNB. But we agree with Ericsson and Apple’s comments that this is subject to UE capability whether the UE supports both or either one case. |
| Samsung | Yes | We agree to conform the RAN1 agreement and also think additional UE capability needs to be discussed. |
| Huawei | Yes |  |
| Sharp | Yes |  |
| vivo | Yes |  |
| Qualcomm | Yes |  |
| CATT | Yes | The UE capability issue can be further discussed. |
| ZTE | Yes | Agree with Ericsson and Apple that UE capability can be a separate discussion and LP-WUS can be configured to be monitored only on the PCell and/or PSCell for MR-DC if supported by UE. |

Rapporteur’s Summary:

10 companies provided feedback and 9 companies support to extend the RAN1 agreement for LP-WUS in NR-DC to cover all the MR-DC cases, i.e. the LP-WUS can only be configured to be monitored on the PCell, if the MN is a gNB (i.e. for NE-DC and NR-DC) and/or with LP-WUS to be monitored on the PSCell, if the SN is a gNB (i.e. for EN-DC, NGEN-DC and NR-DC). And 6 companies mentioned that it is related to the UE capability and requires further discussion.

The following proposal is given based on the comments provided:

**Proposal: LP-WUS, if supported by UE, can only be configured to be monitored on the PCell, if the MN is a gNB (i.e. for NE-DC and NR-DC) and/or with LP-WUS to be monitored on the PSCell, if the SN is a gNB (i.e. for EN-DC, NGEN-DC and NR-DC).**

# 3 Comments on the CR

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| **Company** | **Comments** | **Rapporteur Feedback** |
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# Conclusion

Based on post-meeting email discussion, the following proposals are given for formal decision:

**Proposal: LP-WUS, if supported by UE, can only be configured to be monitored on the PCell, if the MN is a gNB (i.e. for NE-DC and NR-DC) and/or with LP-WUS to be monitored on the PSCell, if the SN is a gNB (i.e. for EN-DC, NGEN-DC and NR-DC).**