3GPP TSG-RAN WG2 #119-bis-e R2-22xxxxx

Electronic meeting, 10th – 19th October 2022

Agenda Item: 6.24.1

Source: Ericsson

Title: Summary of [AT119bis-e][007][NR17] RACH Prioritization

Document for: Discussion, Decision

# 1 Introduction

This paper addresses the following email discussion:

* [AT119bis-e][007][NR17] RACH Prioritization (Ericsson)

 Scope: Treat R2-2209309, R2-2210695, R2-2210696, R2-2210322, R2-2210323. Determine agreeable parts, confirm no R2 impact, confirm reply LS

 Intended outcome: Report, Approved LS out

 Deadline: Schedule 1

According to the schedule:

A first round with Deadline for comments W1 Friday Oct 14th 1000 UTC to settle scope what is agreeable etc.

A final round with Final deadline W2 W2 Tuesday Oct 18th 2300 UTC to settle details / agree LS etc.

# 2 Contact information

|  |  |  |
| --- | --- | --- |
| **Company** | **Name** | **Email address** |
| **LGE** | Gyeong-Cheol LEE | gyeongcheol.lee@lge.com |
| **Apple** | Fangli XU | Fangli\_xu@apple.com |
| **Huawei, HiSilicon** | Dawid Koziol | dawid.koziol@huawei.com |
| **Xiaomi** | xiaowei jiang | jiangxiaowei@xiaomi.com |

# 3 Discussion

Regarding the LS received in R2-2209309 the following contributions have been submitted:

[R2-2209309](file:///C%3A%5C%5CUsers%5C%5Cmtk65284%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2_RL2%5C%5CTSGR2_119bis-e%5C%5CDocs%5C%5CR2-2209309.zip%22%20%5Co%20%22C%3AUsersmtk65284Documents3GPPtsg_ranWG2_RL2TSGR2_119bis-eDocsR2-2209309.zip) Reply LS on clarification of RACH prioritisation rules between LTE and NR-U (R1-2207935; contact: Ericsson) RAN1 LS in Rel-17 NR\_RRM\_enh2-Core To:RAN4 Cc:RAN2

[R2-2210695](http://www.3gpp.org/ftp//tsg_ran/WG2_RL2/TSGR2_119bis-e/Docs/R2-2210695.zip) Discussion on RACH prioritization rules between LTE and NR-U ZTE Corporation, Sanechips discussion Rel-17 38.331 NR\_RRM\_enh2-Core

[R2-2210696](file:///C%3A%5C%5CUsers%5C%5Cmtk65284%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2_RL2%5C%5CTSGR2_119bis-e%5C%5CDocs%5C%5CR2-2210696.zip%22%20%5Co%20%22C%3AUsersmtk65284Documents3GPPtsg_ranWG2_RL2TSGR2_119bis-eDocsR2-2210696.zip) Reply LS to RAN1 on RACH prioritisation rules between LTE and NR-U ZTE Corporation, Sanechips LS out Rel-17 NR\_RRM\_enh2-Core To:RAN1

[R2-2210322](file:///C%3A%5C%5CUsers%5C%5Cmtk65284%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2_RL2%5C%5CTSGR2_119bis-e%5C%5CDocs%5C%5CR2-2210322.zip%22%20%5Co%20%22C%3AUsersmtk65284Documents3GPPtsg_ranWG2_RL2TSGR2_119bis-eDocsR2-2210322.zip) [Draft] Reply LS on clarification of RACH prioritisation rules between LTE and NR-U Ericsson LS out Rel-17 NR\_RRM\_enh2-Core To:RAN1, RAN4

[R2-2210323](http://www.3gpp.org/ftp//tsg_ran/WG2_RL2/TSGR2_119bis-e/Docs/R2-2210323.zip) Discussion on RACH prioritisation rules between LTE and NR-U Ericsson discussion Rel-17 NR\_RRM\_enh2-Core

According to the discussion provided in the documents submitted in R2-2210695 and R2-2210323, it seems that there is a common understanding that what RAN1 clarified in their LS is in line with what is currently captured in the RAN2 specification.

In fact, the TS 38.213, clause 7.6.1, clearly define that in a DC scenario with power allocation limitation, the LTE PRACH is always prioritized in case the power over LTE plus the power over NR exceed the maximum power of the UE.

According to this, in the TS 37.340, clause 5 the following is captured:

---------------------------- TS 37.340 clause 5 ---------------------------

In MR-DC, power sharing can be performed within a frequency range with either semi-static or dynamic power sharing. With semi-static power sharing, the maximum UE transmission power is semi-statically split between MCG and SCG by RRC configuration. With dynamic power sharing:

- when determining the UL transmission power of an SCG transmission in (NG)EN-DC or in NR-DC, the UE takes into account transmission(s) on MCG overlapping with any part of the SCG transmission;

- when determining the UL transmission power of an MCG transmission in NE-DC, the UE takes into account transmission(s) on SCG overlapping with any part of the MCG transmission.

Details are specified in TS 38.213[21].

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Therefore, it quite clear that RAN2 can confirm that for the case when the sum of the configured power on the LTE and NR legs is greater than the configured maximum transmission power for EN-DC, the LTE PRACH is always prioritized.

**Q1**: Do companies agree that for the case when the sum of the configured power on the LTE and NR legs is greater than the configured maximum transmission power for EN-DC, the LTE PRACH is always prioritized?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Detailed comments** |
| **LGE** | Yes | It is already clear in RAN1 spec as RAN1 explained in the LS. |
| **Apple** | Yes |  |
| **Huawei, HiSilicon** | Yes |  |
| **Xiaomi** | Yes |  |

**Q2**: If the reply to Q1 is YES, do companies agree that RAN2 specifications do not need to be updated?

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| --- | --- | --- |
| **Company** | **Yes/No** | **Detailed comments** |
| **LGE** | Yes |  |
| **Apple** | Yes |  |
| **Huawei, HiSilicon** | Yes |  |
| **Xiaomi** | Yes |  |

Also, for what concern the Reply LS to be sent to RAN1 and RAN4, the LS in R2-2210322 (but also in R2-2210696) are written by considering that RAN2 confirm the understanding of RAN1 and that the RAN2 specifications do not need to be updated. Therefore, we can consider the LS in R2-2210322 as baseline and we can modify the text based on the inputs provided by the companies but also based on the outcome of this email discussion.

**Q3**: Do companies agree with the Reply LS in R2-2210322?

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes/No** | **Detailed comments** |
| **LGE** | Yes | R2-2210322 can be a baseline and contents may be updated later, if needed. |
| **Apple** | Yes |  |
| **Huawei, HiSilicon** | Yes | The contents are OK. Just a small typo:“According to the LS…” |
| **Xiaomi** | Yes |  |

# 5 Conclusion

Based on the discussion in the previous sections we propose the following:

[Proposal 1 To be updated.](#_Toc509923397)