**3GPP TSG-RAN WG2 Meeting #112-e *R2-201xxxx***

**Online, 2–13 November 2020**

**Agenda item: 5.3.1**

**Source: Samsung**

**Title: Report of [AT112-e][003][NR15] MAC II (Samsung)**

**Document for: Discussion and Agreement**

# 1 Introduction

This is to report the result of the following email discussion in RAN2#112-e Meeting [1].

* [AT112-e][003][NR15] MAC II (Samsung)

Treat R2-2008909, R2-2010622, R2-2010623, R2-2010624, R2-2010426, R2-2010318, R2-2009910, R2-2009911, R2-2010418, R2-2010164, R2-2009482

Intended outcome: Intermediate: Determine agreeable parts. Final: For agreeable parts, agreed CRs.

Deadline: Intermediate deadline(s) by Rapporteur, Final: Discussion stop at Wed Nov 11, 1200 UTC

# 2 Contact Information

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| Company | Contact: Name (E-mail) |
| Samsung | Jaehyuk JANG (jack.jang@samsung.com) |
| Qualcomm | Linhai He (linhaihe@qti.qualcomm.com) |
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# 3 Discussion

## 3.1 Fixing a CR implementation error of CR0767

R2-2008909 Fixing a CR implementation error of CR0767 Lenovo, Motorola Mobility, Samsung (Rapporteur) CR Rel-15 38.321 15.10.0 0899 - F NR\_newRAT-Core

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| Company | Agree as is (from which release); Agree with changes; Disagree | Detailed Comments |
| Samsung | Agree as is (Rel-15) | It is clearly an implementation error, and Rel-15 specification should be corrected (as proposed). |
| Qualcomm | Agree as is (Rel-15) |  |
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**Conclusion:**

**TBD**

## 3.2 Stopping DRX retransmission timer when bundling is used

(The following five contributions are discussed together here.)

R2-2010622 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.306 16.2.0 0468 - F NR\_newRAT-Core

R2-2010623 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.321 16.2.0 0993 - F NR\_newRAT-Core

R2-2010624 Incorrectly stopping DRX retransmission timer when bundling is used Ericsson CR Rel-16 38.331 16.2.0 2263 - F NR\_newRAT-Core

R2-2010426 Correction on DRX with bundle transmission of configured uplink grant ASUSTeK CR Rel-16 38.321 16.2.1 0987 - F TEI16

R2-2010318 Further discussions on DRX with bundling operation Huawei, HiSilicon discussion Rel-16 TEI16

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| Company | Agree as is (which CR; from which release); Agree with changes;  To capture it in the meeting minutes;  Disagree | Detailed Comments |
| Samsung | Agree as is (ASUSTek or Ericsson (only MAC); Rel-16) | We understand that the proposed change to MAC (from both CRs) are the original intention, and thus support the change. As this is the intended behaviour, no additional capability would be needed as Ericsson proposed, and we are fine with either MAC CR. From the agreement from last meeting, we would need a Rel-16 CR only. |
| Qualcomm | Agree with Ericsson’s MAC CR as is; Rel-16 | We also think that UE capability and network configuration are not necessary, because most companies agreed in the last meeting that the proposed change to the MAC spec is the intended behavior, even for Rel-15. And since there is no UE capability for DG, it would be simpler/cleaner if we do not introduce UE capability just for CG, unless the proposed change is an NBC for some UE implementation.  Between the two MAC CRs from Ericsson and Asustek, we think both are technically correct but have a slight preference for Ericsson’s version.  [r1] As to the proposed clarification on DL reTx timer proposed by Huawei, we do not think it is needed. In our understanding, HARQ feedback for a DL transmission bundle is sent only after the last transmission in the bundle is complete. So there is no ambiguity when UE should stop/start DL HARQ RRT timer and reTx timer. The current spec text is clear enough for us on this behavior. |
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**Conclusion:**

**TBD**

## 3.3 HARQ process handling of retransmission within a bundle

R2-2009910 CR on 38.321 for HARQ process handling of retransmission within a bundle-R15 ZTE Corporation, Sanechips CR Rel-15 38.321 15.10.0 0951 - F NR\_newRAT-Core

R2-2009911 CR on 38.321 for HARQ process handling of retransmission within a bundle-R16 ZTE Corporation, Sanechips CR Rel-16 38.321 16.2.1 0952 - F NR\_newRAT-Core

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| Company | Agree as is (from which release); Agree with changes; Disagree | Detailed Comments |
| Samsung | Disagree | The change seems not needed as the text is interpreted as 'same (frequency) resources'. There would be no room to misinterpret the existing text. |
| Qualcomm | Disagree | We have the same understanding as Samsung. |
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**Conclusion:**

**TBD**

## 3.4 Clarification for bundling transmission

R2-2010418 Clarification for bundling transmission ASUSTeK CR Rel-15 38.321 15.10.0 0983 - F NR\_newRAT-Core

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| Company | Agree as is (from which release); Agree with changes; Disagree | Detailed Comments |
| Samsung | Agree as is (Rel-15) | We are fine with the change which is more accurate. In addition, we recognize that separate CRs (with some additioinal changes) for Rel-16 were submitted this meeting, so Rel-16 can be discussed separately (i.e. not in this thread). |
| Qualcomm | Agree as is (Rel-15) | We think the reason for change is valid and the proposed change is a good clarification to the current text. |
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**Conclusion:**

**TBD**

## 3.5 Consistent use of terminology for bundling in MAC

R2-2010164 Consistent use of terminology for bundling in MAC Ericsson, Samsung CR Rel-16 38.321 16.2.1 0967 - F NR\_newRAT-Core

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| Company | Agree as is (from which release); Agree with changes; Disagree | Detailed Comments |
| Samsung | Agree as is (Rel-15) | We are fine with the changes, and it would be good to correct them from Rel-15.  Another terminology issue: the term "RACH procedure" in subclause 5.12 can be fixed to "Random Access procedure", and can be added to the CR. |
| Qualcomm | Agree as is (Rel-15) | We are fine with the changes. |
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**Conclusion:**

**TBD**

## 3.6 PHR reporting for PUSCH skipping

R2-2009482 Clarification on PHR reporting for PUSCH skipping Apple CR Rel-16 38.321 16.2.1 0929 - F NR\_newRAT-Core, TEI16

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| Company | Agree as is (from which release); Agree with changes; Disagree | Detailed Comments |
| Samsung | Agree as is (Rel-16) | The changes are correct, as it cannot set PCMAX value in such scenario. Since the skipping behaviour will be clarified from Rel-16, Rel-16 CR would be sufficient. |
| Qualcomm | Disagree | The proposed change is against an existing RAN2 agreement (RAN2#103bis). If companies want to revert this agreement, it probably is better to have it first discussed and agreed in RAN1, as they have been discussing the impact of UL skipping.  And there can be alternative solutions, which in our view are better. For example, as UE has to wait until Tproc,2 before PUSCH transmission to determine UL skipping, UE does not determine PH type (real vs virtual) until the moment when it determines whether to skip. |
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**Conclusion:**

**TBD**

# 4 Conclusion

**TBD**

# 5 References

[1] RAN2 112-e Chairman Notes 2020-11-02 0800 UTC.docx