**3GPP TSG-RAN2 Meeting #115-e R2-210xxxx**

**e-Meeting, 16th-27th August 2021**

**Source: email discussion Rapporteur (ZTE Corporation)**

**Title: [Post114-e][505][SData] RRC/MAC modeling and RRC running CR (ZTE): Modeling discussion**

**Agenda item:** **8.6.1**

**Document for:** **Discussion and Decision**

# Introduction

This document contains summary of email discussion to collect comments on the RRC/MAC modelling for SDT:

* [Post114-e][505][SData] RRC/MAC modeling and RRC running CR (ZTE)

**Scope:**

Phase 1: Modeling discussion for RRC/MAC Review running stage 2 CR

i. Feedback on existing modelling used by the running CRs

ii. Identify any issues with the current modelling and any potential changes

iii. Updated running CRs can be provided based on the outcome of this discussion

Phase 2: Review running RRC CR after some agreements from phase 1

**Intended outcome:** CR ready to be endorsed in RAN2115-e

**Deadline for company comments on the modelling issues:** Monday 26th July

**Discussion summary**

* TBD

# Discussion

For the triggering of SDT, a number of conditions were agreed in the previous meetings. We need to agree how to split the specification of these conditions between MAC and RRC. In the latest RRC (R2-2105927) and MAC (R2-2105032) running CRs submitted to RAN2#114-e, the following split has been implemented:

RRC determines whether the pending UL data/NAS message(s) are mapped to SDT RB(s).

MAC performs all other checks

* Data volume threshold check
* SDT RSRP threshold check
* Determining whether to use RA-SDT or CG-SDT
  + CG resource validation
  + RA resource validation

The overall modelling between MAC and RRC hance is as depicted in Figure below (reproduced from R2-2105847):



Figure : Overall modelling of MAC and RRC for determining SDT vs non-SDT (see R2-2105847)

So, according to the above modelling, once RRC determines that all the pending UL data/NAS message(s) are mapped to SDT RB(s), the remaining checks to determine the initial SDT vs non-SDT selection are performed in MAC. The first question is to check whether there are any issues with the above modelling.

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| According to the latest RRC and MAC running CRs, **once RRC determines that all the pending UL data/NAS message(s) are mapped to SDT RB(s), the remaining checks to determine the initial SDT vs non-SDT selection are performed in MAC**.  Q1: Is the above split between RRC and MAC acceptable?   * In the comments, companies can highlight any issues and provide any alternative split between RRC and MAC explaining the reasons for the change. | |
| Company | Comments on the modelling and any identified issues and provide alternative split between RRC/MAC (if there is an issue) |
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One further aspect of the modelling is when to resume the RBs configured for SDT. As per the latest RRC running CR (see R2-2105927), the RBs configured for SDT are only resumed after MAC layer performs the data volume check and other relavent checks for SDT vs non-SDT selection and selects the SDT transmission. Companies are invited to comment on whether such modelling is acceptable.

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| According to the latest RRC and MAC running CRs, **the radio bearers configured for SDT are resumed only after the MAC layer performs the data volume check and other relavent checks for SDT vs non-SDT selection and SDT transmission is selected**.  Q2: Is the above modelling of the resumption of SDT RBs acceptable?   * In the comments, companies can highlight any issues and provide any alternative implementation for the resumption of SDT RBs. | |
| Company | Comments on when SDT RBs should be resumed in RRC and any alternative proposals (if there is any issue with the current modelling) |
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Finally, companies are invited to provide any other comments on the modelling aspects between RRC and MAC (apart from Q1/Q2) above in the table below.

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| Q3: Are there any other comments/questions on modelling aspects between RRC and MAC (not covered by the scope of Q1/Q2 above)? | |
| Company | Comments on any other issues |
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# Conclusion and proposals

# References

1. [R2-2105032](file:///C:\\Users\\panidx\\OneDrive%20-%20InterDigital%20Communications,%20Inc\\Documents\\3GPP%20RAN\\TSGR2_114-e\\Docs\\R2-2105032.zip) Runnning MAC CR for small data Huawei, HiSilicon

1. [R2-2105927](file:///C:\\Users\\panidx\\OneDrive%20-%20InterDigital%20Communications,%20Inc\\Documents\\3GPP%20RAN\\TSGR2_114-e\\Docs\\R2-2105927.zip) RRC Running CR for SDT ZTE Corporation (rapporteur)
2. [R2-2105847](file:///C:\evutukuri\work\5G\RAN2\docs\R2-2105847.zip) Discussion on the spec modeling for Small Data Huawei, HiSilicon, ZTE corporation, Sanechips

# Annex (contact details for email discussions)

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| Company | Contact name | Contact email |
| ZTE (rapporteur) | Eswar Vutukuri | eswar.vutukuri@zte.com.cn |
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