**3GPP T****SG-RAN WG2 Meeting #114-electronic R2-2106561**

**Online, May 19th – May 27th, 2021**

**Title: [Draft] Reply LS to RAN1 on physical layer aspects of small data transmission**

**Response to:** **R1-2102125**

**Release: Release 17**

**Work Item: NR\_SmallData\_INACTIVE-Core**

**Source:** **vivo [to be RAN2]**

**To: RAN1**

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments: N/A**

**1. Overall Description:**

RAN2 would like to thank RAN1 for their reply LS on physical layer aspects of small data transmission.

RAN2 has concluded that new common search space is supported for RA-SDT. The relevant agreement was made as follows,

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| **Agreement:**   1. The separate search space is common to the UEs performing RA-SDT. Inform RAN1 of this agreement |

Furthermore, RAN2 discussed the details of both RA-SDT and CG-SDT leading to the following agreements with potential RAN1 impacts.

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| **Agreement:**  For RA-SDT   1. CFRA is not supported for RA-SDT   For CG-SDT   1. Working assumption: UE-specific search space is configured for UEs performing CG-SDT. RAN2 asks RAN1 whether this working assumption can be confirmed 2. CG-SDT resource can be configured on either initial BWP or separate SDT BWP. Ask RAN1 to confirm 3. RAN2 thinks that some feedback may be beneficial in case CG is used for subsequent transmission. RAN2 assumes that existing mechanism can be used. |

For RA-SDT (for both 2-step RA and 4-step RA), in particular, RAN2 would like to request RAN1 to provide configuration parameters for the PRACH resource configuration when PRACH occasions are shared between SDT and non-SDT and when PRACH occasions are separately configured for SDT and non-SDT.

For CG-SDT, RAN2 respectfully requests RAN1 if the agreements 3/4 mentioned above can be confirmed and provide feedback on whether it is feasible to support HARQ-ACK feedback via DCI by reusing the existing mechanism.

**2. Actions:**

RAN2 respectfully asks RAN1 to provide feedbacks on the physical layer aspects of small data transmission as requested above.

**3. Date of Next RAN2 Meetings:**

TSG-RAN WG2 Meeting #115-e 16th – 27th August 2021 E-meeting

TSG-RAN WG2 Meeting #116-e 1st – 12th Novemebr 2021 E-meeting