**3GPP TSG RAN WG2 #118-e R2-220xxxx**

**e-Meeting, 9-20 May, 2022**

**Title: [Draft] Reply LS on the L1 related agreements for SDT**

**Response to: R2-2204445 (R1-2202656)**

**Release: Rel-17**

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

**Source: [to be] RAN2**

**To: RAN1**

**Cc:**

**Contact person: Eswar Vutukuri**

**E-mail Address: eswar dot vutukuri at zte dot com dot cn**

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

# 1 Overall description

RAN2 thanks RAN1 for the Reply LS on physical layer aspects of small data transmission in R2-2204445 (R1-2202656).

RAN2 had further discussion regarding SDT feature and the following agreements were made.

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| RAN2#117e agreements  => For autonomous re-tx, fix the RV to be 0 for both the initial and retransmission of initial CG-SDT transmission. |

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| RAN2#118e agreements  => Do not support uci-onPUSCH for SDT  => During CG-SDT procedure, the UE does not need to (but is allowed to) select a CG resource corresponding to different SSB as used for the previous CG-SDT transmission if the previously selected SSB is above the cg-SDT-RSRP-ThresholdSSB threshold |

**For CG-SDT search space**

In addition to the above, RAN2 would like to inform RAN1 that the parameter named sdt-CG-SearchSpace-r17 used in 3GPP TS 38.213 does not exist in the RAN2 signalling. Instead, RAN2 signalling uses the existing field names for the search space configuration. RAN2 kindly requests RAN1 to update the RAN1 specs to refer to the search space configured using the BWP-Uplink-Dedicated-SDT-r17 for the above parameter hence, instead of using the new name sdt-CG-SearchSpace-r17.

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| Repetition  For CG-SDT, RAN1 cannot reach consensus on whether to support repetition or not, it’s up to RAN2 to decide on it. |

With regards to the above issue about repetition for CG-SDT, the signalling in TS 38.331 reuses the existing ConfiguredGrantConfig and hence the signalling allows configuration of parameters related to repetition (i.e. repK, repK-RV, pusch-RepTypeIndicator-r16 and frequencyHoppingPUSCH-RepTypeB-r16) within this IE.

**For the maintenance of the TA**

The following has been captured in the MAC spec TS 38.321

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| 1> when a Timing Advance Command is received in a Random Access Response message for a Serving Cell belonging to a TAG or in a MSGB for an SpCell:  2> if the Random Access Preamble was not selected by the MAC entity among the contention-based Random Access Preamble:  3> apply the Timing Advance Command for this TAG;  3> start or restart the *timeAlignmentTimer* associated with this TAG.  2> else if the *timeAlignmentTimer* associated with this TAG is not running:  3> apply the Timing Advance Command for this TAG;  3> start the *timeAlignmentTimer* associated with this TAG;  3> when the Contention Resolution is considered not successful as described in clause 5.1.5; or  3> when the Contention Resolution is considered successful for SI request as described in clause 5.1.5, after transmitting HARQ feedback for MAC PDU including UE Contention Resolution Identity MAC CE:  4> stop *timeAlignmentTimer* associated with this TAG.  3> when the Contention Resolution is considered not successful as described in clause 5.1.5;  4> if CG-SDT procedure triggered as in clause 5.27 is ongoing:  5> set the NTA value to the value before applying the received Timing Advance Command as in TS 38.211 [8]. |

Hence, if the contention resolution is not successful for Random Access procedure during CG-SDT, the UE should set the NTA value to that before the Random Access procedure. RAN2 thinks that this maintenance of NTA should be captured in the TS 38.211.

# 2 Actions

**To RAN1**

**ACTION:** RAN2 respectfully asks RAN1 to take the above information into account for their specification work and provide feedback, if any, on the above agreements

# 3 Dates of next TSG RAN2 meeting

The dates of the next RAN2 meetings can be found at the following link:

<https://portal.3gpp.org/Home.aspx?tbid=380&SubTB=380#/>