**3GPP TSG RAN2 Meeting #117-eR2-220xxxx**

**Online, 21 February – 03 March 2022**

**Title:** [DRAFT]LS on TA validation for CG-SDT

**Response to:** -

**Release:** Rel-17

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

**Source:** LG Electronics [to be RAN2]

**To:** RAN4

**Cc:** -

**Contact Person:**

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**1. Overall Description:**

RAN2 discussed the topic of CG-SDT resource validation based on RSRP change, and made following agreements.

RAN2#116bis-e

For CG-SDT resource validation, the UE compares the RSRP at the time of initiating CG-SDT procedure with the RSRP stored at the time when RRCRelease message is received

RAN2#117-e

Downlink RSRP reference at the time of receiving RRCRelease with suspendConfig for the RSRP-based TA validation is determined by the MO configured for the cell where the UE is released from RRC\_CONNECTED to RRC\_INACTIVE. FFS if there is any issues from RAN4 raised

Reference RSRP value for RSRP-based TA validation in MAC is captured by referring to RAN4 procedural text, e.g. MAC considers the TA valid if "The change in the RSRP of the downlink pathloss reference calculated as specified in 38.133 section 5.x [11] is less than cg-SDT-RSRP-ChangeThreshold."

Based on the agreements, RAN2 implements the MAC CR (R2-2204216) as shown below, which is submitted to RAN#95e for approval.

|  |
| --- |
| 5.x.1 TA Validation for CG-SDT RRC configures the following parameters for validation for CG-SDT:  *- cg-SDT-RSRP-ChangeThreshold*: RSRP threshold for the increase/decrease of RSRP for time alignment validation.  The MAC entity shall:  1> if the UE is configured with *measObject* for the serving cell where the UE receives configuration for CG-SDT:  2> store the RSRP of the downlink pathloss reference derived based on the *measObject* configured for the serving cell as in TS 38.331.  The MAC entity shall consider the TA of the initial CG-SDT transmission with CCCH message to be valid when the following condition is fulfilled:  1> compared to the stored downlink pathloss reference RSRP value, the current RSRP value of the downlink pathloss reference calculated as specified in TS 38.133 [11] has not increased/decreased by more than *cg-SDT-RSRP-ChangeThreshold*, if configured;  1> *cg-SDT-TimeAlignmentTimer* is running. |

**2. Actions:**

**To RAN4 group:**

**ACTION:** RAN2 respectfully asks RAN4 to specify the relevant text in RAN4 specification, considering the RAN2 MAC CR for SDT.

**3. Dates of next TSG-RAN WG2 meetings:**

RAN2#118-e 16 – 27 May 2022 Online