**3GPP TSG-RAN WG2 Meeting #127bis R2-24xxxxx**

**Hefei, China, 14 - 18 October, 2024**

**Title: Reply to SA5 LS on Number of UEs in RRC\_INACTIVE state with data transmission**

**Response to: S5-245138**

**Release: Rel-19**

**Work Item: PM\_KPI\_5G\_Ph4**

**Source: RAN2**

**To: SA5**

**Cc:** **RAN3**

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** <mailto:3GPPLiaison@etsi.org>

**Attachments:** **-**

**1. Overall Description:**

RAN2 would like to thank SA5 for the LS on Number of UEs in RRC\_INACTIVE state with data transmission. RAN2 would like to inform that in some cases the network knows the number of UEs in RRC\_INACTIVE state in a cell with an ongoing SDT session as the connection requests from such UEs are distinguished either based on dedicated RACH resources or based on a dedicated RRC resume cause. However, RAN2 would also like to inform SA5 that occasionally an SDT procedure may be unsuccessfully completed due to cell re-selection during SDT procedure, expiry of the SDT failure detection timer, a MAC entity reaching a configured maximum PRACH preamble transmission threshold, an RLC entity reaching a configured maximum retransmission threshold or integrity check failure while SDT procedure is ongoing. However, in these cases the network would consider SDT as ongoing only until timer T319a expires. T319a is started when the SDT session starts and its maximum value is 4 seconds.

Depending of the definition of SDT session start and end the RAN3 support may be needed if the corresponding events are detectable in a separate RAN architecture components (gNB-CU-CP, gNB-CU-UP and gNB-DU).

**2. Actions:**

**To SA5:**

**ACTION:** RAN2 respectfully asks SA5 to take the above into consideration in their further work

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

RAN2#128 18th – 22nd November 2024 Orlando, US

RAN2#129 17th – 21st February 2025 Athens, Greece