3GPP TSG-RAN WG2 Meeting #126 R2-240xxxx

Fukuoka, Japan, 20 – 25 May 2024

**Title: Draft-**Reply LS on SDT signalling optimization for partial context transfer

**Response to:** R2-2404123 (R3-242198)

**Release:** Rel-18

**Work Item:** TEI18

**Source:** to be RAN2

**To:** RAN3

Cc:

**Contact person:**

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Attachments: None

**1. Overall Description:**

RAN2 would like to thank RAN3 for the reply LS on SDT signalling optimization for partial context transfer in R2-2404123 (R3-242198).

For the network-based solution discussed in RAN3, there are no impacts to RAN2 specs for either Rel-17 or Rel-18, but RAN2 has identified the following issues:

**Issue 1: Data loss**

* If RRCSetup is received during SDT, the UE will discard the stored UE inactive AS context and suspendConfig and release all established radio bearers except SRB0. The associated RLC, PDCP and SDAP entities for these bearers are also released. As a result, any pending data in the user plane protocol stack in UL may be lost.

**Issue 2: Signalling overhead due to security context and AS context release**

* If RRCSetup is received during SDT, the UE will discard the current AS security context including all the UP and CP keys. This would then mean that a new NAS procedure is needed including another round of security mode command, to initialise the security context at the UE. This generates new signalling both on network interfaces and also on Uu to establish new security context. Furthermore, since the stored inactive AS context and suspendConfig are also released, the network has to reconfigure all the bearers and this will further increase the signalling overhead over Uu (i.e. the signalling overhead reduction by using the INACTIVE state itself is also lost). RAN2 would like to note that these implications of signalling overhead are similar to the implications of receiving RRCSetup in response to RRCResumeRequest message from Rel-15 so this is not an SDT specific issue.

**2. Actions:**

**To RAN2 group.**

**ACTION:** RAN2 kindly asks RAN3 to take the above considerations into account.

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

TSG-RAN3 #127 Aug 19 to 23, 2024 Maastricht, NL

TSG-RAN3 #127-bis Oct 14 to 17, 2024 TBC, CN