**3GPP** **TSG SA WG3 Meeting 103-e S3-212257**

**Electronic meeting, 17-28 May 2021**

**Title: Reply LS on Small data transmission**

**Response to: LS S3-211426 (R2-2104401) on** **Small data transmissions**

**Release: Rel-17**

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

**Source: SA3**

**To:** **RAN2**

**Cc: SA2**

**Contact person: Alec Brusilovsky**

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

**Attachments:** none

# 1 Overall description

SA3 would like to thank RAN2 for their LS on Small data transmission.

SA3 discussed the LS from RAN2 and would like to acknowledge the security issues related to reusing the same I-RNTI and NCC with the same cell scenario or mobility scenarios as cell reselection. During the SA3#103-e discussion SA3 could not agree on whether these issues represent “corner” or “normal” cases. SA3 would like to provide the following answers to the questions.

**Q1: Can a CCCH message reusing the I-RNTI and resumeMAC-I be transmitted again in the same cell after SDT initiation, e.g. similar to legacy RRC Reject case (but without having received RRC Reject at the UE)?.**

SA3 Answer: SA3 would like to state one of the security design principles of avoiding possible Replay attacks. Sending Resume Request message with the same I-RNTI and resume MAC-I in the same cell after SDT initiation may violate the stated above principle. SA3 would like RAN2 to design RAN2 solutions while accommodating the principal above where it is possible.

**Q2: Can NCC and I-RNTI from a former cell in which an SDT procedure was initiated be reused to initiate a new SDT procedure in a new cell?.**

SA3 Answer: Reusing the same NCC and I-RNTI from a former cell to resume the SDT procedure in the new cell violates the forward security principle, and such reuse should be avoided where it is possible. SA3 would like RAN2 to design RAN2 solutions while accommodating the principal above where it is possible.

# 2 Actions

**To RAN2, SA2**

**ACTION:** 3GPP TSG SA WG3 would like RAN2 and SA2 to take the above feedback into account.

# 3 Dates of next TSG CT WG1 meetings

TSG SA WG3 Meeting 103-Bis-e (TBC) 05-09 July 2021

TSG SA WG3 Meeting 104-e (TBC) 16-27 August 2021