**3GPP TSG-RAN WG2 Meeting #109bis-eDraft\_R2-2004055**

**Online, 20th - 30th April 2020**

**Title:** [Draft] LS on security of PUR for the CP solution

**Response to:**

**Release:** Release 16

**Work Item:** NB\_IOTenh3-Core, LTE\_eMTC5-Core

**Source:** Huawei [to be RAN2]

**To:** SA3

**Cc:**

**Contact Person:**

#### Name: Baokun Shan

#### E-mail Address: baokun.shan@huawei.com

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

**Attachments:**

**1. Overall Description:**

RAN2 has agreed to introduce transmission using PUR (Preconfigured Uplink Resource) in Rel-16 for BL UE, UEs in CE and NB-IoT UEs. Transmission using PUR allows one uplink transmission from RRC\_IDLE using a preconfigured uplink resource without performing the random access procedure.

The (ng-)eNB provides the configuration of the radio resources for transmission using PUR in *RRCConnectionRelease* message. The configuration is valid for one or multiple PUR occasions and can span over a period of time of one minute to several days.

For the User Plane CIoT EPS/5GS optimisations, the *RRCConnectionRelease* message is sent integrity protected and ciphered. However, for the Control Plane CIoT EPS/5GS optimisations, the *RRCConnectionRelease* message is sent without AS security.

PUR (re-)configuration includes UE-specific time and frequency resources to be used for the uplink in RRC\_IDLE mode and is specific to one cell of an (ng-)eNB, i.e., if the UE changes cell, then PUR configuration is autonomously released.

RAN2 also agreed *“from RAN2 point of view PUR (re-)configuration can be provided to the UE for the CP solution without AS security enabled”*. Therefore, RAN2 would like to ask SA3 the following question:

* Based on existing security solution for the UEs using the Control Plane CIoT EPS/5GS optimisations, is there any security concern about providing the PUR configuration without AS security to UEs in *RRCConnectionRelease* message?

**2. Actions:**

**To SA3:**

RAN2 respectfully asks SA3 to take above information into consideration and provide feedback on the question accordingly.

**3. Date of Next TSG-RAN WG2 Meetings:**

3GPP RAN2#110-e 01 - 12 Jun, 2020 Online

3GPP RAN2#111 24 - 28 Aug, 2020 Toulouse, France