**3GPP TSG RAN WG2#116-bis-e draft R2-2201744**

**Online meeting, January 17-25th, 2022**

Title: [draft] LS on UE location during initial access in NTN

Response to: -

Release: Release 17

Source: Thales [to be RAN2]

To: SA2, SA3, RAN3

Cc: CT1

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Attachments: None

**1. Overall Description:**

Following liaisons with SA2, SA3 and RAN3 (see R2-2109216, R2-2200145, R2-2200149, R2-2202542) on the reporting of UE location information during initial access, RAN2 is discussing different options and requires the views of SA2, SA3 and RAN3 to select the most relevant option:

* Option 1: Maintain the agreement that UE may report to the NG-RAN *its coarse GNSS coordinates during initial access (before AS security is activated).*The reporting would be under network control (i.e. it could be disabled if/when needed). Furthermore the accuracy of the coarse GNSS coordinates could be further relaxed, e.g. ~10km or more instead of ~2km radius initially envisaged.
  + **Question to SA3: Would a higher granularity location information (e.g., in the granularity of 10km or more, i.e. possibly even higher than the typical TN cell size) alleviate the privacy concern when sent together with SUPI/temporary ID during initial access ?**
  + **Question to SA3: Can solutions be considered to protect/conceal this UE location information based on coarse GNSS coordinates before AS security is established (e.g. as part of Release 18) ?**
* Option 2: Withdraw the agreement that UE may report to the NG-RAN *its coarse GNSS coordinates during initial access (before AS security is activated)*, implying that the NG-RAN would have no information at all about the UE location during initial access.
  + **Question SA2: Would registration procedures (initial, update, ..) work efficiently without having knowledge of location information of the mobile UEs (e.g. when NTN beam covers several countries) ?**
    - **note that RAN2 is aware that the UE location information obtained during initial access may not be reliable due to a lack of integrity protection and that the reliability of the information would have to be double-checked**
  + **Question to RAN3: Can NG-RAN carry out efficiently its procedures without being able to construct the accurate Mapped Cell ID based on the UE location information (e.g., during the initial access or after AS security when NG-RAN has no user consent to obtain UE location report) ?**

**2. Actions:**

**To** **SA2.**

**ACTION:** RAN2 kindly asks SA2, SA3, RAN3 to answer the questions above.

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

TSG-RAN WG2#117- e February 21st – March 3rd, 2022 Online meeting