**3GPP TSG RAN WG2#115-e R2-210xxxx**

**Online meeting, August 09-27, 2021**

Title: [Draft] Reply LS on UE location aspects in NTN

Response to: R3-212917/ R2-2106941

Release: Release 17

Source: Qualcomm Inc. [to be RAN2]

To: RAN3

Cc: SA2, CT1

**Contact Person:**

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

Attachments: None

**1. Overall Description:**

RAN2 would like to thank RAN3 for the LS reply and provide answers to the following questions.

**Question 1: RAN3 would like RAN2 to confirm whether the gNB will be able to acquire UE location information with an accuracy comparable to TN cell granularity (e.g. GNSS information** **or otherwise) after AS security, and also to confirm whether it is possible to provide any level of UE location information (i.e. finer than NTN Uu cell accuracy) before AS security.**

**RAN2 answer:** RAN2 has made following agreements:

* UE coarse location information refers to coarse GNSS coordinates (FFS on the details, e.g. X MSB bits out of 24 bits of longitude/latitude or GNSS coordinates with ~2km accuracy).
* if SA3 has no concern reporting coarse location during initial access, the coarse location information is reported in Msg5, i.e., via *RRCSetupComplete*/*RRCResumeComplete* message.
* After AS security is established, gNB can obtain a GNSS-based location information from the UE using existing signalling method, i.e., by configuring *includeCommonLocationInfo* in the corresponding r*eportConfig*. It is up to SA3 to decide whether User Consent is required before NW acquires location information from the UE in NTN.

**Question 3: RAN3 welcomes any feedback from RAN2 on the described case (i.e. the gNB to trigger inter-AMF handover when crossing country borders).**

**RAN2 answer:** RAN2 understands it is up to other working groups to decide based on available information such as UE location information, if available and reported by UE

**Question 4: RAN3 requests RAN2, CT1 and SA2 to provide any feedback on above issue (i.e. which TAC should be reported by the gNB in case of multiple broadcast TAC).**

**RAN2 answer:** As in LS R2-2108888, RAN2 decides that it is up to other working groups (i.e. CT1/SA2) to make judgement on TAI selection based on which criteria to apply (e.g. UE location information or other) at the UE side. RAN2 is under the discussion on the possibility for the UE to report the TAC of the selected TAI to the gNB, pending potential decisions from other WGs on UE TAI selection, and will keep RAN3 updated with latest progress (if any).

**2. Actions:**

**To** **RAN WG3 group.**

**ACTION:** RAN2 kindly asks RAN WG3 to take the above information into account and provide feedback, if any.

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

TSG-RAN WG2#116-e November 1st – November 12th, 2021 Online meeting