**3GPP TSG-RAN WG3 Meeting #114bis-e *R3-221406***

**Online, 17th -26th January 2022**

**Title:** LS on opens issues for NB-IoT and eMTC support for NTN

**Response to:**

**Release:** Rel-17

**Work Item:** LTE\_NBIOT\_eMTC\_NTN

**Source:** RAN3

**To:** SA2, SA3, RAN2

**Contact Person:**

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**1. Overall Description:**

RAN3 would like to inform SA2, SA3 and RAN2 that RAN3 has started specifying NB-IoT and eMTC NTN support for E-UTRAN (including S1 and X2 interfaces), by reusing NR NTN functionality as a baseline. RAN3 assumes the relevant functionality will be supported in the EPC. RAN3 would like to ask the following questions:

**1) To SA2 and SA3**

For a UE using CP CIoT EPS optimization only, RAN3 understands that the UE might not be able to provide UE location information to eNB, on the assumption that such information can only be sent after AS security activation. Therefore, the CGI provided in the ULI to MME may only refer to a quite coarse-grained location (e.g., based on the satellite beam footprint) and might not be sufficient to determine the country where the UE is located (and also not close to TN level granularity, as previously requested for NR NTN).

RAN3 would like thus to ask SA2 and SA3 whether such a coarse-grained location is sufficient for UEs using only CP CIoT EPS optimization in release 17. RAN3 assumes that no such issue will arise for UEs using UP CIoT EPS optimization.

**2) To SA2 and RAN2**

RAN3 assumes that the LTE-M NTN capable UE indicates category M1 or M2 in its UE Radio Capability, which then the eNB will indicate to the CN as LTE-M Satellite Indication in the UE CAPABILITY INFO INDICATION message. RAN3 would ask RAN2 and SA2 to confirm this assumption.

**2. Actions:**

**To SA2 and SA3**

**ACTION:** RAN3 kindly asks SA2 and SA3 to provide feedback on above issues.

**To RAN2**

**ACTION:** RAN3 kindly asks RAN2 to provide feedback on above issue.

**3. Date of Next TSG-RAN WG3 Meetings:**

TSG-RAN3 Meeting #115-e 21 February-3 March 2022 Online