3GPP TSG-RAN WG1 Meeting #107-e R1-211XXXX

e-Meeting, November 11th – 19th, 2021

**Title: DRAFT** LS on GNSS Validity duration for IoT NTN

**Reply to:**

**Release:** Release 17

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

**Source:** Moderator (MediaTek), [RAN1]

**To:** RAN2

**Cc:**

**Contact Person:**

**Name:** Gilles Charbit

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**Attachments:** None

**1. Overall Description:**

RAN1 has discussed the following aspects and leaves it up to RAN2 to take the following RAN1 agreements into consideration to specify the aspects related to GNSS position validity:

* For sporadic short transmission, UE in RRC\_CONNECTED should go back to idle mode and re-acquire a GNSS position fix if GNSS becomes outdated
* The UE autonomously determines its GNSS validity duration X and reports information associated with this valid duration to the network via RRC signalling.
  + X = {10s, 20s, 30s, 40s, 50s, 60s, 5 min, 10 min, 15 min, 20 min, 25 min, 30 min, 60 min, 90 min, 120 min, infinity}
* Note: The duration of the short transmission is not longer than the “validity timer for UL synchronization” referred to in the WID objective (but which still needs further discussion for specifying further details)

RAN1 respectfully requests RAN2 to prioritize the aspects related to GNSS position validity specification work.

Relevant RAN1 agreements are attached below.

Agreement:

The UE autonomously determines its GNSS validity duration X and reports information associated with this valid duration to the network via RRC signalling.

* X = {10s, 20s, 30s, 40s, 50s, 60s, 5 min, 10 min, 15 min, 20 min, 25 min, 30 min, 60 min, 90 min, 120 min, infinity}

Agreement:

The validity timer for UL synchronization is started/restarted with configured timer validity duration at the epoch time of the assistance information (i.e. serving satellite ephemeris data).

* FFS: Precise definition of epoch time taking into account SIB repetitions

Agreement:

For sporadic short transmission, UE in RRC\_CONNECTED should go back to idle mode and re-acquire a GNSS position fix if GNSS becomes outdated.

**2. Actions:**

**To RAN2 group:**

**ACTION:** RAN1 respectfully asks RAN2 to take the above into account for future work.

**3. Date of Next TSG-RAN WG1 Meetings:**

TSG-RAN WG1 Meeting #107-bis-e 17 – 25 January 2022 Electronic Meeting

TSG RAN WG1 Meeting #108-e                   21st Feb – 3rd Mar, 2022           Electronic Meeting