**3GPP TSG RAN WG1 Meeting #105-e R1-2106265**

**e-meeting, May 19th – 27th, 2021**

**Title: [DRAFT] LS on Positioning Reference Units (PRUs) for enhancing positioning performance.**

**Release:** Rel-17

**Work Item:** NR\_pos\_enh

**Source:** CATT [RAN1]

**To:** RAN2, RAN3

**Cc:** SA2

**Contact Person:**

#### Name: Ren Da

#### E-mail Address: renda@catt.cn

**Attachments:** None

**1. Overall Description:**

RAN1 has started working on Rel-17 WI on NR Positioning Enhancements [1]. During working on the WI, RAN1 has made the following agreement in RAN1#105:

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| Agreement:Send an LS to RAN2/RAN3 (cc SA2), including the following content:* RAN1 has evaluated the use of positioning reference units (PRUs) with known locations for positioning and observes improvements in using PRUs for enhancing the positioning performance. But, RAN1 has not identified specification enhancements needed in RAN1 specifications. RAN1 kindly requests RAN2/RAN3 (cc SA2) to determine if and what specification enhancements are adopted for PRUs for positioning.
* Notes:
	+ The term “positioning reference unit (PRU)” is only used as a terminology in this discussion. PRU does not necessarily mean an introduction of a new network node.
	+ PRU may support, at least, some of the Rel-16 positioning functionalities of UE, if agreed, which is up to RAN2. The positioning functionalities may include, but not limited to, the following:
		1. Provide the positioning measurements (e.g., RSTD, RSRP, Rx-Tx time differences)
		2. Transmit the UL SRS signals for positioning
	+ PRU may be requested by the LMF to provide its own known location coordinate information to the LMF. If the antenna orientation information of the PRU is known, the information may also be requested by the LMF.
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**2. Actions:**

**To RAN2/RAN3:** RAN1 kindly requests RAN2/RAN3 to determine if and what specification enhancements are adopted for the use of PRUs for positioning.

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

TSG-RAN WG1 Meeting #106-e Aug 16 – 27, 2021

**4. References:**

1. RP-210903, Revised WID on NR Positioning Enhancements, Intel Corporation, CATT