**3GPP TSG RAN WG1 Meeting #113 R1-230xxxx**

Incheon, Korea, May 22nd – May 26th, 2023

**Agenda item: 9.17**

**Source: Nokia, Nokia Shanghai Bell**

**Title: Summary on email discussion on** **NR Enhanced Positioning**

**Document for: Discussion and Decision**

# 1 Introduction

This thread will discuss the draft CR to 38.214 for the NR Enhanced Positioning.

First checkpoint for this discussion: **June 7th, UTC 12.00**!

# 2 Discussion – first round

The comments in this section are based on version 0 of the the draft CR available in the **Post RAN1#113 discussion.**

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| Company | Comments | Editor reply/Notes |
| CATT | Comment 1:  **Agreement**  Introduce DL reference carrier phase (DL RSCP) and NR DL reference carrier phase difference (DL RSCPD) as DL carrier phase measurements.   * Note: It is up to RAN4 to decide whether and how to define the requirements for DL RSCP and/or DL RSCPD. No LS needed to RAN4 for this note. * DL RSCP can be reported together with UE Rx – Tx time difference measurement * DL RSCPD can be reported together with RSTD measurement * …   Based on above agreement, we need to switch RSCPD and RSCP in the following paragraph:  *In 5.1.6.5 PRS reception procedure*  *….*  *For DL UE positioning measurement reporting in higher layer parameter NR-DL-TDOA-SignalMeasurementInformation,* the UE may be configured to report the DL Reference Signal Carrier Phase Difference (RSCPD) [7, TS 38.215] measurement along with the DL RSTD. When the UE reports RSCPD measurements the reference is the same as the one configured, or reported, for the RSTD measurements. For DL UE positioning measurement reporting in higher layer parameter *NR-Multi-RTT-SignalMeasurementInformation* the UE may be configured to report the DL Reference Signal Carrier Phase (RSCP) measurement [7, TS 38,215] along with the UE Rx-Tx time difference.  Comment 2:  **Agreement**  If a UE reports RSCPD measurements together with RSTD measurements in a measurement report element, the reference TRP for RSCPD is the same as the reference TRP reported for RSTD.   * The target and the reference TRP are in the same PFL   Based on above agreement, suggest making the following change to the reference of the RSCPD:    *In 5.1.6.5 PRS reception procedure*  *….*  *For DL UE positioning measurement reporting in higher layer parameter NR-DL-TDOA-SignalMeasurementInformation,* the UE may be configured to report the DL Reference Signal Carrier Phase (RSCP) [7, TS 38.215] measurement along with the DL RSTD. When the UE reports RSCPD measurements, the reference TRP is the same as the one reported for the RSTD measurements. For DL UE positioning measurement reporting in higher layer parameter *NR-Multi-RTT-SignalMeasurementInformation* the UE may be configured to report the DL Reference Signal Carrier Phase Difference (RSCPD) measurement [7, TS 38,215] along with the UE Rx-Tx time difference. |  |
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