**3GPP TSG RAN WG1 Meeting #104-e R1-210nnnn**

**e-Meeting, January 25th – February 5th, 2021**

**Source: Moderator (CATT)**

**Title: Summary on email discussion [104-e-NR-Pos-04] for R1-2100320**

**Agenda item: 7.2.8**

**Document for:** **Discussion and Decision**

Introduction

This contribution summarizes the discussions and outcomes of email discussion [104-e-NR-Pos-04] triggered by the following Chairman’s decision:

[R1-2100320](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_104-e/Docs/R1-2100320.zip) Draft CR to 36.214 on corrections for Reference Point for eNB Rx – Tx time difference CATT

[104-e-NR-Pos-04] Email discussion/approval for R1-2100320 until Jan-28 – Xiaotao Ren (CATT)

Discussion

Draft CR to 36.214 – Reference Point for eNB Rx-Tx Time Difference Measurement

In draft CR for TS 36.214(R1-2100320) [1], it is proposed to define the reference point for eNB Rx – Tx time difference measurement.

**Background**

RAN4 had discussed the reference point for timing related measurements triggered by RAN1 LS R4-1907905 (R1-1907869[2]) and sent response LS to RAN1(R4-1915801[3]). However, the description of the reference point for eNB Rx – Tx time difference in section 5.2.5 in 36.214 is not matched with the response LS from RAN4(R4-1915801[3]).

**Proposed change**

The following text proposal is prepared to address raised above issue:

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| --- | --- | --- |
| < Unchanged parts are omitted >5.2.5 eNB Rx – Tx time difference  |  |  | | --- | --- | | **Definition** | The eNB Rx – Tx time difference is defined as T eNB-RX –TeNB-TX  Where:  T eNB-RX is the eNB received timing of uplink radio frame #i, defined by the first detected path in time.  The reference point for TeNB-RX shall be: ~~the Rx antenna connector~~  for non-AAS base station [TS 36.104]: the Rx antenna connector,  for OTA AAS base station [TS 37.105]: the Rx antenna,  for Hybrid AAS base station [TS 37.105]: the Rx Transceiver Array Boundary connector.  T eNB-TX is the eNB transmit timing of downlink radio frame #i.  The reference point for TeNB-TX shall be: ~~the Tx antenna connector~~  for non-AAS base station [TS 36.104]: the Tx antenna connector,  for OTA AAS base station [TS 37.105]: the Tx antenna,  for Hybrid AAS base station [TS 37.105]: the Tx Transceiver Array Boundary connector. |  < Unchanged parts are omitted > |

Discussion Round #1

Companies are invited to provide views on the text proposal above:

|  |  |
| --- | --- |
| Company Name | Comments |
| Huawei/HiSilicon | The change should be OK, but the text in TS 36.214 was there since Rel-9 when LTE E-CID was introduced, while AAS BS was introduced in Rel-13.  The questions from our side is regarding the cover page. In particular,   * What should be the proper impacted releases of LTE specification? * What should be the proper WI code, as fixing LTE eNB Rx – Tx time difference is not in the scope of NR\_pos-Core. Shouldn’t TEI-16 be better? * ME box should not be ticked, as there is no impact on UE. |
| vivo | We have a similar question/concern as Huawei mentioned above.  Last time I checked, TS 36.214 is not one of impacted TS for NR\_Pos-Core WI.  It appears that the proposed fix is not for NR\_Pos-Core at all. Therefore, we don’t think it should be discussed here. |
| Qualcomm | We are generally supportive, and we acknowledge the procedural issues described above; we were actually under the impression that this would be discussed in the LTE CR section and not in the NR Pos. No problem with the technical change, just need to make sure procedurally is the correct way of treating this. |
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Conclusion

TBD

Reference

1. R1-2100320, “Draft CR to 36.214 on corrections for Reference Point for eNB Rx – Tx time difference”, CATT.
2. R1-1907869, “LS on Reference Point for Timing Related Measurements”, RAN1.
3. R4-1915801, “Response LS on Reference Point for Timing Related Measurements in FR2”, RAN4.