3GPP TSG RAN WG2 Meeting #117-e R2-220xxxx

**Electronic meeting, 21 Feb- 3 March, 2022**

**Agenda item:** 8.11.1

**Source:** Intel Corporation

**Title:** Report of  [AT117-e][632][POS] Merged CR to 38.305 (Intel)

**Document for:**  Discussion and decision

# Introduction

This is the report of following offline discussion:

* [AT117-e][632][POS] Merged CR to 38.305 (Intel)

      Scope: Merge the endorsed positioning CRs to 38.305.

      Intended outcome: Agreeable CR

      Deadline:  Wednesday 2022-03-02 1000 UTC

# Annex: companies’ point of contact

|  |  |  |
| --- | --- | --- |
| **Company** | **Point of contact** | **Email address** |
| Intel Corporation | Yi Guo | Yi.guo@intel.com |
| Nokia | Mani Thyagarajan | mani.thyagarajan@nokia.com |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Discussion

## Summary

### 3.1.1 RAT dependent positioning

**Additional changes:**

**On demand PRS:**

1 Add a Stage 2 note clarifying the difference between index-based and explicit-based on-demand PRS requests. (based on RAN2 aqgreements)

2 The UE-initiated mechanism is enabled by the UE request triggering a request from the LMF, and the actual PRS changes are requested by the LMF irrespective of whether the procedure is UE- or LMF-initiated. (based on comments received in RAN2#117-e604)

**TEG definition (capture RAN1 agreements):**

**“**

* A “Rx TEG” is associated with one or more measurements obtained from one or multiple received RS resources. The Rx timing error differences between any pair of the measurements belonging to the same Rx TEG are within a certain margin.
* A “Tx TEG” is associated with one or more transmitted RS resources.  The Tx timing error differences between any pair of the RS resources belonging to the same Tx TEG are within a certain margin.
* The “group” means that for a set of multiple measurements or a set of multiple RS resources, if the error difference between any pair within the set is within the margin, the set is intuitively considered as timing error group, and is associated with a TEG ID.
* The definitions of the *Tx/Rx timing delays/errors* and *Rx/Tx/RxTx TEGs* in RAN2’s LS that RAN2 plans on using as a baseline are correct with the following changes.
	+ **UE RxTx ‘timing error group’ (UE RxTx TEG)**: Rx timing errors and Tx timing errors, associated with UE reporting of one or more UE Rx-Tx time difference measurements, which have the 'Rx timing errors+Tx timing errors' differences within a certain margin
	+ **TRP RxTx ‘timing error group’ (TRP RxTx TEG)**: Rx timing errors and Tx timing errors, associated with TRP reporting of one or more gNB Rx-Tx time difference measurements, which have the 'Rx timing errors+Tx timing errors' differences within a certain margin

**”**

**Merged endorsed CR**

* [AT117-e][604][POS] RAT-dependent positioning running CR to 38.305 (Intel)

 Scope: Review and update the CR in R2-2202490.

 Intended outcome: Endorsable CR in R2-2203605

 Deadline: Friday 2022-02-25 1000 UTC

[R2-2203605](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202202-03%20-%20RAN2_117-e%2C%20Online%5CExtracts%5CR2-2203605-Running%2038.305%20v04.docx) Running 38.305 CR for Positioning WI on RAT dependent positioning methods Intel Corporation draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

* Endorsed

### 3.1.2 GNSS integrity

**Merged endorsed CR**

[R2-2203604](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202202-03%20-%20RAN2_117-e%2C%20Online%5CExtracts%5CR2-2203604%20%28Running%20CR%20of%2038_305%20GNSS%20Pos%20Integrity%29.docx) Running CR of 38.305 for GNSS Positioning Integrity InterDigital, Inc. draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

* Endorsed
* [AT117-e][603][POS] Integrity stage 2 CRs (InterDigital)

 Scope: Review and update the following CRs:

* R2-2202861 (integrity introduction to 36.305)
* R2-2202862 (integrity introduction to 38.305)

 Intended outcome: Endorsable CRs

 Deadline: Friday 2022-02-25 1000 UTC

### 3.1.3 A-GNSS enhancements

**Merged endorsed CRs**

[R2-2203611](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202202-03%20-%20RAN2_117-e%2C%20Online%5CExtracts%5C38.305_CR0084r1_%28Rel-17%29_R2-2203611.docx) Introduction of B2a and B3I signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, HiSilicon, Intel Corporation, ZTE Corporation, CBN, vivo, OPPO, Lenovo, MediaTek Inc, Spreadtrum Communications, Xiaomi. CR Rel-17 38.305 16.7.0 0084 1 B NR\_pos\_enh-Core R2-2109485

* Endorsed
* [AT117-e][601][POS] BDS running CRs (CATT)

 Scope: Review the following CRs, collect comments, and update if necessary:

* R2-2202402 (BDS introduction to 37.355)
* R2-2202403 (BDS introduction to 36.305)
* R2-2202404 (BDS introduction to 38.305)

 Intended outcome: Endorsable CRs and report in R2-2203612

 Deadline: Friday 2022-02-25 1000 UTC

[R2-2203615](file:///C%3A%5CUsers%5Cmtk16923%5CDocuments%5C3GPP%20Meetings%5C202202-03%20-%20RAN2_117-e%2C%20Online%5CExtracts%5CR2-2203615%20Draft%20running%20CR%20for%20stage2%20spec%20for%20NAVIC%20in%20R17%20positioning.docx) Draft running CR for stage2 spec for NAVIC in R17 positioning Huawei, HiSilicon draftCR Rel-17 38.305 16.7.0 B NR\_pos\_enh-Core

* Endorsed
* [AT117-e][602][POS] NavIC running CRs (Ericsson/Huawei)

 Scope: Review the following CRs, collect comments, and update if necessary:

* R2-2202607 (NavIC introduction to 38.305)
* R2-2203710 (NavIC introduction to 38.331)

 Intended outcome: Endorsable CRs and report in R2-2203608

 Deadline: Friday 2022-02-25 1000 UTC

## 3.2 Comments on the merged CR

**Discussion point : Companies are invited to provide view on the merged version?**

|  |  |  |  |
| --- | --- | --- | --- |
| **Company’s name** | **Section** | **Identified issues** | **Change suggestion** |
| Nokia | 3.1 | Minor editorial issue in **Rx Timing Error** definition | Remove “(defined below)” in the first sentence. |
| Nokia | 7.x.1 | The last sentence starts as a sentence specific to UE-initiated case but ends in making a statement for both UE-initiated and LMF-initiated cases. | Adopt one of the following suggested sentences to replace the last sentence in 7.x.1:**Option 1**: “The UE-initiated mechanism is enabled by the UE request triggering a request from the LMF, and the actual PRS changes are requested by the LMF”**Option 2**: “The actual PRS changes are requested by the LMF irrespective of whether the procedure is UE- or LMF-initiated” |
| Nokia | 7.y.2 | Editorial issue in step 1. Similar issue in step 1 in section 7.z.2 | MEASUREMENT PRECONFIGURATION REQUIRE should be MEASUREMENT PRECONFIGURATION REQUIRED |
| Nokia | 7.x.2 | NOTE 2 needs alignment of terminology | In the first sentence change From: “the UE is allowed to request On-Demand PRS parameters based on preconfigured PRS configuration ID (index-based request)”To: “the UE is allowed to request On-Demand PRS parameters based on pre-defined PRS configuration ID (index-based request)” |

# Summary report and proposals