**3GPP TSG-RAN WG2 Meeting #116bis-e R2-220xxxx**

**Electronic Meeting, January 17 – 25, 2022**

**Agenda item:** 8.11.1

**Source:** InterDigital Inc.

**Title:** Email discussion report on [Post116bis-e][627][POS] 36.305/38.305 integrity running CRs (InterDigital)

**Document for:**  Discussion

# 1. Introduction

This document summarizes the following email discussion:

* [Post116bis-e][627][POS] 36.305/38.305 integrity running CRs (InterDigital)

      Scope: Check and endorse the running CRs considering decisions of RAN2#116bis-e.

      Intended outcome: Endorsed CRs

      Deadline:  Friday 2022-01-28 0800 UTC

The draft running CRs are attached with this email discussion.

Please provide the contact information in the following Table:

|  |  |  |
| --- | --- | --- |
| **Company** | **Point of contact** | **Email address** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 2. Discussion

The scope of this email discussion is to discuss the Stage 2 description included in the running CRs for TS 38.305 and TS 36.305, in [1] and [2], respectively.

The previously submitted running CRs (prior to start of RAN2#116bis-e meeting) are [3] and [4].

## 2.1 Discussion

The text proposal provided in the running CRs are based on the descriptions discussed during [AT116bis-e][611][POS] discussions [3][4] and agreed during RAN2#116bis-e meeting [5].

Given the agreements in [5] and the open issues/FFS listed in [AT116bis-e][611][POS] GNSS integrity - Extended Discussion (Stage 3) [4], the following parameters related to Integrity alerts, and orbit and clock integrity bounds are excluded from Table 8.1.2.1b-1 (Mapping of Integrity Parameters) in the running CRs:

* Integrity Alerts
  + Service DNU, Constellation DNU, Satellite Vehicle DNU
* Integrity Bounds (Mean)
  + Mean Orbit Clock Residual Error Shape Vector, Mean Orbit Clock Residual Rate Error Shape Vector, Mean Orbit Clock Residual Error Scale Factor, Mean Orbit Clock Residual Rate Error Scale Factor
* Integrity Bounds (StdDev)
  + Covariance Orbit Clock Residual Error Shape Matrix, Covariance Orbit Clock Residual Rate Error Shape Matrix, Covariance Orbit Clock Residual Error Scale Factor, Covariance Orbit Clock Residual Rate Error Scale Factor

The open issues related to the above parameters, provided in [4], are as follows:

* **Proposal 3 (Open Issue): RAN2 to discuss whether to modify the existing GNSS-RealTimeIntegrity IE or create a new IE to accommodate the Alerts for the satellite/constellation specific DNUs under *GNSS-GenericAssistData*.**
  + **Discuss whether a Constellation DNU and per-signal DNU should be included in addition to the SV DNU.**
* **Proposal 5 (Open Issue): RAN2 to discuss whether or not the cross-covariance should be included for the Orbit and Clock integrity bounds and whether these bounds should be included as a new IE or within the existing SSR Orbit and Clock IEs.**

Q1: Please provide your comments on the CRs, as well as your suggested changes and corresponding clause/section where the comments/changes may apply.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company** | **Comments** | **Suggested Changes** | **Clause/Section** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# 3 Summary

The following is the summary containing the companies and rapporteur’s views derived from the discussion above:

# 4 Reference

1. R2-220xxxx, Running CR of 38.305 GNSS Positioning Integrity (InterDigital, Inc), Jan 2022
2. R2-220xxxx, Running CR of 36.305 GNSS Positioning Integrity (InterDigital, Inc), Jan 2022
3. R2-2201390, Running CR of 36.305 for GNSS Positioning Integrity (InterDigital, Inc), Jan 2022
4. R2-2201391 Running CR of 38.305 for GNSS Positioning Integrity (InterDigital, Inc), Jan 2022
5. R2-2201761, Report of [AT116bis-e][611][POS] GNSS integrity (Swift)
6. R2-2201765, [AT116bis-e][611][POS] GNSS integrity - Extended Discussion (Stage 3) (Swift)
7. RAN2 chairman notes RAN2#116bis-e, January 2022