**3GPP TSG RAN WG2 Meeting #116-e R2-21xxxxx**

**Electronic meeting, 1th November - 12th November 2021**

**Source: ESA**

**Title: Email discussion on LS to RTCM for GNSS integrity**

**Agenda Item: 8.11.5**

**Document for: Discussion and Decision**

1. Introduction

During the email discussion on assistance data it was mentioned the need to continue interaction with RTCM and clarify any remaining open points on GNSS integrity.

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| * **[AT116-e][611][POS] LS to RTCM (ESA)**         Scope: Discuss coordination with RTCM, taking into account the way-forward proposals in R2-2109807 and related parts of R2-2110181:   * Conclude on the intention to specify GNSS integrity signalling in Rel-17 * Determine what information we intend to share with RTCM * Draft an LS reply (TP to be endorsed later)         Intended outcome: Report in R2-2111361 and approvable LS in R2-2111362        Deadline:  Friday 2021-11-05 1000 UTC (comments), Monday 2021-11-08 1100 UTC (output available) |

This contribution puts forward several considerations for a potential LS to RTCM.

1. Context

A reply LS from RTCM has been sent to RAN2 and its summary is included in R2-2109807. In a nutshell the information received could help clarify the scope and timeline used by RTCM SC134 for its work on GNSS integrity but not how exchange of information with RAN2 could be put in place.

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| Q 1: Do RAN2 delegates agree to include the first paragraph proposed in the tentative draft LS? This is to address some questions received from RTCM SC134. | | |
| Company | Agree/Disagree | Comments if any |
| ESA | Yes |  |

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| Q 2: Do RAN2 delegates agree that we include in the LS a proposal for a 1 day online informal workshop with RTCM SC134 ? | | |
| Company | Agree/Disagree | Comments if any |
| ESA | Yes | In absence of a integrity standard from RTCM (which is expected to become available only after the end of our WI), a full day workshop could allow us to better understand the direction RTCM SC134 is going towards. Also, it can help us decide if it´s best to keep GNSS integrity in Rel17 as simple as possible and defer more complex features for Release 18 when the RTCM integrity standard is supposed to be available. Lastly, Such an event would allow us to ask questions and receive answers in real-time. |

Depending whether we will have a workshop some specific questions may need to be included in the LS

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| Q 3: Do RAN2 delegates agree that we include in LS question on overbounding errors: mean + sigma vs sigma only? | | |
| Company | Agree/Disagree | Comments if any |
| ESA | Yes but only if RAN2 decides not to have a workshop with RTCM SC134 | We could understand what is the approach in RTCM. |

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| Q 4: Do RAN2 delegates agree to ask RTCM SC134 to invite us to attend its next meeting so we build at RAN2 level an understanding about the working process and scope of this RTCM Special Committee? | | |
| Company | Agree/Disagree | Comments if any |
| ESA | Yes |  |

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| Q 5: If relevant, please provide any additional items you consider needs be included in the LS | |
| Company | Additional items |
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1. GNSS Integrity – tentative draft LS to RTCM

Title: LS on GNSS integrity assistance data

Release: Release 17

Work Item: NR\_pos\_enh

Source: RAN2

To: RTCM SC134

Cc: RTCM

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

Attachments: TBC (pending companies agreement)

**1. Overall Description:**

3GPP RAN2 thanks RTCM for its liaison note sent on 3rd of September in reply to R2-2106596. First, we confirm that automotive, rail, and industrial IoT are the only use cases addressed in Release 17 of New Radio. Second, the scope of GNSS integrity work in 3GPP does not preclude any GNSS method at this moment and it is based on contributions. Lastly, for Release 17 of New Radio it was decided to focus only on GNSS integrity therefore 5G PRS and GNSS integration is not in scope of current release.

Through its LS RTCM clarified the scope and timeline adopted by SC134 for its first release of an integrity standard. At the moment, the work on GNSS integrity in RAN2 is expected to last until Q1 2022 and this is before RTCM target release date for the integrity standard. This time misalignments represents a challenge to our common goal of aligning views, at least for the near future and several points needs further clarifications.

RAN2 would like to learn from RTCM (Radio Technical Commission for Maritime Services):

* **Question 1 to X: Pending on agreements**

**Actions:**

**To RTCM SC134.**

**ACTION:** RAN2 respectfully asks RTCM SC134 to provide feedback on the above questions.

**3. Date of Next RAN2 Meetings:**

RAN2#116-bis-e 17th – 25th January 2022 Electronic meeting

RAN2#117-e 21st February – 3rd March 2022 Electronic meeting