3GPP TSG-RAN WG2 #118-e R2-22xxxxx

Online Meeting, May 9th – May 20th, 2022

Agenda Item: 6.21.2

Source: Ericsson

Title: [AT118-e][628][POS] NMEA GGA string for HA-GNSS reporting

(Ericsson)

Document for: Discussion, Decision

# Introduction

This email discussion addresses the following contribution about a correction to add information corresponding to the NMEA GGA string to HA-GNSS reporting.

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| [R2-2206329](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Inbox/R2-2206329.zip) (revision of R2-2205845) | Remaining details for high-precision GNSS reporting | ESA, Ericsson, Deutsche Telecom, T-Mobile USA, Swift Navigation, Hexagon, MediaTek Inc., u-blox |

* [AT118-e][628][TEI17] NMEA GGA string for HA-GNSS reporting (Ericsson)

      Scope: Discuss the contribution in R2-2205845 and determine if a CR is agreeable.

      Intended outcome: Agreed CR (without CB if possible)

      Deadline:  Tuesday 2022-05-17 1800 UTC

The email discussion is in two phases, where the first phase ends ***Friday 2022-05-13 1800 UTC.***

# Contact Information

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| --- | --- |
| Company | Contact: Name (E-mail) |
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# Discussion

The 3GPP-based high precision GNSS has been leveraged by the RTCM work when introducing support for OSR in Rel 15. RTCM distribution is based on NTRIP signalling, where NMEA GGA strings are used to provide device feedback with position estimate and quality and positioning details (no of satellites used, dilution of precision, quality indicator for position fix and age of assistance data). In 3GPP, location information feedback in terms of position estimates and quality is handled by the LPP *CommonIEsProvideLocationInformation* IE, with the possibility to add specific information per positioning method. For GNSS, this is handled via the *GNSS-LocationInformation* IE which optionally for capable devices could be hosting the positioning details. The contribution [1] [R2-2206329](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Inbox/R2-2206329.zip) suggests that the remaining positioning information from the NMEA GGA string is added to the *GNSS-LocationInformation* IE.

Question 1: The contribution [1] is signed and co-signed by ESA, Ericsson, Deutsche Telecom, T-Mobile USA, Swift Navigation, Hexagon, MediaTek Inc., u-blox. In addition to these companies, do you support the addition of the remaining positioning information from the NMEA GGA string (no of satellites used, dilution of precision, quality indicator for position fix and age of assistance data) to the LPP *GNSS-LocationInformation* IE?

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Intel | Yes |  |
| Huawei, HiSilicon | Yes |  |
| ESA | Yes |  |
| Apple | Yes |  |
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Question 2: Any technical comments to the text proposal to TR 37.355 in R2-2206329?

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| Company | Comments |
| Intel | Editorial issues:  nrofUsedSatellites-r17 should be nrOfUsedSatellites-r17  ***ha-GNSS-MetricsReq***  This field, if present, indicates that any location estimate provided by the target device should be reported with GNSS positioning metrics---- full stop is missing.  ***ha-gnss-MetricsSupport***  This field specifies that high accuracy GNSS positioning metrics are supported by the target device ---- full stop is missing. |
| Huawei, HiSilicon | Since this is a TEI17 CR, there should be a tag for it attached to the title of the CR according to previous agreement in RANP. |
| Apple | Some editorials:   1. The acronym “HA” is used, e.g. in “This field specifies the age of the used assistance data for HA GNSS, scale factor 1 seconds”. Is the acronym defined somewhere? 2. Suggest adding “high accuracy” (or “HA”) to “This field, if present, indicates that any location estimate provided by the target device should be reported with GNSS positioning metrics”. |
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# Conclusion

# References

[1] [R2-2206329](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Inbox/R2-2206329.zip) Remaining details for high-precision GNSS reporting, ESA, Ericsson, Deutsche Telecom, T-Mobile USA, Swift Navigation, Hexagon, MediaTek Inc., u-blox