



Radio Technical Commission for Maritime Services

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RTCM Special Committee 104 Differential GNSS Service

Liaison Note to IALA – Update of RTCM 10402.3 Standard

The RTCM Special Committee 104 has carefully considered the IALA Liaison note IALA22-201 (C76-12.1.1) with the attached annexes.

The committee has also presented their view on the future of this standard to the Radionavigation Services Working Group at IALA ENG13, ENG 15 and ENG17. Based on the discussions in IALA and in the RTCM committee, RTCM would like to propose a new approach to the update of the standard.

RTCM has maintained the RTCM 10402.X standard to support the IALA DGNSS radiobeacons and the limited bandwidth available from these devices. All other users were recommended to move to the RTCM 10403.X standard. A draft RTCM 10402.4 has already been discussed for more than 15 years without being approved. During this period, several new GNSS have become available with multiple frequencies from each GNSS. The current IALA DGNSS radiobeacon stations have limited capacity and are only capable of supporting single frequency GPS and GLONASS only. They do not have capacity to support multiple systems and multiple frequencies.

Rather than updating the RTCM 10402.X standard with new generic multi-constellation, multi-frequency messages that we believe will not be used, RTCM proposes to keep the existing RTCM 10402.3 standard to support legacy users. This standard could be amended to add support for R-mode as proposed in the IALA Liaison note.

RTCM agrees that the radiobeacon band is valuable to maritime safety and that it is important to maintain this application.

Some alternative evolutions of the application might be:

1. Add support for R-mode while maintaining the existing legacy service
2. Introduce an Integrity Support Message (ISM) that supports several GNSS/frequencies. This could co-exist with the legacy service.
3. A new signal format/standard

The RTCM Special Committee 104 is in favor of and would like a collaboration with the IALA ENG Committee to further discuss these matters.