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Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **X** ENG **□**  PAP **X** Input

**□** DTEC **□** VTS **□** Information

Agenda item [[2]](#footnote-3) 3.1

Technical Domain / Task Number 2 …………………………………

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Proposal for the integration of PNT related S-200 series product specifications

# Summary

IALA, as a domain owner in the IHO Geospatial Information (GI) Registry for Aton and VTS domains, has developed the S-200 series product specifications. In particular, IALA has developed test versions of product specifications for the PNT domain, including S-240, S-245, S-246, and S-247. Among the PNT-related S-200 series product specifications, S-240 pertains to the almanac data of DGNSS station, while S-246 and S-247 relate to the almanac data of eLoran station. These product specifications are similar in terms of their data model. These product specifications share similar data model structures. As there is a need for integration in terms of managing and utilizing the S-200 series product specifications, this paper proposes a method for integrating the PNT-related S-200 series product specifications.

## Purpose of the document

This document proposes a strategy for the integration of the PNT related S-200 series product specifications.

## Related documents

* S-100 IHO Universal Hydrographic Data Model (Edition 5.2.0, June 2024)
* S-97 IHO Guidelines for Creating S-100 Product Specifications (Edition 1.1.0, June 2020)
* S-240 DGNSS Station Almanac
* S-246 eLoran Transmitting Station Almanac
* S-247 Differential eLoran Reference Station Almanac

# Background

The IALA ENG Committee developed the test versions of the S-200 series product specifications for marine information exchange in the PNT domain. Some projects have already produced and tested station almanac data according to the S-240, S-246, and S-247 product specifications.

# Discussion

## Need for integration of PNT related S-200 series product specifications for station almanac

The IALA ENG Committee, responsible for the development and collaboration on technical standards related to PNT, has developed the S-200 series product specifications to manage and exchange information on PNT related station almanac. The relevant product specifications are as follows:

* S-240 DGNSS Station Almanac: This PS pertains to the DGNSS station almanac data, defining the station's name, location, message types, and status information.
* S-246 eLoran Transmitting Station Almanac: This PS pertains to the eLoran station almanac data, including the station's name, location, key specifications, and features of the eLoran stations.
* S-247 Differential eLoran Reference Station Almanac: This standard pertains to the differential eLoran reference station almanac data, including the station's name, location, key specifications, and features.

S-200 series product specifications aim to efficiently manage and exchange information needed in the maritime domain. IALA's representative product specification, S-201, encompasses various types of maritime information within a single standard. Although independent identifiers have been used for PNT-related station information, there is significant overlap in content and characteristics, suggesting that integration and unified management are feasible.

The need for integrating the PNT-related S-200 series product specifications can be outlined as follows:

* S-245, S-246, and S-247 are vector data regarding the station almanac data, with high similarities in content.
* The S-200 series product specifications for PNT-related stations have test versions, but revisions to operational versions are needed based on user feedback and test bed results.
* There is a lack of experts on the S-200 series within the IALA Secretariat and ENG Committee, making it difficult to maintain individual product standards.
* Integrating the PNT-related station almanac product specifications would increase usability and allow for quicker updates based on user requirements.
* By analyzing the needs and current status of PNT-related stations, a more advanced data model reflecting the latest technological developments could be created.
* There is a need to collect global data on PNT-related stations and manage it through a World Wide Marine Aton Portal.

## Future plans

The ENG Committee is proposing the integration of the S-200 series product specifications for PNT-related station almanac. Based on the decisions made by the ENG Committee, the integration of these standards will proceed according to the following schedule:

* ENG20: Discussion on the integration of S-200 series product standards for PNT station almanac
* ENG21: Requirements analysis and basic design for the unified data model for PNT station almanac
* ENG22: Development and review of the integrated PNT station data model.
* ENG23: Development and review of the integrated S-200 series product specifications for PNT station
* ENG24: Creation and verification of PNT Station S-200 data
* ENG25: Development and approval of the operational version of the PNT Station S-200

# Action requested of the Committee

The Committee is requested to consider this input paper, and take actions as appropriate.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-2)
2. Leave open if uncertain [↑](#footnote-ref-3)