

TRANSITION COUNCIL
3rd session



10-13 December 2024
Headquarters, France

10 – TECHNICAL ACTIVITIES

10.8 – Product specifications and technical services

10.8.1 – Committee work on S-200 PS

Note by the Secretariat

1. INTRODUCTION

Throughout the second half of 2024, the committees have been progressing in the development of the S-200 Product Specifications (PS) within their relevant areas. This document aims to provide the Council with a comprehensive update on the S-200 PS series, reflecting the accomplishments and efforts of the committees.

2. SUMMARY OF THE COMMITTEE WORKS

IALA, as the recognized Domain Control Body for AtoN, AIS, and VTS, continues to lead the development of PS that enhance marine navigation and operational safety.

The ARM Committee has taken a leading role in drafting an S-200 Implementation Plan, building on the S-100 Implementation Strategy and Roadmap and involving extensive coordination with other IALA committees.

The following table provides a detailed summary of each committee's active PS development work:

Domain	PS	Title	Developing Committee	Edition
AtoN	S-201	AtoN information	ARM	1.1.0
	S-125	Marine Aids to Navigation	IHO NIPWG (ARM)	0.0.3
Positioning	S-240	DGNSS almanac	ENG	1.2.0
	S-245	eLoran ASF	ENG	1.0.0
	S-246	eLoran almanac	ENG	1.0.0
	S-247	eLoran reference stations	ENG	1.0.0
Comms.	S-230	Application Specific Message (ASM)	DTEC	Planned
VTS	S-210	Inter VTS exchange	VTS	Started
	S-211	Port Call Message	IPCDMC	1.0.0
	S-212	VTS digital information service	VTS	0.6.4

3. S-201 AIDS TO NAVIGATION INFORMATION

The ARM Committee, working with the S-201 Task Group, reviewed a comprehensive analysis report from the Canadian Coast Guard (CCG) on the S-201 data model, Edition 1.1. A primary focus of this review was to ensure that the S-201 data model aligns with established standards, particularly the S-101 and S-57, while prioritizing functionality for AtoN stakeholders. To improve compatibility, it was

decided to adapt the S-201 model to better integrate with S-101 for primary functions, with secondary compatibility for S-57. The S-201 TG identified specific feature types, such as All-around, Sectored, Fog detector, and Air obstruction lights, and retained the Topmark as a feature type, making the model highly relevant for navigational aids. The revised S-201 model will undergo testing through the S-200 test bed following ARM19, with results disseminated to stakeholders.

4. S-230 APPLICATION SPECIFIC MESSAGE (ASM)

During discussions within the DTEC Committee, it was determined that the S-230 Application Specific Messages (ASM) PS does not align well with the broader scope of IALA's data modeling strategy. Specifically, data modeled under ASM could be better stored and transferred using other PS, such as S-124, which offers greater integration and alignment with IALA's objectives. As such, the DTEC Committee has recommended the removal of S-230 from the official list of IALA PS. To formalize this decision, the Secretariat will notify the IHO and update all relevant IALA documentation to reflect this change.

5. S-210 INTER VTS EXCHANGE AND S-212 VTS DIGITAL INFORMATION SERVICE AND ITS RELEVANT TECHNICAL SERVICE DOCUMENTS

Progress on the S-210 Inter VTS exchange and S-212 VTS digital information service remains ongoing within the VTS Committee. At VTS56, committee members reviewed an updated version of the traffic clearance service specification and Service Design, incorporating input from China MSA. Resolutions reached during these discussions allowed for the creation of new version updates—1.4 for the service specification and 1.1 for the Service Design—both of which are intended as output papers.

Development on route exchange service design will continue at VTS57. Additionally, the Secretariat is set to liaise with the IHO Secretariat regarding the GI Concept Registry and explore establishing a GitHub repository for XML schemes related to the S-200 series.

6. S-240 DGNSS ALMANAC

The ENG Committee has continued work on the S-240 DGNSS Almanac, focusing on document version updates to enhance standardization and usability. Recently, three critical documents were revised: the S-240 Product Specification (version 1.2), the GML Schema, and the Feature Catalogue (in XML format). These documents will soon be accessible on the IALA website, offering stakeholders up-to-date resources for implementing and referencing the DGNSS Almanac PS.

7. S-200 TEST AND VALIDATION TOOL

To support the effective implementation and validation of the S-200 Product Specifications, IALA has developed the S-200 Test & Validation Tool, a resource that serves as a robust platform for testing, verifying, and refining S-200 series standards. Initially launched as the S-200 Test Bed, this tool has evolved through Phase 2 of development to meet the expanded needs of the VTS Committee and other IALA members who require a reliable framework for validating S-200 series PS.

The tool is equipped to handle a range of functionalities essential to the testing process. It allows users to input sample data according to Product Specification and upload multiple AtoN data entries through an intuitive Excel template. This capability mirrors the typical list of AtoNs, making it accessible for practitioners while ensuring the tool aligns with real-world applications. Key features include the validation check of uploaded data for errors or inconsistencies, along with a download function for the validated test data, which members can use in practical testing scenarios.

The Test & Validation Tool was specifically designed to support the validation of critical S-200 PS, including S-201 (Aids to Navigation data model), enabling users to conduct rigorous testing that aligns with IALA's quality standards. During the 2nd IALA/IHO joint workshop, it was noted that the tool's previous name, "S-200 Test Bed," often caused confusion with the S-100 Test Bed. In response, IALA

rebranded it as the S-200 Test & Validation Tool to more clearly differentiate it and emphasize its role in the validation process.

8. IALA S-200 TRAINING

In February 2024, IALA WWA conducted a pilot training course on the S-200 series Product Specifications, held at IALA headquarters. This three-day course marked a foundational step in establishing a regular curriculum for those involved in the development, deployment, and operational use of S-200 series PS. The pilot course attracted participants from diverse nations, including the UK, Ireland, France, Denmark, Finland, Norway, Sweden, and Japan, representing professionals across the AtoN and VTS domains.

The course content was designed to introduce the core concepts and practical applications of the S-200 series PS, with a particular emphasis on data model development, feature cataloguing, and symbol creation. Participants were given hands-on experience with IHO's latest S-100 tools to practice creating feature catalogues, GML Schemas, and SVG symbols. Through practical exercises, trainees engaged in drafting a sample data model, building familiarity with the S-200 standards that will be integral to their future work.

Feedback gathered from the pilot course underscored two key areas for improvement: the need for more specialized courses tailored to the unique requirements of AtoN and VTS, and the necessity for an introductory course for those with limited experience in computer languages. As a result, IALA has planned an expanded S-200 training course, scheduled for 3-7 March 2025 in Busan, Korea, which will provide dedicated sessions on AtoN data, focusing on S-201, S-125, and S-124. This course will not only deepen participants' understanding of the S-200 PS framework but will also offer insights into the broader implications of these standards on daily operations in the AtoN sector.

An important feature of the upcoming 2025 training is a final-day sea trial. This hands-on trial will allow participants to observe the end-to-end process of real-world data exchange based on the S-200 standards. By witnessing the practical application of AtoN data exchange, participants will gain insights into the operational impact of S-200 PS, from the generation of AtoN changes in compliance with IALA guidelines to the delivery of updated information to end users. During the sea trial, S-125 AtoN data changes will be generated from an AtoN information system designed to be compatible with the S-201 model, thereby demonstrating the alignment of S-200 PS with IALA's maritime service specifications and IEC SECOM standards.

This course represents a opportunity for members to ensure their staff are equipped with the latest knowledge and practical skills needed to implement S-200 PS effectively.

9. 2ND JOINT IHO IALA WORKSHOP

Building on the success of the first joint IHO/IALA workshop in 2022, the 2nd Joint IHO/IALA Workshop on S-100/200 Development and Portrayal was held from 9-13 September 2024 at the U.S. Naval Academy in Annapolis, USA. With 84 participants from 19 countries, this event showcased the commitment of both organizations to aligning global practices for navigational safety and standardization.

The workshop addressed operational, technical, and training aspects of the S-100/200 series. A major outcome was clarifying the roles of S-101 for navigational charts, S-124 for time-sensitive warnings, and S-125 for AtoN updates, ensuring streamlined information for mariners. Technically, the workshop recommended steps to strengthen data provision standards and identity management for Maritime Connectivity Platform (MCP). Additionally, IHO and IALA were encouraged to improve communications around S-100 updates, easing the transition for users.

In training, the workshop highlighted the need for multilingual and multimedia instructional materials tailored to various user levels, from technical developers to executive staff. This approach will address knowledge gaps and promote widespread adoption of S-100/200 standards.

Overall, the workshop demonstrated significant progress in aligning international standards, with plans for a follow-up event to maintain momentum. The Council's continued support for these collaborative workshops is vital to achieving consistent, global standards in maritime navigation, ensuring safe and efficient data delivery for the maritime community.

10. THE COUNCIL IS REQUESTED TO

NOTE the information provided in this document.