

3rd Joint IHO-IALA Workshop on S-100/S-200 Development and Portrayal Istanbul, Türkiye, 1 – 4 September 2026

Contribution to the IHO Work Programme 2026

WP 1.1.6 Maintain relationship with the IALA

High level summary:

- The 3rd Joint IHO-IALA Workshop on S-100/S-200 Development and Portrayal was held in Istanbul, Türkiye, from 1 to 4 September 2026, co-hosted by IALA, IHO, and the Directorate General of Coastal Safety of Türkiye, with more than 70 participants from hydrographic offices, Aids to Navigation authorities, maritime administrations, international organizations, industry, and academia.
- The workshop marked a shift from conceptual discussion toward implementation, interoperability, and operational experience, reflecting the approaching 2029 carriage requirement for S-100 based ECDIS, and covered standards alignment, secure data exchange, data quality/validation, and practical implementation lessons.
- The Workshop addressed operational, technical, and training priorities, including the need for annual IHO-IALA collaboration, resolution of S-101/S-201/S-125 alignment issues, extension of the S-100 framework to streaming and service-based data exchange, unresolved governance around Maritime Connectivity Platform (MCP) trust domains, and stronger emphasis on structured S-100/S-200 training.

Details:

The workshop was jointly organized by IHO, IALA and the Directorate General of Coastal Safety of Türkiye in Istanbul from 1–4 September 2026, bringing together over 70 participants representing hydrographic offices, Marine Aids to Navigation authorities, maritime administrations, international organizations, industry, and academia. The programme featured presentations on the alignment of international standards, operational implementation, secure data exchange, data quality and validation, and practical use cases and lessons learned.

In opening remarks, the IHO Assistant Director Yong BAEK noted that this was the third workshop in the series, following the inaugural event in Norway four years earlier, and observed that discussions have progressed from concepts and possibilities toward implementation, interoperability, and operational experience. The S-100 framework was described as an opportunity to move beyond traditional electronic charting toward an integrated digital maritime environment, with the S-200 domain—covering Aids to Navigation, Vessel Traffic Services, and positioning/communication systems—bringing essential operational information into the wider S-100 ecosystem.



The workshop was organized in two parts. The first part consisted of presentations by IHO and IALA on their current progress with S-100 and S-200, covering the latest status of technical development and outstanding issues for consideration. HSSC Vice-Chair Nathalie Leidinger opened this session with an introduction to IHO and an update on S-100 progress. NIPWG Chair Stefan Engstrom then presented

details on data modelling, maintenance, and production workflows linking IALA S-201 to IHO S-101. IHO Secretariat representative Yong Baek followed with a presentation on the S-100 infrastructure and ecosystem, covering the quality assurance process for machine-readable IHO standards, the IHO Infrastructure Centre, and the application process for the IHO Security Scheme and SECOM service testing.

In the second part, participants split into three Working Groups to discuss these issues in more detail.

The groups were open to all participants and were co-chaired as follows:

- **Working Group 1 – Operational:** Dave Lewald and Selay Turan
- **Working Group 2 – Technical:** Alison Contreras and Sewoong Oh
- **Working Group 3 – Training:** Heather Gilbert and Ulla Møller
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Figure 1 Working Group session

Working Group 1 (Operational) focused on how the standards work in practice. The group reviewed follow-up actions from previous workshops, checked what progress had been made, and looked for any remaining gaps in how Aids to Navigation and VTS information is displayed (portrayed), including complex cases like sector lights.

The group concluded the following key ways forward:

- All Product Specifications need clear validation procedures. This includes using data confidence markers such as CATZOC, and checking data quality at the point where it is manually entered.
- Product specifications also need regular maintenance, and member states should follow IHO C-165 — currently under development by S-100WG — and the IALA Guidelines for best practice.
- To avoid confusion between S-124 and S-125, the IALA AtoN MRN should be used the same way across all domains.
- S-201 and S-125 still do not line up properly with S-101, which needs to be corrected — but the S-101 Product Specification is already mature and should not be reopened before 2030. Each country will need to work out, at the national level, how AtoN Authorities and Hydrographic Offices exchange S-201 data with each other.

Working Group 2 (Technical) looked at the underlying technical issues. The group reviewed lessons learned from IHO and IALA test beds for S-124, S-125, and S-201, and followed up on action item HSSC 18/054 concerning technical service specifications. A key topic was how IHO and IALA should cooperate on SECOM and the Maritime Connectivity Platform (MCP) so that the two organizations' technical frameworks stay compatible.

The group identified that the S-100 framework is now being used beyond its original ENC/ECDIS purpose, but it does not yet properly support streaming, real-time, and message-based services like S-210, S-212, and S-421. IHO and IALA should discuss this further. The IALA VTS Committee will prepare an Information Paper for the IHO S-100 WG meeting in 2027.

The IHO's and IALA's Maritime Connectivity Platform (MCP) systems relation to each other is also still unresolved. The main challenges here are about governance, certificate trust, mutual recognition, revocation, and liability, rather than technology itself; IALA is currently running a feasibility study on the MCP concept.

Working Group 3 (Training) concentrated on education and skills. The group reviewed IALA's S-200 courses and recorded their observations. They identified gaps in the S-100 starter course for both external users (such as mariners) and internal users (hydrographic offices and AtoN authorities), to help prepare input for an update to IMO Model Course 7.03.

The group recommended that future joint workshops should put more focus on training, and the training working group should include representatives from IHO, IALA, and industry. Many participants are not aware that basic S-100/S-200 courses already exist, so clearer information is needed on what these courses cover, why they matter, and where to find them. It was also seen as important to make sure senior leaders across all stakeholder organizations have the information they need to support the move to S-100/S-200.

Next steps:

Given the ongoing implementation and operational phase of S-100 and S-200, participants recommended increasing collaboration between IHO, IALA, and their members, potentially through an annual joint event. Future IHO/IALA meetings will consider SOLAS carriage requirements for nautical publications ahead of the next scheduled amendment cycle of S-100 ECDIS.



Figure 2 Group photo of IHO-IALA S-100/S-200 Workshop