IHO SECOM Service Test
Seoul, Rep. of Korea, 13 – 14 July 2026

Contribution to the IHO Work Programme 2026	
Goal 1	Maintain IHO S100 infrastructure systems

High level summary:

- The IHO SECOM Service Test was conducted over two days in Seoul, Republic of Korea, hosted by the Korea Hydrographic and Oceanographic Association (KHRA), with participation from IHO, IEC-TC80, Korea Hydrographic Office and associated local stakeholders.
- The test trialed the IHO IP-based service infrastructure for SECOM support ahead of the 2029 carriage requirement for S-100 ECDIS, integrating the Service Register (SR) / Identity Register (IR) with the IHO Data Protection Scheme and associated IHO systems (Produce Code Register, INToGIS, P-5 Yearbook)
- Three test scenarios covering service discovery, S-124/128 data requests, and real-time data push to a vessel were successfully executed, confirming the feasibility of an integrated IHO SECOM-based service chain and marking the first operational test case of IHO's IP-based data distribution model.

Details:

The IHO SECOM Service Test was held on 13 - 14 July 2026 in Seoul, at the Korea Hydrography and Research Association (KHRA). The IHO was represented by Mr. Yong Baek Assistant Director Digital Technology, alongside IEC-TC80 WG Convenor Prop. Kangil Lee, KHOA, KHRA, KRISO, ECDIS OEM, and SECOM terminal provider.

The purpose of the test was to identify potential gaps and areas for improvement in the IHO IP-based service supporting SECOM, prior to its official operational launch, with reference to IMO MSC.530(106) Rev.1, ahead of the 2029 carriage requirement for S-100 ECDIS. The test reviewed the IHO's prototype systems and processes for the IP-based service and exercised them through defined scenarios involving service providers, data producers, and OEMs. The associated IHO systems tested included the Producer Code Register, INToGIS, P-5 Yearbook, and the Data Protection Scheme (API service), together with the Identity Register (IR) and Service Register (SR).

The goal was to demonstrate IHO's commitment to a SECOM-compliant, IP-based service discovery system; to offer Member States and organizations — including hydrographic offices, RENCs and OEMs — a beta service against which to test; and to surface areas for improvement before a full-scale register is implemented.

The test programme is structured in two phases. Phase 1 (Beta 1) involved engaging services to establish the SR and IR using open-source MCP, with the objective of learning the management process and coordination arrangements with non-IHO SR/IR systems; this phase has been opened since mid-April 2026. Phase 2 (Beta 2), the subject of this test, involved integrating the SR/IR with the Data Protection Scheme (security tools), building a system-based trust framework for registering and managing data producers, OEMs, and data servers (service providers) within the IHO S-100 infrastructure flamework.

Three scenarios were executed during the test:

- Scenario #1: Discovery of available services through the service registry.
- Scenario #2: Requesting S-124/128 data using information retrieved from the discovered service.
- Scenario #3: Push of new data from the service to a vessel.

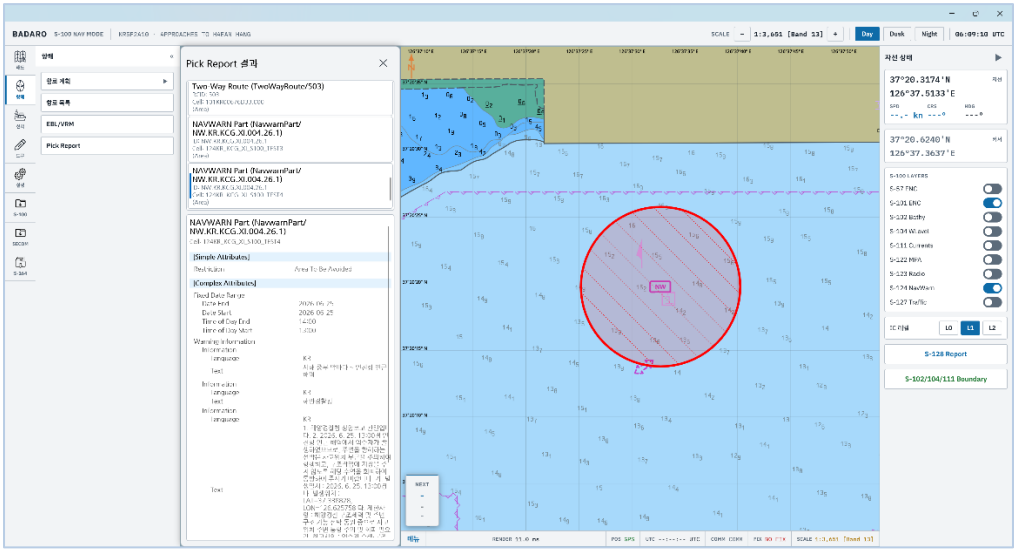

Figure 1Displaying S-124 navigational warning on ECDIS via IHO SECOM Service

The test confirmed the feasibility of connectivity based on the IHO SECOM framework, specifically: management of data producers, service providers, and manufacturers on top of the IHO Data Protection Scheme; provision of service information usable by vessels through the SECOM service registry; supply of S-100 data based on the SECOM standard; and the first test case of IHO's IP-based data distribution in Asia.

Figure 2 Testing IHO SECOM service for KHRA S-124/S-128 service instance

Next steps:

Outcomes from the IHO SECOM service test will enable further refinements to the SR/IR integration with the Data Protection Scheme ahead of broader stakeholder testing. Findings and identified gaps will feed into preparations for the full-scale register implementation, supporting readiness for the 2029 S-100 ECDIS carriage requirement. The IHO will continue to test this service in other regions.