



7th Meeting of the IHO Council

Progress Report on the Joint IHO-Singapore Innovation and Technology Laboratory

Agenda Item 04.5A

C-7 IHO Secretariat, Monaco, 17-19 October 2023



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Objectives of the IHO-Singapore Lab

01 Facilitate

The **conduct of innovative or investigative projects** proposed by IHO Member States(s), IHO organs, or other stakeholders. (including test bedding)

02 Enable

Knowledge creation and foster collaboration to evaluate specifications of global standard setting within the scope of IHO standardization activities

03 Foster

A **multidisciplinary and collaborative environment** for **technical experts** to interact learn and promote new solutions and technologies, including collaboration and cooperation with **other international organizations** research and development bodies active in the maritime domain under the guidance of a Governing Board



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Composition of the Governing Board



Abri Kampfer
Chair
(Director, IHO)



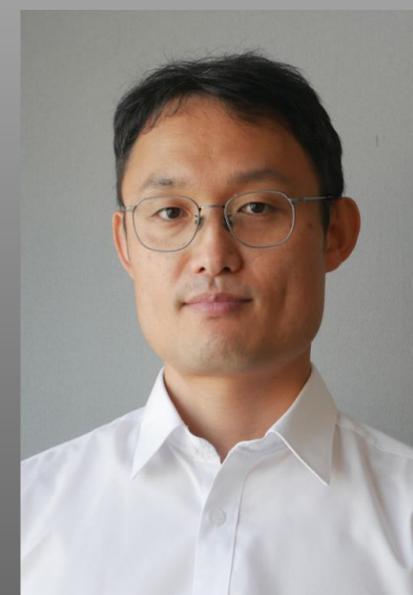
Thomas Dehling
Member
(Chair, IRCC)



Magnus Wallhagen
Member
(Chair, HSSC)



Thomas Ting
Member
(Host Country Rep)



Yong Baek
Secretariat
(IHO)



Parry Oei
General Manager
(IHO Lab)



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1. Approved Project – Seeking Funding Support for Development of S-57 to S-101 Conversion Guidance Document and Workshop

Goals of the Project:

- Thoroughly **test and propose refinements** to the "S-57 to S-101 Conversion Guidance" document, produced by the IHO ENC Working Group (ENCWG)
- Use existing conversion tools to **test the Conversion Guidance document** and produce outputs conformant to its contents
- Finalising details to implement a **Review cum Workshop** in Singapore, November 2023

Headed by:
Thomas Mellor, (UKHO)
Chair ENCWG



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2. Work in progress – S-131 Marine Harbour Infrastructure Database

Goals of the Project:

- Create a **database and interface** that will **improve the information exchange** between harbours and hydrographic offices by acting as a **neutral repository of harbour information**
- **Making good progress on development of S-131 standards.** First in-person meeting scheduled in Singapore, November 2023

Headed by:
Sarah Rahr, Canadian
Hydrographic Services



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3. Approved Revised Project Proposal: Creation and test-bedding of ECDIS capable of displaying S-102 Bathymetric Surface (Phase 1) and S-104 Water Level products (Phase 2) on S-101 ENC

Goals of the Project

- **Interfacing S-102 with S-101** to explore display options to best match user needs & requirements without cluttering of information, including in conformance with S-98
- Provision of Test-bed infrastructure or Testbed ECDIS which allows **display of S-102 onto S-101 ENCs**. Provision of hardware for Testbed ECDIS

Participating Parties ;
Korean Research Institute of Ships and
Ocean Engineering (KRISO) and Singapore
HO and Canadian Hydrographic Services



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4. Successfully completed Proof of Concept Project – 1st IHO & IALA Collaboration to Demonstrate Interoperability of S-101 and S-125 at Sea using Wireless Updating via 4G/5G Telecom Links

Goals of the Project :

- Support navigational safety – supplementing **S-101 ENC**s using varying sizes of **S-125 dataset**, including overlays.
- Service S-125 datasets via **4/5-G telecom** means.
- Testing **interoperability between S-125 and S-101** as interleaving and overlaying – agreed at joint IHO/IALA workshop held in Norway, September 2022.
- **Sea Trial using 4/5G** conducted during Singapore Maritime Week from 19th to 21st in April 2023 – Joint Collaboration with Korean Research Institute of Ships and Ocean Engineering (KRISO), Singapore HO and Chair NIPWG.



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ACTIONS REQUESTED FROM IHO COUNCIL

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Request IHO Council to note the Progress Report of the IHO-Singapore Lab:

Update on the 4 Projects:

- Seeking Funding Support: S-57 to S-101 Guidance Document - Discussion on organizing a Review cum Workshop in November 2023
- Work in progress : S-131 Project. Engaging relevant stakeholders for testing and making recommendations, where appropriate
- Approved Revised Proposal: ECDIS displaying S-102 and S-104 pending Part 2
- Successfully Completed : Proof of Concept Project between IHO and IALA – S-124 & S-125

Governing Board looks forward to evaluating more collaborative projects. Encouraged the involvement of industry stakeholders



For Information