



15th Meeting of the Hydrographic Services and Standards Committee

Progress Report on the Joint IHO-Singapore Innovation and Technology Laboratory and Possible Impact on HSSC Activities

Agenda Item 04.4A

HSSC-15, Helsinki, Finland, 5 – 9 June 2023



IHO

International
Hydrographic
Organization

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



IHO

International
Hydrographic
Organization

Composition of the Governing Board



Abri Kampfer
Chair
(Director, IHO)



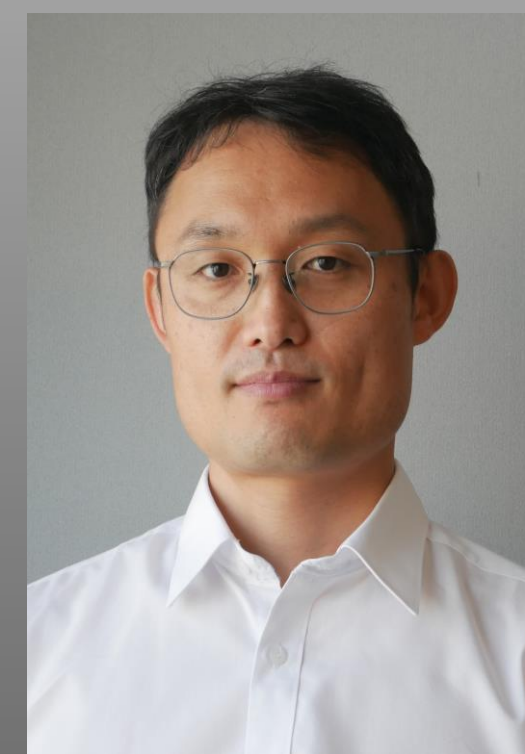
Thomas Dehling
Member
(Chair, IRCC)



Magnus Wallhagen
Member
(Chair, HSSC)



Thomas Ting
Member
(Host Country Rep)



Yong Baek
Secretariat
(IHO)



Parry Oei
General Manager
(IHO Lab)



IHO

International
Hydrographic
Organization

1. Approved Project – Development of S-57 to S-101 Conversion Guidance Document

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 July / August 2023

Headed by:
Thomas Mellor, (UKHO)
Chair ENCWG



IHO

International
Hydrographic
Organization

2. Approved Project – 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 for July 2023

Headed by:
Sarah Rahr, Canadian
Hydrographic Services



IHO

International
Hydrographic
Organization

3. Approved Project : 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 ENC**s. Provision of hardware for Testbed ECDIS
- Current status : Discussion with Stakeholder **and seeking funding support**



IHO

International
Hydrographic
Organization

4. Approved 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 between Korean Research Institute of Ships and Ocean Engineering (KRISO) and Singapore HO.**



IHO

ACTIONS REQUESTED FROM HSSC

International
Hydrographic
Organization

Request HSSC-15th to note the Progress Report of the IHO-Singapore Lab:

Update on the 4 Approved Projects:

- S-57 to S-101 Guidance Document - Discussion on organizing a Review cum Workshop in July / August 2023
- S-131 Project. Engaging relevant stakeholders for testing and making recommendations, where appropriate
- ECDIS displaying S-102 and S-104 pending Part 2 approval
- 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

HSSC-15, Helsinki, Finland, 5 – 9 June 2023



For Information