



IHO

5<sup>th</sup> S-100 Working Group (S-100WG) Meeting

International  
Hydrographic  
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# S-100 Test Bed Platform

Republic of Korea (**KHOA**)

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# 1. Introduction

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- KHOA operates the S-100 infrastructure to support development of IHO S-100 and S-10X Product Specifications, and **conducts a test bed programme to check the draft PSs and related technologies.**
- In order to facilitate testing the PSs for various PS developers and users, KHOA established **S-100 Test Bed Platform** to serve three different environments for **offline, online, and simulation.**
- This document introduces the S-100 Test Bed Platform.



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## 2. Platforms - Offline Platform (S-100 Viewer)

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- **KHOA and NIWC** are developing **S-100 viewer** respectively to support verification of S-10X products, such as S-101 electronic charts, S-102 bathymetric surface and S-111 surface current, etc.
- A key feature is to display the S-10X TDS with different version of S-10X FC/PC when loading the data. The viewer provides basic options to check functions for navigational requirements.
- In particular, S-100WG and S-101PT decided to change S-101 PC from the XSLT to the Lua considering the improvement of display mechanism for S-100 ECDIS system.



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## 2. Platforms - Offline Platform (S-100 Viewer)

- KHOA S-100 viewer has recently developed a **Lua engine to absorb S-101 Lua PC**. In addition, it deployed the interoperability catalogue to control various S-10X data in accordance with the draft S-98.
- It also supports **Plug-&Play** concept for S-10X catalogues allowing to select a catalogue if needed.



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## 2. Platforms - Simulation Platform (S-100 Navigational Simulator System)

- KHOA established a Test Bed Centre based on S-100 Navigational Simulator System
  - ✓ taking into account the physical environment of the vessel operation at sea. This allows to test S-10X products and services with virtual simulators in various coastal conditions.
- The S-57 ECDIS and prototype S-100 ECDIS developed by KHOA were installed in the centre.



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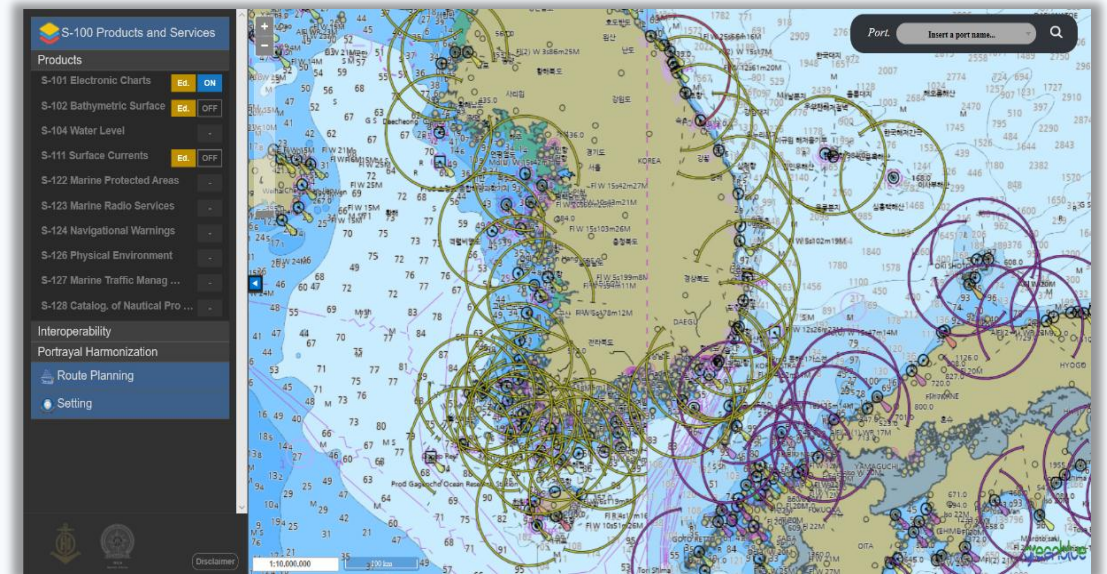
## 2. Platforms - Simulation Platform (S-100 Navigational Simulator System)

- First trial of the S-129 workshop in S-100 Simulator Centre, November 2019
  - ✓ to check the simulator's functions and test S-129 TDS.
- ❖ Function and environment
- ❖ Appropriateness and Application of S-10X Hydrographic data
- ❖ User experience and optimal provision of additional information
- ❖ Key considerations in terms of bridge procedure
- ❖ Considerations for S-100/10X interoperability, symbols and quality information



## 2. Platforms - Online Platform (S-100 Online)

- KHOA has built S-100 Online which is an online-based infrastructure.
  - ✓ The online has lots of other benefits than the offline platform such as fee to S/W installation and easy success, etc.

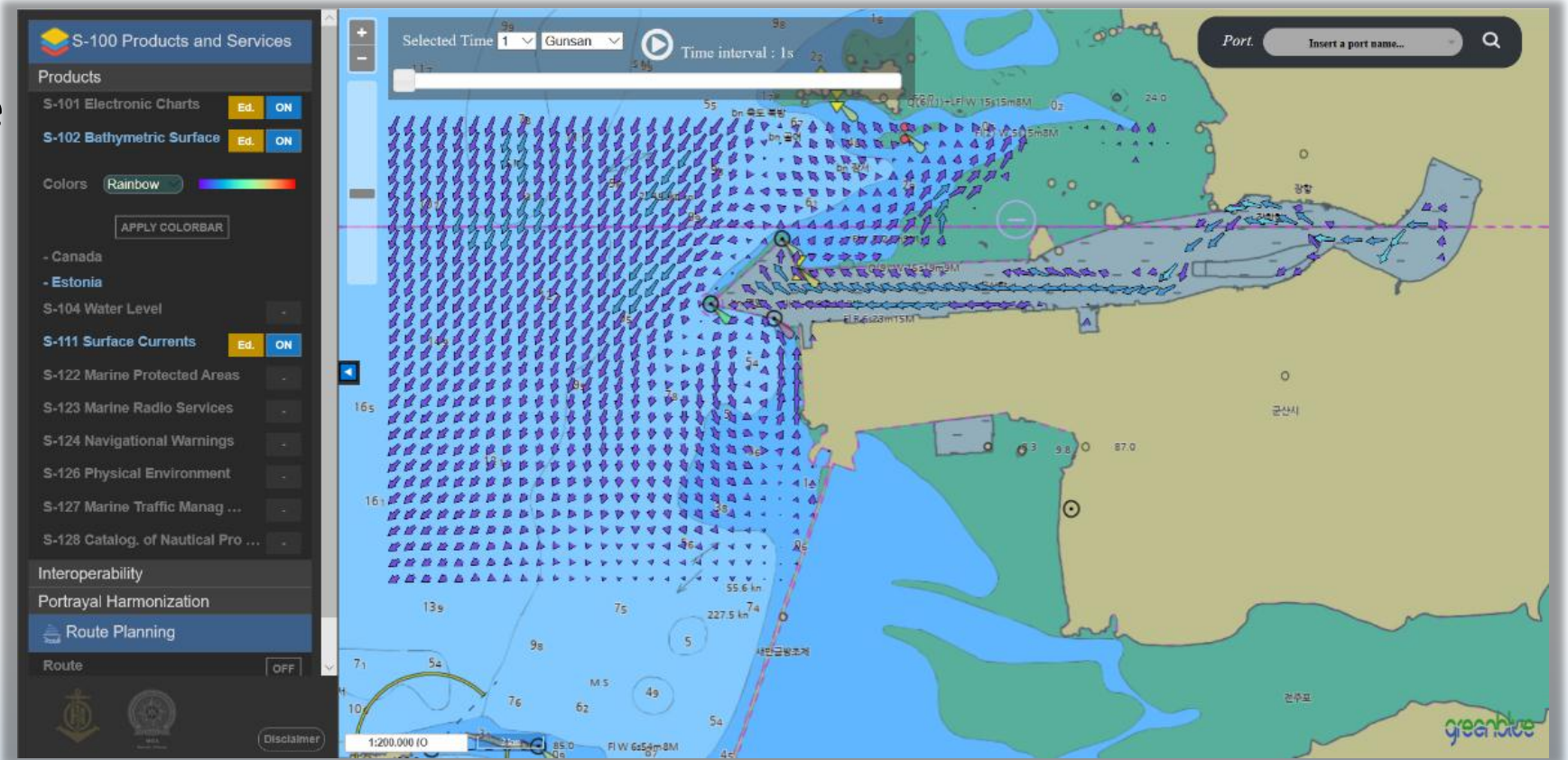


- This Online tools access the GI registry to display data with different versions of the FC/PC. In addition, this supports functions applying colours and symbols from the Portrayal register in real time.



## 2. Platforms - Online Platform (S-100 Online)

- This Online platform enables data producers and users to explore S-10X products and services.
- For more information, see another KHOA S-100 Online document.



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# 7. Conclusions and Recommendations

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- In line with the IHO S-100 Master Plan, KHOA has built various platforms to support S-100 and S-10X PSs and to support the preparation of S-100 products by the Hydrographic offices. KHOA hopes that the development and production of the IHO S-100 is going to move smoothly.
- KHOA recommends to use S-100 Test Bed Platform for testing and verifying S-100 development.



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# Action requested of S-100WG

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- S-100WG5 is invited to:
  - a. **Note** this paper



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