

IHO S-100 Working Group

# Ship handling simulator based S-100 Test Environment

Presented by KHOA



# Introduction

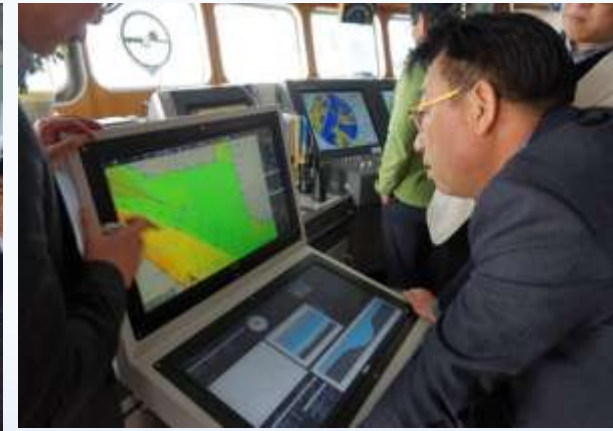
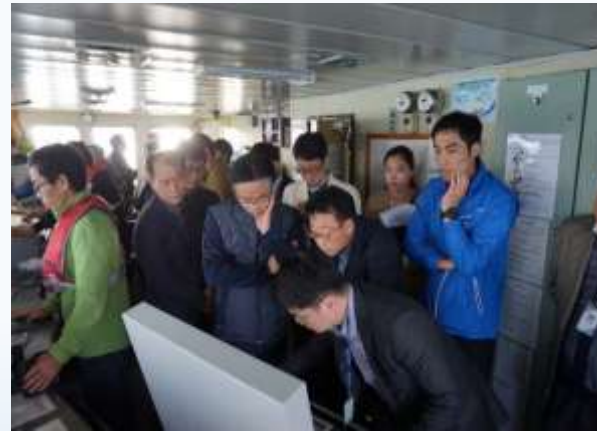
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- KHOA S-100 Test bed project
  - S-100 Simple Viewer and S-100 Test System (shore-based ECDIS) to support the IHO S-100 Test Framework
  - verify the quality and usability of S-100 data.
- Ship handling simulator based S-100 test environment
  - to verify the S-100 data such as S-101 ENC and S-111 Surface Currents in an environment similar to a ship bridge
- This paper introduces the main results of prototype development in 2018 and seeks advices from experts.



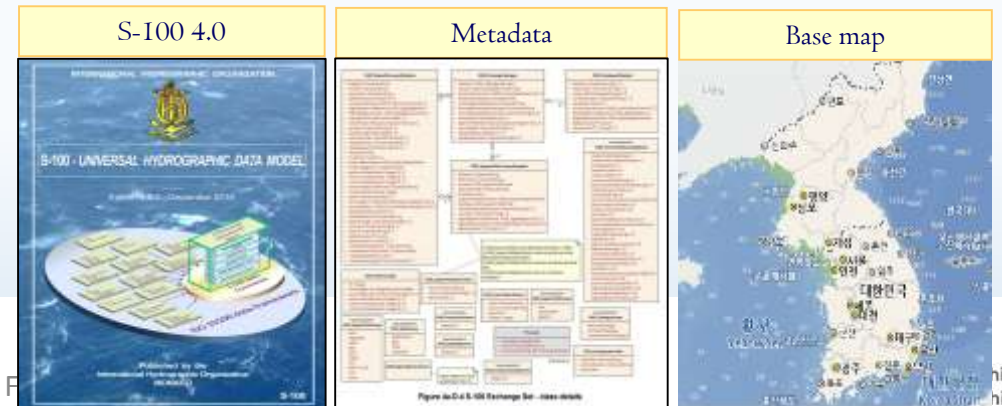
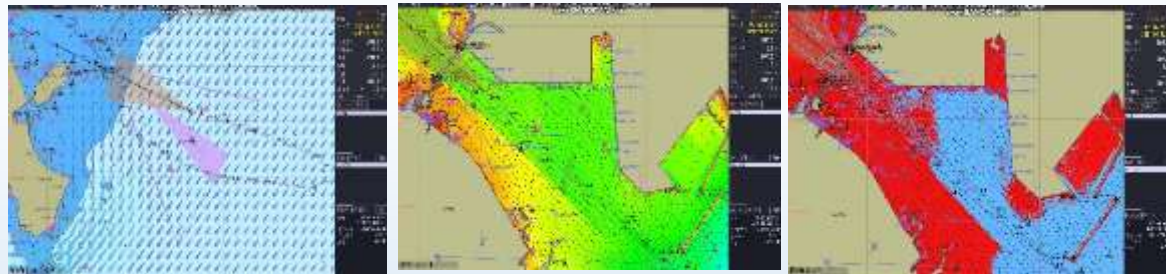
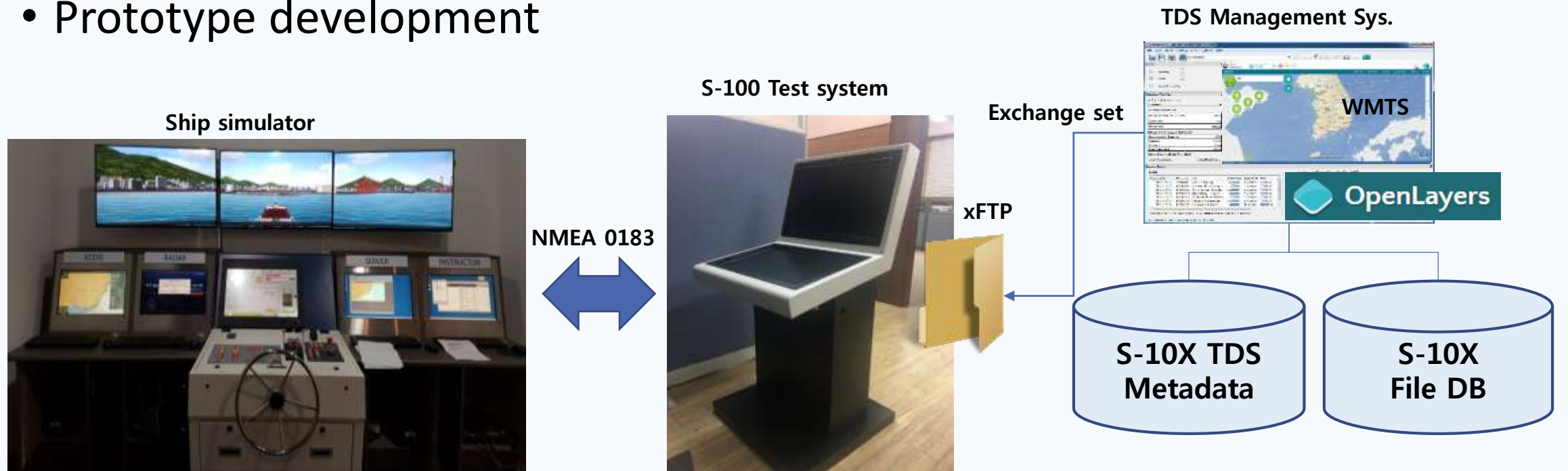
# S-100 Simple Viewer and Test System of KHOA

- S-100 Simple Viewer
  - aims to verify feature/portrayal catalogue created by S-100 registry and catalogue builders and S-101 data converted by S-101 Converter.
- S-100 test system (shore-based ECDIS)
  - combining the **S-100 Simple Viewer** and **ECDIS SW**
  - KHOA research team performed **three sea trials** between 2016 and 2017



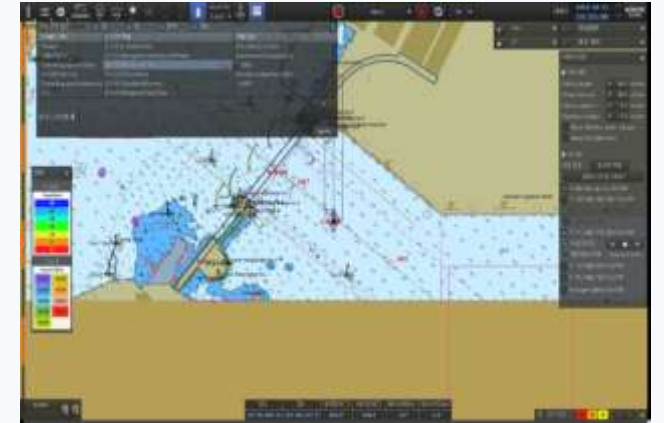
# Ship Simulator Based S-100 Test Environment

- Prototype development



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- Prototype development



# Summary

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- The ship simulator based test was **more beneficial** than sea trials
  - Efficient communication with various stakeholders such as mariners, data producers and OEM developers
  - **More practical test in terms of usability view** using the ship simulator based S-100 test system (Shore based ECDIS) **compared to the S-100 Simple Viewer**
  - **Improved efficiency** in terms of time and cost **compared to sea trial tests**
- Construction of the operational environment (2019)
  - ship handling simulator based S-100 test system in 2019 based on the lessons learned from the prototype development
  - verify S-100 test data and S-100 test system with domestic and international experts.



# Recommendations

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- Test plan
  - Indoor test using the ship handling simulator based S-100 test environment
  - Sea trial using the S-100 test system
- It's invited
  - interested experts to advice on the plan of testing S-100 data by ship handling simulator based S-100 test system indoor
  - sea trial using the S-100 test system
  - for the purpose of testing harmonized integration and display of S-100 data.

