Paper for Consideration by S-101PT1

S-101 Test Data Sets

Submitted by:	Republic of Korea (KHOA) and KRISO
Executive Summary:	This paper reports the creation of S-101 Test datasets in the joint project agreement with NOAA.
Related Documents:	S-100 Edition 2.0.0, S-101 Product Specification
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

As part of a joint project agreement with NOAA, ROK has created the S-101 Test datasets. The portion of ROK in the joint project was about the native ENC based on the S-101 and the task was to develop the following:

- Preliminary tool development to create native ENC
- Creation of S-101 Test datasets using S-64 Cells including native ENC and metadata
- Creation of S-101 ECDIS Chart 1

This paper reports the creation results of S-101 Test datasets by ROK.

Analysis/Discussion

Preliminary tools for creating S-101 TDS

It's required to develop a preliminary tool for the purpose of creating the S-101 native ENC on the ROK task and the tool has been developed. The tool includes functions to edit S-101 ENC and to add feature types in the S-101 feature catalogue.
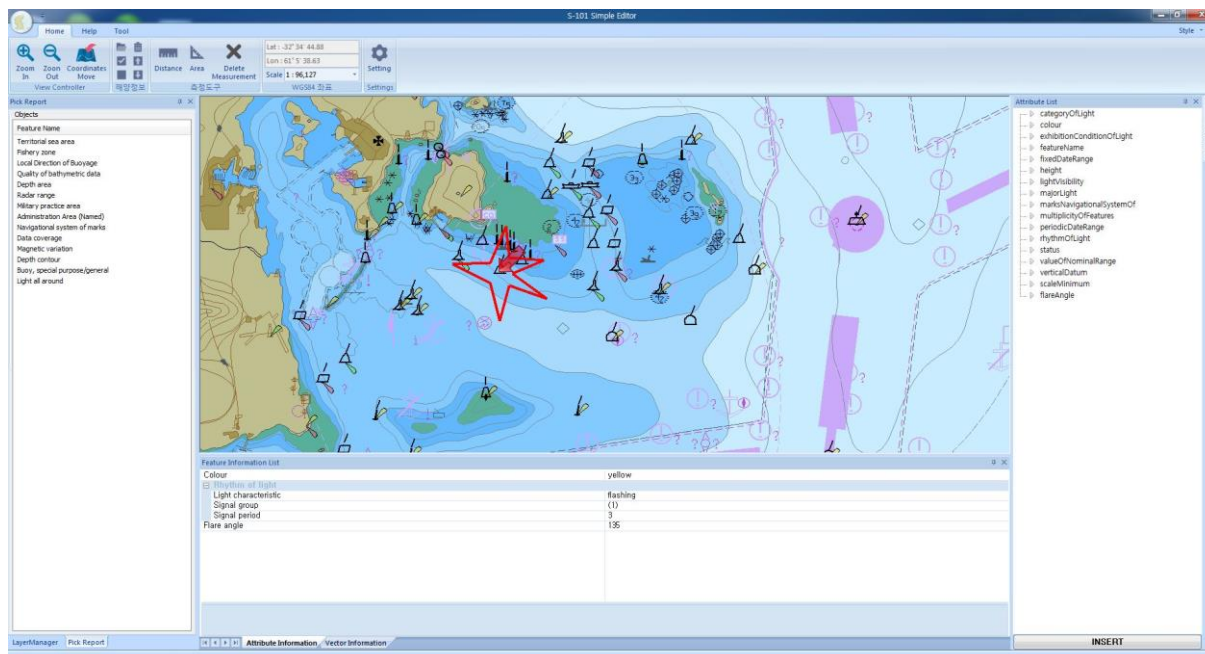

Figure 1. Preliminary tool for creating S-101 TDS

Creation of S-101 TDS

This task was about creation of S-101 TDS using the S-64 Cells. NOAA provided the file names for the test datasets on the S-64 cells and a scenario was included for the native ENCs. The existing S-64 data sets were converted using the S-57 to S-101 converter and the native ENC was created using the preliminary tool. The major task was like the following:

- S-64 EN data: Converted using the S-57 to S-101 converter
- S-64 ER data: Created manually using a programming method, not using a tool
- Native ENC: Created using the preliminary tool
- XML Exchange catalogue, XML metadata per each cell: Created manually using a XML editor

The exchange catalogue and metadata on S-64 cells were created considering the examples of S-101 Exchange catalogue, which was tasked by NOAA and IIC Technologies. Figure 2 shows one of creating the S-101 test datasets.
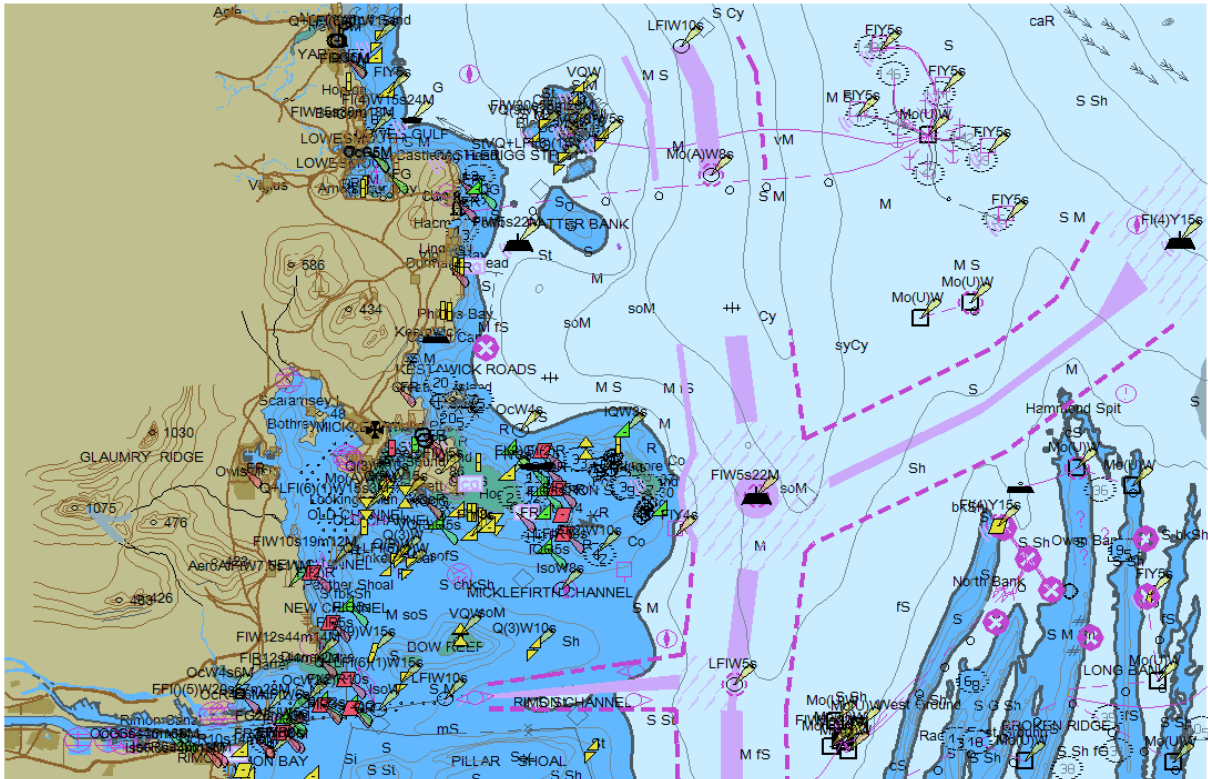

Figure 2. Creation of S-101 Test datasets

Creation of S-101 ECDIS Chart 1

The S-101 ECDIS Chart 1 was created using the S-57 to S-101 converter and S-101 preliminary tool and was completed including the native feature types. The figure 3 shows an example of S-101 ECDIS Chart 1. New feature type named as "New object" was defined to create the datasets. Regarding the new feature type, a feature catalogue and portrayal catalogue were recreated with editing the S-101 ones.
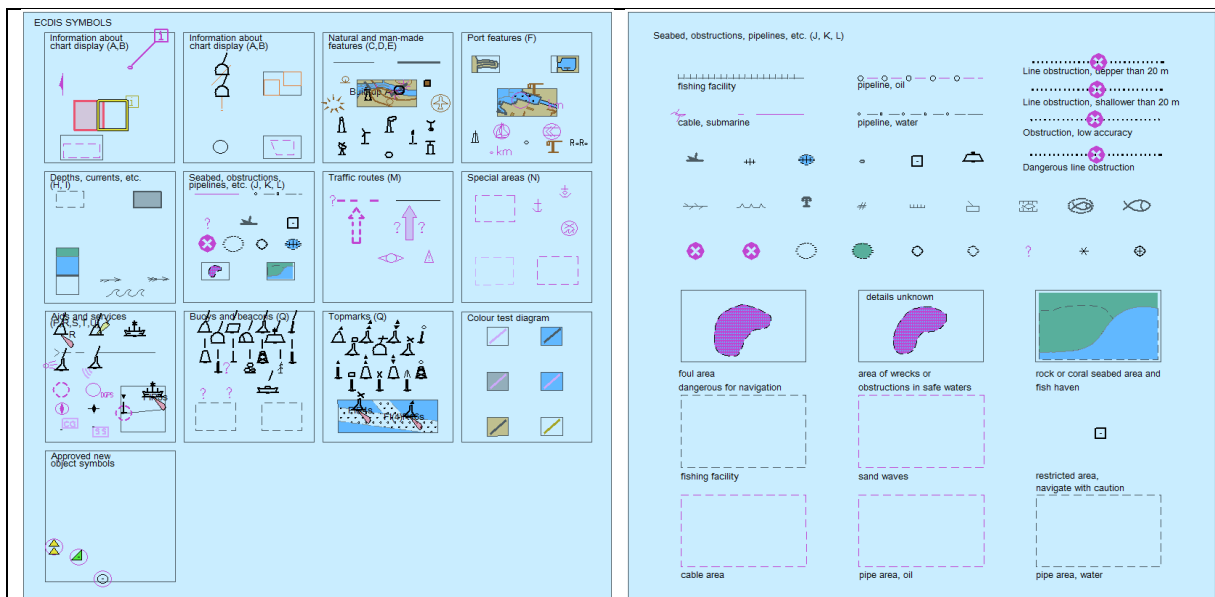

Figure 3. Creation of S-101 ECDIS Chart 1

<u>Future plan</u>

ROK reported the progress of creating the S-101 test datasets in the 3rd Test Strategy meeting and the resultant work was published under the S-100 Test Bed project on Basecamp. SPAWAR has started to test the S-101 test datasets and provided the found errors. ROK reviewed the errors and returned the revised data sets to SPAWAR. It's expected that an iterative process will be required to improve a completeness of the S-101 test datasets.

Action Required of S-101PT1
The S-101PT1 is invited to:

      a.   note the progress reported in this paper.

      b.   request to test and provide comments on the S-101 test datasets.