Paper for Consideration by TSM3

S-100 Test Dataset Tool

Submitted by:	Republic of Korea (KHOA)
Executive Summary:	This paper outlines the status of S-100 Test Dataset Tool
Related Documents:	S-100, S-100 Test Framework
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

KHOA and NOAA discussed establishing the test data set for the Phase 4 in the S-100 Test program and commenced the technical cooperation project. This paper outlines the current status of the cooperative development for the S-100 TDS and the Test Dataset Tool.

Analysis/Discussion

Background of the cooperative project

In recognizing the need for test beds and to help promote the development of the S-101 Product Specification, the National Oceanic and Atmospheric Administration (NOAA) contracted with ESRI to develop an S-57 to S-101 open source convertor and KHOA has established some Research and Development Projects to investigate the technology needed behind S-100. For example, KHOA has prototyped a S-100 feature catalogue builder that will be used to build the S-101 feature catalogue – which is the backbone to the S-101 ENC specification.

There is also recognized the need for both an S-100 data editor and a viewer to enable the creation of S-100 based data from scratch. This is so the functionality of the exchangeable feature and portrayal catalogues can be proved and to allow the creation of test data using new S-100 functionality.

KHOA and NOAA discussed establishing the test data set for the Phase 4 in the S-100 Test program and commenced the technical cooperation project. The main contents of the project are as follows:
- Creation of a preliminary S-100/S-101 production tool
- Creation of additional test data sets

The source data of the S-101 test is the S-64 TDS, and cases can be divided into those which use the S-101 Converter and the S-101 Editor respectively according to the requirements from establishing the S-101 test data.

a. Cases which use the S-101 Converter: Cases which convert the S-64 TDS into S-101 ENC only using the Convertor without changes to features or values
b. Cases which use the S-101 Editor: Cases which features are changed or which need to insert newly added features in S-101 ENC. Cases which need to produce S-101 ECDIS Chart 1.

NOAA writes a scenario for S-101 test data sets and produces test data sets using the S-101 Converter, whereas KHOA edits features or produces test data sets which require adding new features. In order to edit features of S-101 ENC which is converted using the S-101 Converter or to add new features, KHOA is developing the S-100 Test Dataset Tool (TDT). The S-100 TDT is designed to contain the following functions:

- Edit features of converted S-101 ENC.
- Add and edit features and attribute values of S-101 ENC according to the S-101 Feature Catalogue.
- Produce TDS of the S-101 Test Dataset List using the S-64 TDS.
- Produce the S-101 ECDIS Chart 1.

Basic concept of the S-100 Test Dataset Tool

Based on the S-100 Simple Viewer, the S-100 Test Dataset Tool is being developed by adding the function to edit S-100 test data. In connection with the S-100 Registry, the S-100 FCB can produce Feature Catalogue of S-100 test data, and the produced Feature Catalogue can be used for producing the Portrayal Catalogue.

The S-100 Test Dataset Tool applies the S-100 FC and PC created in connection with the S-100 Registry and creates the S-100 Test Datasets, data formats under consideration are 8211 and GML.
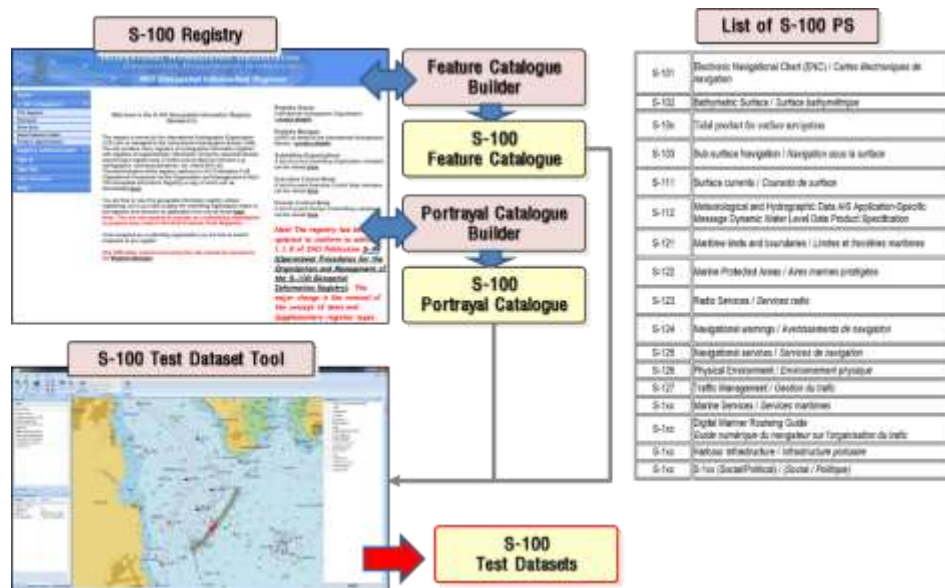

Fig. 1 Concept of S-100 Test Dataset Tool

Current status of the S-100 Test Dataset Tool

The S-100 Test Dataset Tool uses the S-100 Simple Viewer, and KHOA is developing the functions to edit and create test data.

Currently, in accordance with the S-101 Feature Catalogue Version 0.8.8, the baseline version has been completed with the functions to edit the converted S-101 features and to create Native ENC.

Fig 2. Current Status of S-100 Test Dataset Tool

. KHOA is planning to amend the following points of the S-100 Test Dataset Tool processed so far:

- Reflect the S-101 initial Portrayal Catalogue.
- Improve the work environment of the S-101 Test Data.
- Develop Test Data creation modules in a GML format.
- Apply to the S-101 TDS.

Plans for the S-100 TDS

As mentioned in the agenda item 4.2 of the TSM3, the S-100 WG Chair organised the S-101 Test Dataset List.
This document lists the S-64 test datasets and maps them to a new S-101 name and adds in some new S-101 parameters. It is expected that these test datasets will form the backbone of the S-101 Test Instruction Manual for eventual replacement of the S-64 test datasets.

ROK is planning to use and work on the S-100 Test Dataset Tool for S-64 EN files, whereas existing ENC tools or programs will be used for S-64 ER files.

In particular, as for Additional Test Dataset which is not included in the S-64 TDS of the S-101 Test Dataset List, ROK is planning to extend the AA5OTHER file of S-64, and to add new features of S-101.

The result of S-101 TDS using the S-100 Test Dataset Tool will be reported at the S-100 WG which is scheduled to take place in Tokyo, Japan in 2016.

Action Required of TSM3

The TSM3 is invited to:
    a.   note the progress reported in this paper.