

## Paper for Consideration by [S-100WG2]

## [S-10X Test Bed Dataset and Test Site]

<b>Submitted by:</b>	S-100WG Vice Chair / KHOA (Rep. of Korea)
<b>Executive Summary:</b>	This paper discusses a way for maintaining S-100 Test Data Sets and Test Site for the S-100 test framework.
<b>Related Documents:</b>	HSSC8-05.1D, TSM4-5.1B
<b>Related Projects:</b>	S-100 Testbed Project

**Introduction / Background**

At the 1<sup>st</sup> S-100 Working Group meeting in Tokyo 2016, KHOA reported on a creation of S-101 Test Data Sets (TDS) using the current S-64 Cells. The HSSC8 held at the IHO Secretariat last year was reported on S-10X TDS by KHOA and various sub-WGs. In the meanwhile, S-100 WG has been developing an Interoperability Specification (IS) to display some products and services on basic ENC cells.

This report will discuss an efficiency way to create and share S-100 based TDS to not only display a single product but also display multi-layers of products and services which are on basic ENC cells.

**Analysis**

S-10X TDS have been created and maintained by a relevant Working Group (WG) and Project Team (PT) in order to test their product specification.

However, some of S-10X products should be presented in the next ECDIS system according to the S-100 IS. The function for display multi-layers, for instance S-101 ENC, S-102 Bathymetric Surface, S-111 Surface Currents and S-412 Weather Overlay etc. should be tested for complex data loading scenarios.

The following table shows S-10X products and services for S-100 IS.

PS	Version	TDS	Type and formats
S-101	January 2016	S-64 cells	Vector / ISO 8211
S-102	Draft 2.0.0	PRIMAR S-102 project data	Grid / HDF5
S-111	Draft 1.8	4 sets for E.01.10	Grid / HDF5
S-112	Draft Nov. 2014	None	Vector / GML?
S-122	NIPWG1 docs	North American Right Whale Protection Areas	Vector / GML
S-124	Under development	TDS from (Eivind?)	Vector / GML?
S-411	Version 1.1	None?	Vector / ISO 8211 and GML
S-412	Draft June 2015	ROK 8211	Vector / ISO 8211?

In the above table, only a few PS have FC/PC on some area and most of them do not have proper FC/PC as well as TDS on same geographical area. Furthermore it is difficult to check the status of the catalogues and TDS that are maintained separately within the domain.

KHOA reported its activities on creation of S-10X TDS and sea trial at the HSSC8 meeting held at the IHO Secretariat 2016. A key of the sea trial was tested to display various TDS for S-10X products which covered the same geographical area. The following items are TDS from KHOA.

PS	Version	Cells	Type and formats
S-101	Draft 0.0.2	10	ISO 8211
S-102	Draft 2.0.0	6	BAG
S-111	Draft 1.8	11	HDF5
S-112	Draft 0.0.0 (2014)	2 tidal stations	AIS message 8
-	Additional bathymetric layer	2	ISO 8211
-	Digital list of tide	2 sets	GML



Figure 1: S-10X test site of Korea

### Discussion

In order to efficiently test S-100 based product specifications with the IS and support the development of a product specification, the following items should be considered:

- Establish S-100 test site which is able to provide the TDS.
- Develop S-100 Test Bed website for maintaining various TDS, the PSs and the FC/PC with history record.

### Conclusions

Since S-100 edition 1.0.0 was released, the IHO has endeavoured to develop S-10X PS and they need to be tested. Therefore, it is required to set up the S-100 test site with the TDS and S-100 test bed website to share and maintain those data and information.

### Recommendations

It is recommended to accept the KHOA test site for S-100 test site and to develop S-100 test bed webpage under the IHO GI registry as the following example:

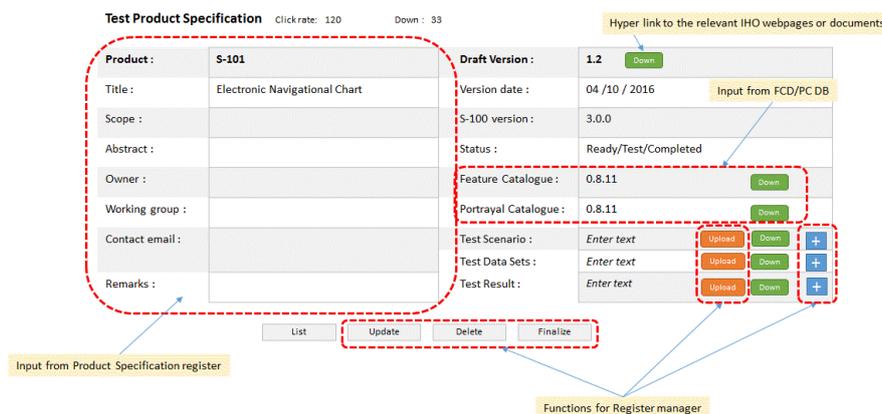


Figure 2. Draft interface of S-10x Test Bed

**Action Required of [S-100WG and S-101PT]**

The S-100WG are invited to:

- a. note this paper
- b. discuss the recommendations and decide to establish the test site and develop the webpage for S-100 test framework.