Paper for Consideration by NIPWG2/S-100WG1

Update on S-100 Registry interface and Test operation

Submitted by:	Republic of Korea (KHOA)/IHB
Executive Summary:	This paper reports on the result of improvement to and test operation of the S-100 Registry interface.
Related Documents:	S-100, S-99
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

Following the operation of the S-100 Registry and improvement to S-100 Version 2.0, the KHOA would like to report on the result of improvement to S-100 Registry interface currently in process and future plans.

Analysis/Discussion

Improvement to and Operation of the S-100 Registry

The KHOA developed following strategies to establish the S-100 Registry stably and effectively. At this stage, the work was limited to the FCD Register only.

- NOAA to establish a Clone Server distinguished from the existing S-100 Registry to improve the Registry
- KHOA to reflect the requirements for the interface analysed by NOAA to the Registry
- KHOA to transfer the KHOA Registry to the IHO Clone Server and start test operating the S-100 Registry
- Domains (Npub and Inland) manager to access the S-100 Registry and test operate proposal and approval processes for standardized items
- Domains manager to use the S-100 Feature Catalogue Builder to test produce the S-10X Feature Catalogue
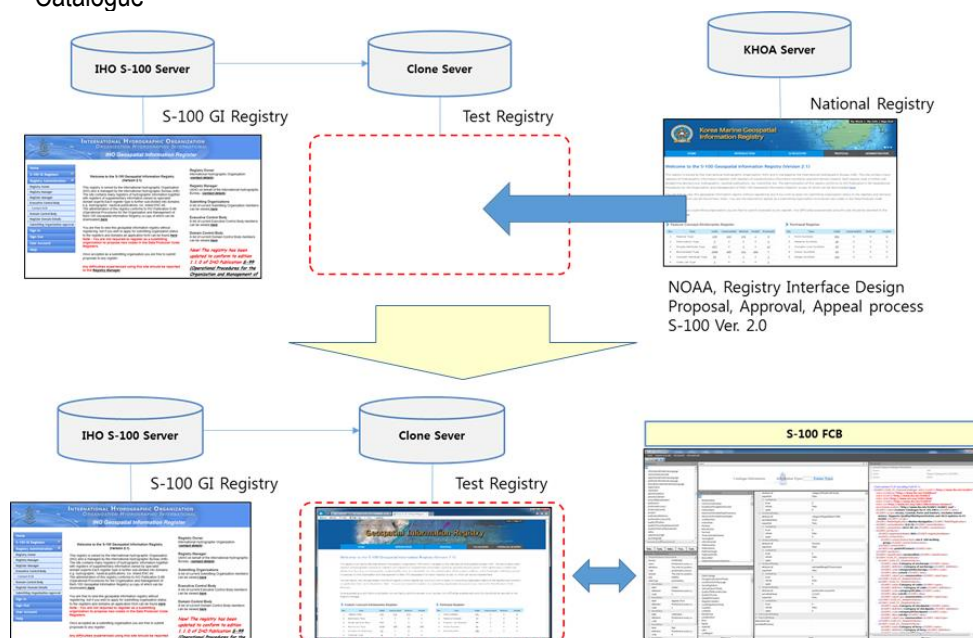

Figure 1. Improvement to and Test Operation of the S-100 Registry Interface

Result of improvement to the S-100 Registry Interface

In order to improve the IHO S-100 GI Registry in relation to the announcement of S-100 2.0, NOAA analysed the functions of the Registry webpage and the requirements for the Registry interface, and wrote the documents below.

- Functions of the Registry webpage: S-100 GI Registry Programmer's Code Guide (Version 5)
- Requirements for the Registry interface: Interface Design Document

Based on the result of the analysis, the current condition of the IHO S-100 Registry has been identified as below. (However, the analysis is restricted to the FCD Register only.)

- The FCD Register, Data Producer Codes Register, and Product Specifications Register have been created.
- The code list type and code list value newly included in S-100 Ver. 2.0 are missing.
- Part of the proposal process is missing.
- Incomplete approval process
- Incomplete appeal process
- Incomplete Registry user management system

Having reviewed the documents above, the ROK applied the requirements for the Registry interface analysed by NOAA to the KHOA National Registry. While improving the Registry, proposal and approval processes for standardized items defined in S-100 and S-99 were created, as well as Registry user approval and management system. Furthermore, items added to S-100 Ver. 2.0 were reflected.

Figure 2. NEW S-100 Registry

Result of Test Operating the S-100 Registry

In order to validate the improvement to the S-100 Registry interface and to test operate the S-100 Registry, domains (Npub and Inland) manager accessed the S-100 Registry and test operated the proposal and approval processes for new S-XXX standardized items being developed in each domain.

Following Registry users should be identified to validate proposal and approval processes for standardized items in a specific domain:
- Registry Manager
- FCD Register Manager
- Domain Control Body
- Submitting organization

In this occasion, proposal and approval processes of the FCD Register were test operated and the functions of the Registry were validated.

The result of the test operation will be reported at an S-100 WG meeting.

Main Achievements of and Plans for the S-100 Registry

The KHOA agreed with the IHO on the improvement to and stabilization of the S-100 Registry, and is conducting various R&D activities related to the Registry. KHOA implemented the final requirements for the test operation of the S-100 Registry in January-February 2016. KHOA plans to complete the test operation in March, transfer the Registry to an IHO server, and start operating it from April. Rough steps are as below:

- Investigation and Web Interface Design: 11 Jan. - 15 Jan. 2016
- Develop the interface and improve DB structure of the registry: 11 Jan. - 16 Feb. 2016
- TEST Operation with domain body: 22 Feb. - 4 Mar. 2016
- Improvement with feedback from 1 Test Operation: 7 Mar – 18 Mar.2016
- Report on the status of S-100 registry in S-100WG1: 14 Mar. – 18 Mar. 2016
- NEW Registry transition to IHO clone server: 21 Mar. - 25 Mar. 2016
- Operate IHO S-100 GI registry: 4th April 2016

KHOA plans to make the S-100 Registry available from April so that KHOA can support IHO Working Group members and others from related groups who manage S-100 based product standards development in developing S-100 product standards. Moreover, KHOA will improve the FCD Register of the S-100 Registry and start the second development project for parts missing including the Portrayal Register, starting from April. The S-100 Registry second development project includes the following:
- Analyse Portrayal DB
- Develop Portrayal Register interface according to the S-100 Portrayal Register
- Metadata Register
- Data Producer Codes
- Product Specifications

Action Required of NIPWG2/S-100WG1
The NIPWG2 is invited to:
- a.   note the progress reported in this paper.
- b.   Invite relevant experts for developing the second phase of the S-100 Registry.