Paper for Consideration by TSMAD29/DIPWG7

Improvement on the S-100 feature catalogue builder

Submitted by:	Republic of Korea (KHOA)
Executive Summary:	This paper request opinions about updates and improvements of S-100 FCB considering discussions and requirements on the S-100 FCB in the TSM2
Related Documents:	S-100 Universal Hydrographic Data Model, S-100 Test Framework
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

KHOA was tasked for the development of S-100 Feature Catalogue Builder (FCB) in the IHO S-100/S-101 Test Bed Project. The S-100 FCB was drafted in the mid of 2014 and the S-101 feature catalogue was produced to be used in the S-101 Converter and S-100 Portrayal catalogue builder. KHOA reported updates on the S-100 FCB and discussed some technical issues in the TSM2 held in Arlington, USA in September of 2014. This paper reports improvements on the S-100 FCB.

Analysis/Discussion

Application of changes on the feature catalogue model in the S-100 ver. 2.0 to the S-100 FCB
TSM2 noted that extra elements in the S-101 Feature Catalogue (Ver. 0.8.7) developed by S-100 FCB V0.8.7, exist.(i.e. fc:catalogInfo and fc:dataSetAttributes), but S-100 V1.0 Feature Catalogue do not contain the elements. TSM2 agreed that the structure of S-100 feature catalogue meet the feature catalogue model in the S-100 Ver. 2.0 and decided that extra elements can be removed from the feature catalogue. Revision of S-100 schema files was required to follow this decision. Jeppesen supported the work of S-100 schema revision according to the S-100 ver 2.0 and ROK improved the S-100 FCB based on the revised S-100 schema files. As extra elements like "dataSetAttributes" were removed in the structure of feature catalogue, a process to build a feature catalogue in the S-100 FCB was changed like below table.
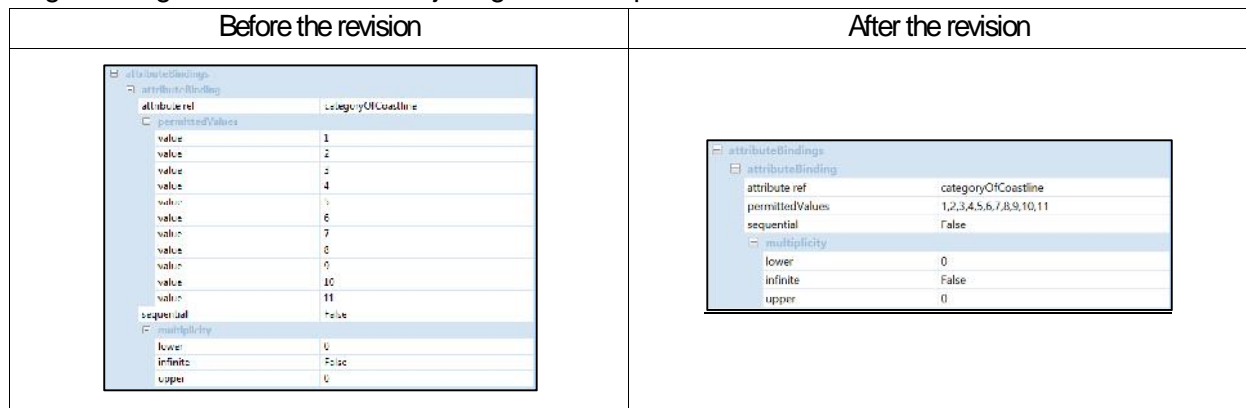
Table 1. Process change to build the feature catalogue in the S-100 FCB

Before the revision	After the revision
- Step 1: catalogInfo	- Step 1: catalogInfo (Metadata for catalogue)
- Step 2: dataSetAttributes	- Step 2: informationTypes
- Step 3: informationTypes	- Step 3: featureTypes
- Step 4: featureTypes	

Improvement of adjusting function on permitted values
S-100 FCB includes the function to adjust permitted value on the enumerated simple attribute in feature types and information types. The draft version of S-100 FCB didn't include the function to adjust permitted values on the enumerated simple attribute belonged to complex attribute. The function was developed to solve the problem and the relevant user interface was changed simply like the Figure 1 below.

Fig. 1. Changes of user interface to adjusting function on permitted values

Before the revision	After the revision

Requirements on the S-100 FCB in the S-100 Test Framework

Phase 1 A of S-100 Test Framework is on the test process of S-100 feature catalogue builder. ROK reviewed the detailed requirements indicated in the S-100 test framework to adopt the S-100 FCB successfully to the test process and checked each part as shown below;

1.0 Access System:

This requirement means that S-100 FCB needs to include some functions of log-on/off and giving different authority to per users. ROK is testing the functions using the table information defined in the S-100 Registry database. Additional test will be implemented in the process of establishing the live connection between S-100 FCB and IHO Registry.

2.0 Catalogue Management:

This requirement means that a stored catalogue could be read, copied, deleted for the management. The relevant functions were developed linking with the catalogue database of S-100 Registry.

3.0 Edit Catalogue:

This requirements means edit of feature catalogue. The relevant functions have developed.

4.0 Output catalogue:

The function to export a compiled feature catalogue to catalogue database of S-100 registry has developed, and it also contains other option to export to a XML feature catalogue. Function to present a compiled feature catalogue to HTML or change to PDF file will be developed.

5.0 Validation: Planed

6.0 Digital Signature: Planed

Action Required of TSMAD and/or DIPWG

The TSMAD29/DIPWG7 is invited to:

    a.   note the improvement of S-100 Feature Catalogue Builder indicated in this paper.

    b.   provide recommendations that may be helpful to improve more the S-100 Feature Catalogue Builder.