

Paper for Consideration by S-100WG1**Update to S-100 FCB v2.0**

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

Introduction / Background

The KHOA has developed the S-100 FCB (Feature Catalogue Builder) and drafted a draft version of S-101 Feature Catalogue to support the S-100/S-101 Test bed of the IHO.

The S-100 FCB is being updated based on the new version of S-100 and requirements by user groups. This paper reports the results of updates since the TSM (Test Strategy Meeting) held in Jeju Island, ROK in 2015 and future plan.

Analysis/Discussion**Identification of revisions to the S-100 FCB**

The KHOA asked the Inland domain to test the S-100 FCB and received comments on the evaluation and revisions. The comments can be summarized as below:

- Network: S-100 FCB could not access the S-100 FCB Registry due to the security policy of the user's organization. (Since the S-100 FCB was not working due to a network problem, a mobile network was used instead of the organization's network.)
- Access: The mobile network made the S-100 FCB very slow due to the time taken for logging in with a user ID and PW, loading the FCD Register DB from the Registry, and loading saved FC from the S-10X FC DB.
- FC Schema: The existing feature catalogue for Inland ENC's from the Inland domain was not loaded.
- Functions: Several errors were found in some parts of the S-100 FCB.

The KHOA has recognized that the S-100 FCB can be largely affected by communication network. Loading FCB Register DB or loading/saving FC information established in FC DB is not a work done frequently when using the S-100 FCB. Taking that into consideration, if local FCD Register DB can be managed in XML file, it is observed that the network problem can be resolved to some degree.

Results of the Update to the S-100 FCB

The KHOA updated the S-100 FCB to minimize dependence on the network status of the place the S-100 FCB is being operated as below:

- 1) Function to manage the FCD Register DB within S-100 FCB in an XML format.
- 2) Function to update the local XML file on FCD register DB.
- 3) Improvement of the process of FC compilation and uploading the S-10X FC to the FC DB of S-100 Registry
- 4) Adjust the version number of FCB to the S-100 (S-100 v2.0 → FCB v.2.0.x), 0.0.X can be used to indicate an error revision and function improvement

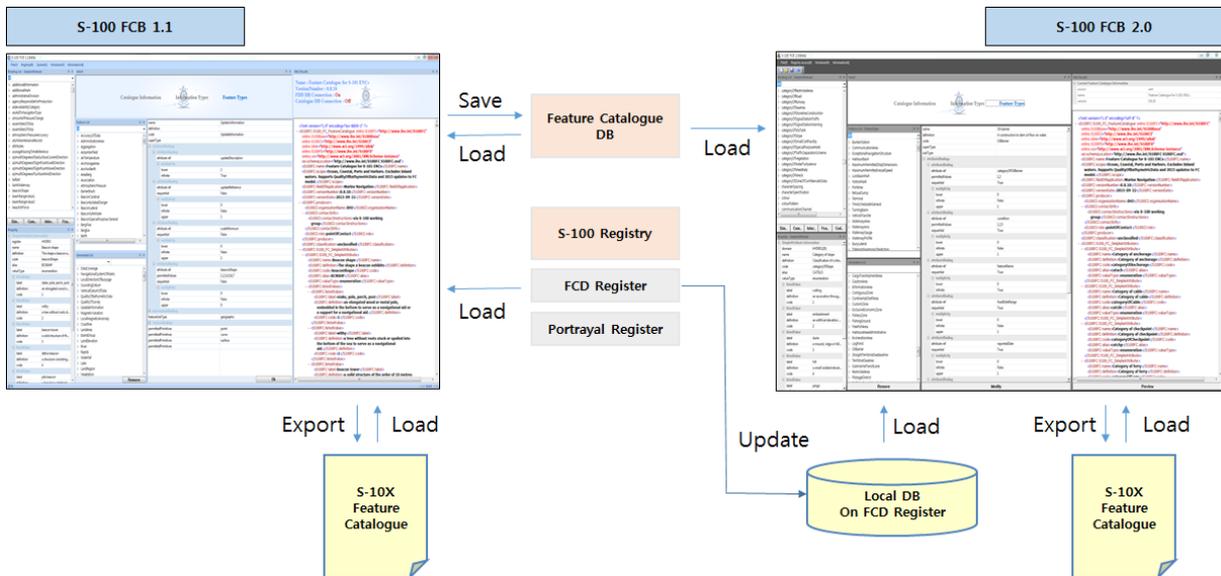


Figure. 1 Comparison between S-100 FCB 1.1 and S-100 FCB 2.0

Since the TSM held in Jeju Island, ROK in 2015, the feature catalogue schema was updated by Jeppesen according to the feature catalogue model of S-100 ver. 2.0. Accordingly S-100 FCB was updated considering the changed schema and improvement in terms of function and user interface.

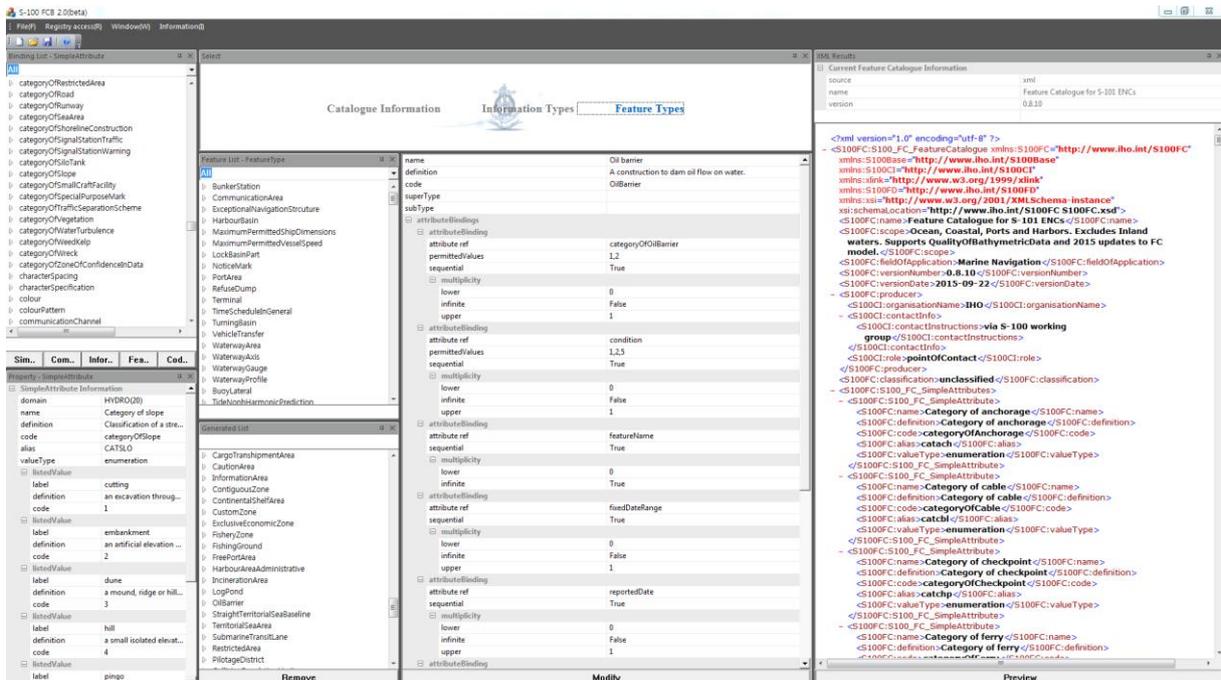


Figure. 2 Result of the Update to S-100 FCB (Version 2.0)

Regarding the operation of the S-100 FCB, use case can be expected as below:

- S-10X PS developers: use S-100 FCB to develop a required feature catalogue in S-10X PS. Users can proceed with FC works without accessing to S-100 Registry. As S-100 FCB provides information of latest updated date of FCD Register local DB, users can update the FCD register local DB from S-100 Registry if the renewal of local DB is required. Users can export the S-10X FC to external XML file, but it is not permitted to save to FC DB in S-100 Registry.
- Registry Manager or Register Manager: If user with administrative rights log in S-100 FCB, it is possible to load S-10X FC from the FC DB and save the S-10X FC to FC DB.

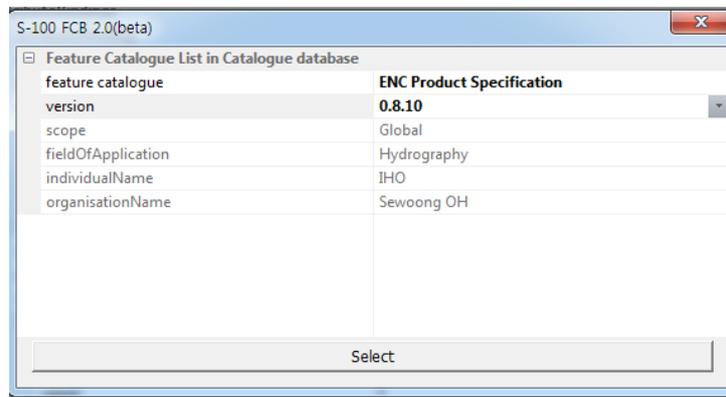


Figure. 3 S-10X feature catalogue in FC list

Discussion topics

S-100WG1 is invited to discuss several topics raised in updating the S-100 FCB.

- **Operating FCD Register local DB within S-100 FCB:** Application of new concept on operating FCD Register local DB within S-100 FCB to minimize the dependence with communication network environment.
- **Access authority control to FC DB:** S-10X PS developer can export S-10X FC in S-100 FCB as XML format. Final version of S-10X FC can be saved to FC DB only by S-100 Registry manager. All users can load S-10X FC from FC DB of S-100 Registry.
- **User accounts of S-100 FCB:** Since S-100 FCB contains the FCD Register local DB, users can use the S-100 FCB without log-in process. But, it's required to log in S-100 FCB if users want to update the FCD register local DB. It's invited to discuss if the user information of S-100 Registry website can be used to the log-in process of S-100 FCB.
- **Use of registered items depending on status:** The current S-100 FCB use only valid items in FCD Register. When compiling the S-10X FC, there can be a case to use invalid (proposed) items in the FCD Register. It is necessary to discuss whether valid items are used only or used with invalid items together.

Future plan of S-100 FCB

The KHOA assumes that the network problem was minimized and the stability was improved by updating to S-100 FCB v.2.0. ROK planed like below considering the test operation of S-100 Registry:

- Test between S-100 Registry DB and S-100 FCD in conjunction with the operation of S-100 Registry
- Update S-101 FC using S-100 FCB
- Provide S-100 FCB to non-hydro domain (Npub, Inland) and request to produce S-10X FC, support technical issues
- Tutorial and manual on S-100 FCB

Action Required of S-100WG1

The S-100WG1 is invited to:

- a. note the progress reported in this paper.
- b. Provide comments on the items raised in discussion topics.