Paper for Consideration by S-100WG3

S-100 Feature Catalogue Builder

Submitted by:	Republic of Korea (KHOA)
Executive Summary:	This paper reports the improvement on S-100 Feature Catalogue Builder (FCB).
Related Documents:	S-100 version 3.0.0
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

KHOA developed S-100 Feature Catalogue Builder (FCB) and S-101 Feature Catalogue baseline to support IHO's S-100 Testbed. The result of updating S-100 FCB in 2017 was reported to S-100WG2 and TSM3 and this paper reports the update since and how to access to FCB.

Analysis / Discussion

S-100 FCB Operating Concept

S-100 FCB is an essential element of S-100 Infrastructure along with S-100 Registry and S-100 Portrayal Catalogue Builder (PCB). It is a tool to support writing Feature Catalogue (xml) documents which define the Application Schema in detail included in S-100 Specifications, using standardized items such as feature type, information type and attribute type saved on FCD Register of S-100 Registry.

Fig. 1 shows the S-100 FCB operating concept. S-100 FCB includes Local File DB which has the same content as Feature Concept Dictionary (Data Dictionary in the case of a new registry) Register DB. S-100 FCB users can log onto S-100 Registry, download up-to-date FCD Register and update Local File DB. With S-100 FCB, they can download FCD Register DB, work on FC and save the work onto Feature Catalogue DB or save it as FC xml files.

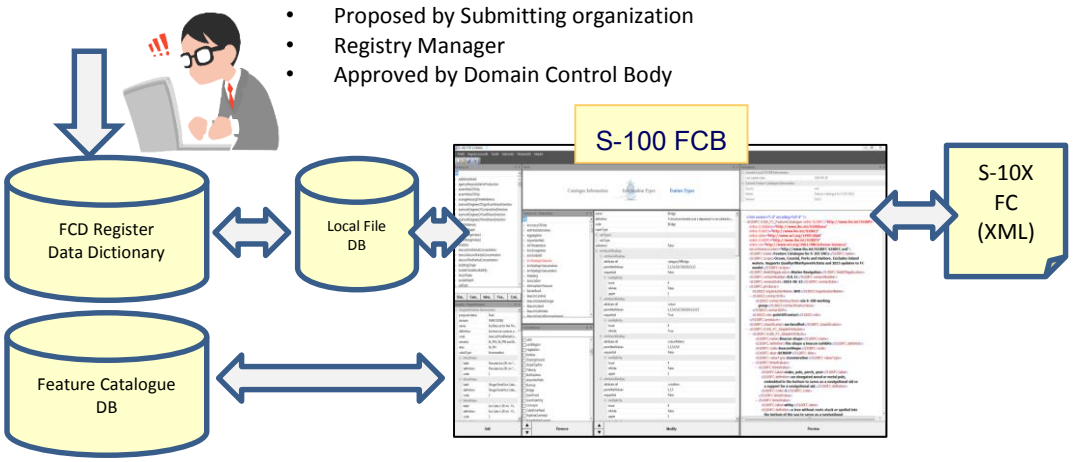

Fig. 1 S-100 FCB Operating Concept

Development of User Defined DB Function

S-10X developers who wish to create Feature Catalogue (xml) using S-100 FCB can do so by binding features and attributes registered to S-100 Register on FCB. However using new or amended feature type or attribute type on FCB not listed on Registry is possible after it has been approved according to the S-99 Registry proposal procedure. Thus the concept of a sandbox was proposed at S-100WG2 to develop S-10X Product Specifications (PS) conveniently.

The KHOA research team defined items including features using external files (excel sheets) to support the sand box concept for S-10X PS developers and developed a function to support PS development by inserting the external files on S-100 FCB (see Fig. 2).

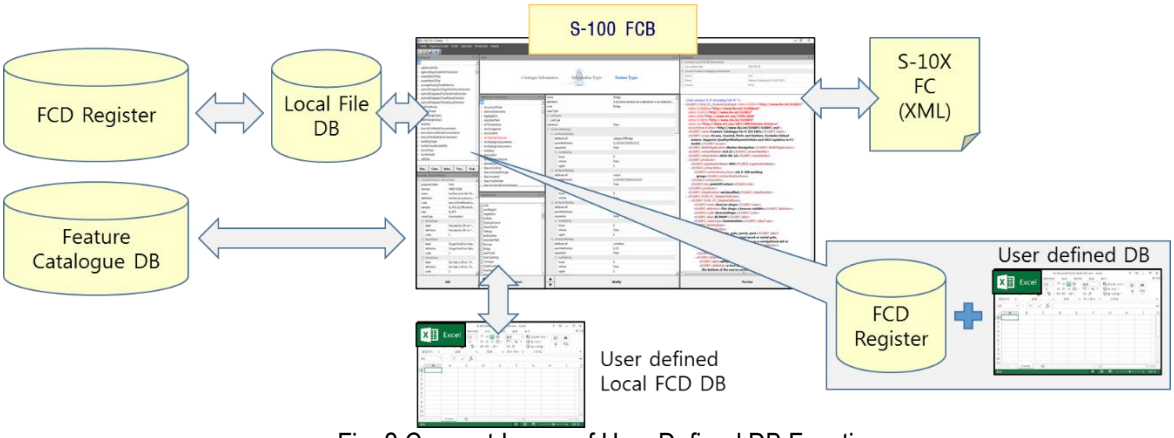

Fig. 2 Concept Image of User Defined DB Function

Development of User Defined DB Function and Its Application

The following items are defined in excel sheets to support the sandbox function of FCB.

- Simple Attributes
- Listed Value
- Complex Attributes
- Sub Attribute Bindings
- Roles
- Information Association
- Feature Association
- Information Types
- Feature Types
- Codelist
- Codelisted Value

Fig. 3 shows the result of developing the user defined DB function on excel sheets. Each item is defined on each field according to the Application Schema of S-128 *Catalogue of Nautical Products* and Feature Catalogue was drawn up using these items.

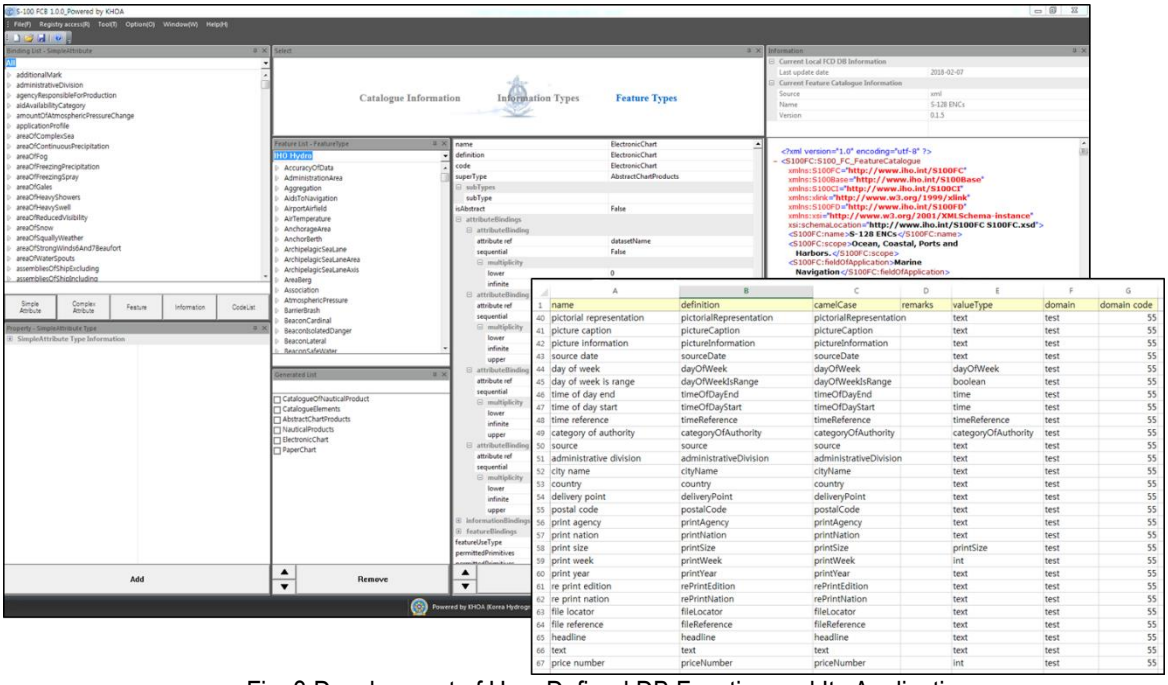

Fig. 3 Development of User Defined DB Function and Its Application

Conclusions

The user defined DB function was developed using external files (excel sheets) to provide the sandbox function required when drafting Feature Catalogue of S-10X PSs and was applied to draw up Feature Catalogue of S-128 *Catalogue of Nautical Products.*

Through the S-100 FCB update, S-100 FCB will be used in drawing up FC through S-100 Registry FCB Register and also drawing up temporary FC while developing S-10X PSs so more flexibility in developing and validating PSs is expected.

S-100 FCB will be provided to S-10X PS developers through the new Registry.

Action Required of S-100WG

The S-100WG3 is invited to:

a. **Note** this paper.