Paper for Consideration by TSMAD TSM2

[Feature Catalogue Builder Update]

Submitted by:	Republic of Korea (KHOA)
Executive Summary:	To report the progress made in the development of Feature Catalogue Builder by KHOA
Related Documents:	S-100 Ver. 1.0, S-100 Ver.2.0, S-101 DCEG, S-100 System Test Flow Diagram
Related Projects:	IHO S-100/S-101 Test Bed Project

Introduction / Background

As part of IHO's S-100/S-101 Test Bed, ROK was tasked to develop S-100 Feature Catalogue Builder. The ROK research project was launched in December 2013. ROK presented the Prototype of S-100 Feature Catalogue Builder at the combined 28th TSMAD and 6th DIPWG Meeting held in Sydney, Australia in March 2014. The draft version of S-101 Feature Catalogue was developed using S-100 FCB developed by ROK. ROK is currently conducting work to further enhance the FCB by reflecting the comments on S-101 Feature Catalogue from the S-101 Converter Team and the Portrayal Catalogue Builder Team.

Analysis/Discussion

The S-100 Feature Catalogue Builder being developed by ROK is a stand-alone software. It accesses the FCD (Feature Concept Dictionary) Database of S-100 Registry, loads the contents of "SimpleAttribute", "ComplexAttribute", "Information Type", and "Feature Type," and then creates Feature Catalogues in the order of (1) CatalogInfo, (2) dataSetAttributes, (3) informationTypes, and (4) featureTypes based on this information. Figure 1 shows a screen image of the current Feature Catalogue Builder.
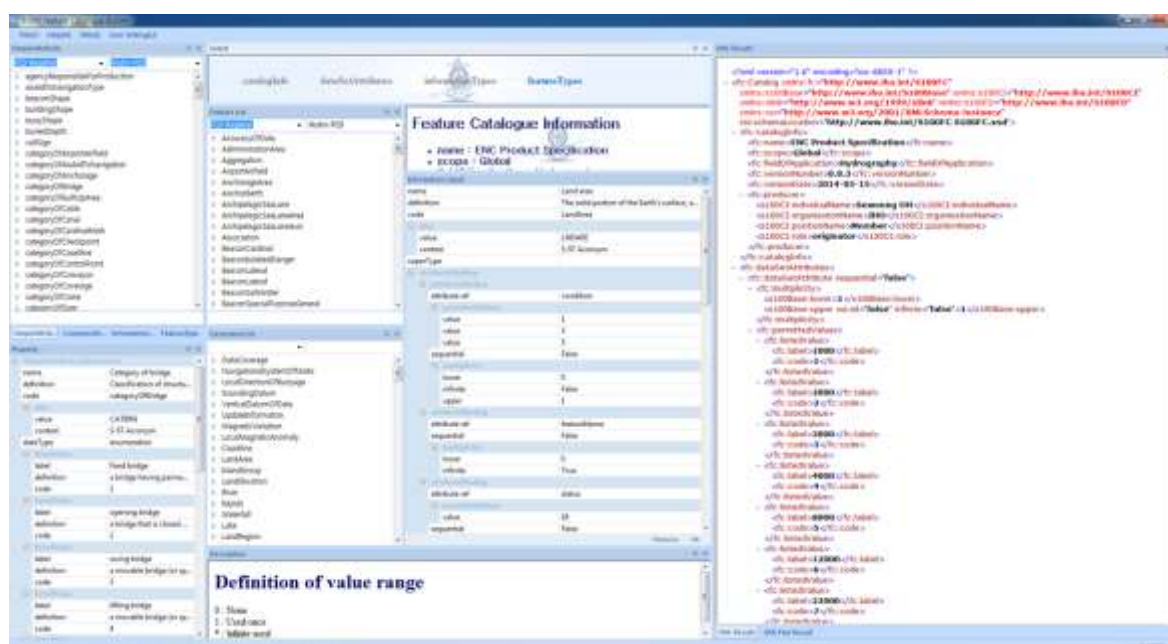

Fig. 1 Screen Image of Feature Catalogue Builder

After the combined 28th TSMAD and 6th DIPWG Meeting, the following actions have been implemented for improvement:

- Feature Binding and Information Binding functions were further enhanced
- Permitted Value setting function for simple attribute was newly added
- Errors in S-101 Feature Catalogue were identified and corrected
- S-101 Feature Catalogue Version 0.8.7 was provided

In the meantime, the following 12 comments were received regarding S-101 Feature Catalogue. Eight (8) comments have already been considered and reflected. The TSM meeting is invited to consider the remaining four (4) comments. Detailed information is provided in the TSMAD_TSM2_02.1B (Annex A of TSM2_02.1A).

1. [Low Priority] Prefix declared for the catalogue does not really reflect the domain. S100FC could be a more indicative choice **[Done]**
2. [High Priority] Class names do not follow the model i.e. 'S100_FC_FeatureCatalgue' is simply done as 'Catalog' **[Done**]
3. [High Priority] Extra elements are present in the catalogue which are not covered by the model i.e. fc:catalogInfo, fc:dataSetAttributes **[Planned]**
4. [Low Priority] The definitions sources (FC_DefinitionSource) and links to them are not present **[Planned]**
5. [Low Priority] Extra namespaces are defined (s100CI to handle CI_ResponsibleParty) **[Planned]**
6. [Middle Priority] Some roles are not present for (all feature types, information types etc.) should be handled as items under S100_FC_FeatureCatalgue element **[Done]**
7. [Low Priority] S100_FC_Item.remarks are frequently not present even when present in DCEG **[Planned]**
8. [Middle Priority] S100_FC_Item.alias should be a string but it is handled as complex type consisting of a value and a context; **[Done]**
9. [Middle Priority] S100_FC_AttributeBinding has two essentially the same types of associations (permittedValues, attribute) **[Done]**
10. [High Priority] Role code for spatialQuality from 'provides' to 'identifies' but 'identifies' is not listed as a valid role code in the FC **[Done]**
11. [High Priority] UnderwaterAwashRock is missing attribute binding qualityOfSoundingMeasurement according to the DCEG **[Done]**
12. [High Priority] Missing of features of information type binding to SupplementaryInformation **[Done]**

One of the key changes requested was that each element name of S-101 Feature Catalogue should be same as the class name of S-100 Ver. 2.0 Feature Catalogue Data Model. To implement this change, it was required to revise S-100 Schema, and then partial revision work was conducted. At TSMAD TSM 2, the results of S-100 Schema revision taking the S-100 Ver. 2.0 into consideration will be presented. The meeting is invited to discuss the direction of future implementation.

Action Required of TSMAD TSM
The TSMAD TSM is invited to:

a. take note of this initiative;
b. discuss the revision requirements of S-100 Feature Catalogue Builder and outstanding issues ;
c. discuss the revision of S-100 Schema taking S-100 Ver. 2.0 into consideration.