

4. Portrayal Register (only for Point, Line Style, Area Fill, Colour, Font)
Presentation colour of symbols has been improved by CSS (Cascading Style Sheets) file replacement and this improvement had a validation check through test registry server. Preview image error of BLOB type was fixed using images from 7cs.
5. Product Specification Register
Product specification register has been introduced to manage various products based on S-10X and share product specification files for related S/W.
6. Producer Code Register
The producer code service will be developed in the GI registry as present IHO data producer codes website.
7. Test bed
Test bed webpage will be developed in order to share the test catalogue and test data sets for developing Product Specifications.
8. New interface of S-100 GI Registry has being developed for improved approval process and user friendliness (figure 2).

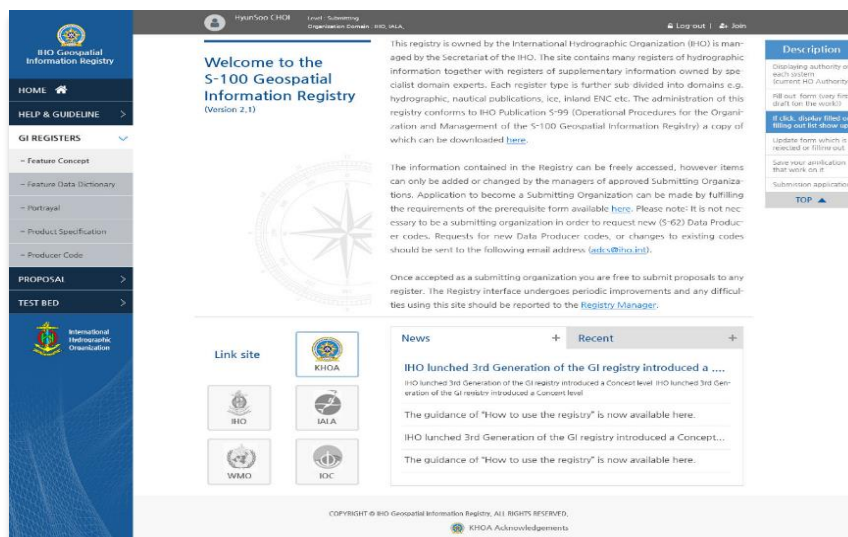


Figure 2. New interface of S-100 GI Registry

Summary of Database Model for Registry and Register

KHOA analysed IHO S-100, S-99 standard and FC UML to improve registry database model. Results of analysis are as follows.

1. Codelist, codelist value
Codelist item type was moved to simple attribute's data type and codelist value item type was moved to enumerated value's data type to follow the S-100 FC UML.
2. Concept Register DB
Concept register DB has been developed and present FCB approval process's several parts (name, definition, camelcase, reference, etc.) have been moved to concept register approval process.
3. Overview of new database model
Present registry and DB for two registers will be improved to five registers through this improvement. In addition, metadata for registry operation and user management will be developed (figure 3).

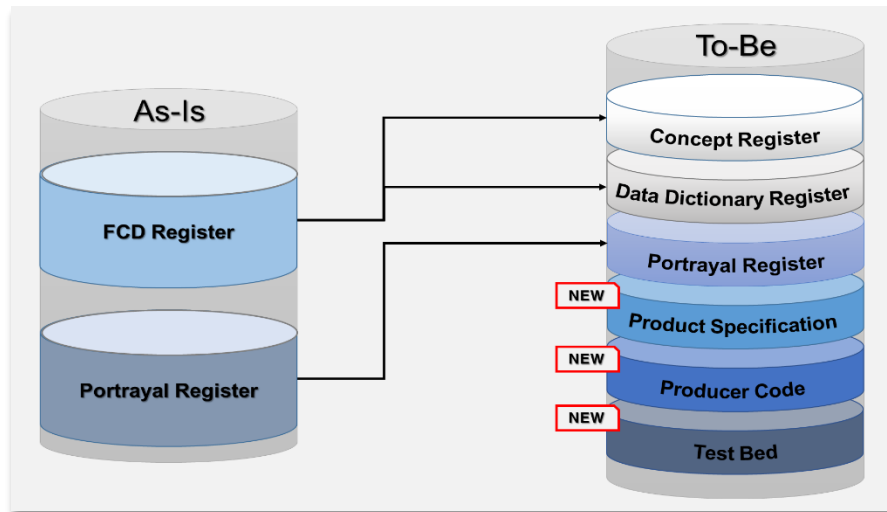


Figure 3. Overview of new database model

Discussion/Conclusions

While the improvement on the registry and database model has been made, there are some issues as described below:

- 1) Domain concept: Items (dictionary data, portrayal) do not belong to each submitted domain according to concept register introduction. Any items can be used in whole domain and this concept should be applied to portrayal register.
- 2) S-32 hydrographic dictionary: S-32 DB or website needs to be connected to concept and item of registry.

NEW registry of this improvement will be made available after the test operation in January 2018.

Action Required of S-100TSM

The S-100TSM5 is invited to:

- a. Note the progress reported in this paper
- b. Discuss pending issues brought up in this paper