

Liaison Note from SNPWG

IHO Geospatial Information Registry

Desirable Components and Tools

Submitted by:	SNPWG
Executive Summary:	A summary of IHO registry components and tools needed for preparing S-100 Product Specifications
Related Documents:	(1) S-100 Ed. 1.0.0
Related Projects:	(1) S-100

Introduction / Background

There have been several exercises in preparing S-100 product specifications carried out as part of SNPWG work and other places. These exercises have identified some needs for the IHO registry that are specific to the task of developing product specifications. This liaison note describes current ideas in SNPWG concerning registry components and tools needed for preparing Product Specifications.

Terms and Abbreviations

FCD	Feature Concept Dictionary
MPA	Marine Protected Area
PS	Product Specification as defined in S-100
XML	eXtensible Markup Language

References

[S-100] Universal Hydrographic Data Model, Edition 1.0.0, January 2010.

[S-101] Electronic Navigational Chart Product Specification; Phase 4, June 2012.

[WIKI] SNPWG Wiki at http://www.fuerstenberg-dhg.de/mediawiki/index.php/Main_Page

Desirable tools and components for the registry

Discussions in the working group identified the following needs and wants for the IHO Geospatial Information Registry:

Sandbox for development of features and attributes

A work area for feature/information classes and attributes, where concepts that are under development can be entered with an “under development” status (meaning that no action by the registry manager or control bodies is requested). The sandbox would be used by working groups for developing proposed concepts and bindings. One lesson learnt from the SNPWG Wiki work was that the capability of allowing users to add comments is essential.

Other significant requirements are functionality to convert an “under development” item into a proposal for a new or updated registry item, and the ability to copy an existing item into the sandbox for update workup. In general we need all functions a wiki offers including a “What links here” and “Recent changes” functions.

It is also proposed that new features, attributes and enumerated values being used in the Sandbox facility, can be viewed (via the registry interface) so that two (or more) communities do not develop parallel concepts at the same time.

Priority: High

Sandbox for development of feature catalogues

This is similar to the feature/attribute sandbox, but intended for the development of product specifications for different products. The functionality differs in that this sandbox is intended for making collections of features and information classes for specific data products. There are currently ideas being considered for multiple “lightweight” products in a domain (e.g., marine protected areas, piloting, radio signals, etc.) and a sandbox where the data models for such product can be worked on might be useful.

This sandbox might be merged into the Feature Catalogue Builder (see below), depending on what capabilities that tool provides.

Priority: High

Feature catalogue builder

A tool to generate the feature catalogue for a product specification is needed. We believe this is under development. Desirable functionality would include the ability to select feature/information classes from the registry FCD(s), indicate attribute bindings (including multiplicity), and store collections of such selections for future use or updates to product specifications. The FC builder should be able to generate feature catalogues both in XML and printable forms.

Other desirable functionality includes the ability to export tables of feature classes, information classes, and attributes for use in preparing printable product specifications.

For use in the printed versions of product specifications, generation of MSWord, OpenOffice (or another format which can be imported into these word-processing tools and further edited) is desirable. Export into XML and CSV formats as an interim solution may be acceptable.

Priority: High

Registry bulk loading

Tools or procedures to bulk load FCD and FC entries, at least in an ad hoc manner for initial population of the registry. It might be sufficient to specify a spreadsheet format and provide support for bulk loading.

Priority: Medium

DCEG templates

This includes functionality to store templates for feature, information, and attribute types, and generate skeleton pages for the DCEG from these templates. Generation of MSWord, OpenOffice (or another format which can be imported into these word-processing tools and further edited) is desirable.

Priority: Medium

Schema repository

A permanent repository for XML schemas developed for different product specifications. This should be designed to also provide permanent locations for XML schemas defining types used in multiple domains (e.g., an XML schema defining an enumeration type for ISO country codes).

Consider also whether this schema repository should be part of the IHO registry web site or a separate IHO service.

Priority: Medium

Registers for code lists and widely-used enumerations

Widely-used lists like ISO country codes, time zones, etc., might be conveniently managed separately from domains. The idea is analogous to the “Producing Agency Codes” register already on the IHO Registry.

Priority: High

Other desirable features include a product specifications register and search functionality – these are not described separately in this note because we understand they are already on the to-do list for the registry.

Conclusion

This note sketches out certain tools and components SNPWG considers necessary or desirable for the IHO registry. Discussions with SNPWG on priorities, schedules, developing detailed requirements, actions, and implementation are invited.

Action Required of TSMAD

TSMAD is invited to:

- note this paper
- liaise with SNPWG on priorities, schedules, requirements, and implementation
- provide a time schedule when the listed functions are planned to be ready for use.