

2nd S-100WG MEETING
Genoa, Italy – 15-18 March 2017

Paper for Consideration by the S-100 Working Group (S-100WG)

Review and Consolidation of IHO Geospatial Information (GI) Registry Content

Submitted by:	IHO Secretariat (TSSO).
Executive Summary:	TSSO experience so far with the assessment and processing of proposals to the IHO GI Registry indicate that a complete review and consolidation of the content of the Registry is required.
Related Documents:	<ol style="list-style-type: none"> 1. IHO Publication S-99 - <i>Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry.</i> 2. S-100WG2-09.4A - <i>Guidelines for Proposals to the IHO Geospatial Information Registry and Formation of an IHO GI Registry Project Team.</i>
Related Projects:	Development of the IHO Geospatial Information Registry; S-100 based Product Specification development.

Introduction / Background

The IHO Geospatial Information (GI) Registry became operational in October 2016. From this time the Register Manager (Technical Standards Support Officer (TSSO) at the IHO Secretariat) for the Feature Concept Dictionary (FCD) Register began processing proposals for the inclusion of new items in the Register.

Due to:

- Various iterations of the Registry (and Register population processes) since it was first conceptualised;
- The lack of a dedicated Registry and Register Manager(s);
- Reliance for initial FCD Register population on the S-57 Object Catalogue; and
- A lack of guidelines for Submitting Organizations, Domain Control Bodies and Register Manager(s),

there are multiple instances of duplication (and near duplication) within the Feature Concept Dictionary (FCD) Register. These factors have also contributed to inconsistent/incomplete FCD Register content (format, definitions etc.) and confusion for Submitting Organizations, Domain Control Bodies and the Register Manager in decision making for proposal development and evaluation.

Analysis / Discussion

TSSO observations of the FCD Register content while processing proposals have identified the following issues:

- Numerous duplication of registered items – typical cases include:
 - Same item, item type etc.;
 - Same item, different item type, slightly different metadata;
 - Same item, different Domain;
 - Similar item, different type, same Domain;
 - Similar item, different Domain.
- Prohibitively long feature names (name and definition the same), e.g. “Thin First Year Ice Stage 1 (30 to <50 cm) - Ice Stage of Development (SS)”;
- Incomplete registered items, e.g. missing name; missing camelCase; missing definition (legacy from previous versions of the Registry?);
- “Narrow” scope of registered items, i.e. name/definition taken directly from S-57, therefore specific to nautical chart (ENC) application. This makes such items in many cases unsuitable for adoption in other S-100 based Product Specifications, with the result that other Domains are proposing essentially the same concepts, however having different names and slightly different definitions, sometimes with a similar narrow scope in application specific to their Product Specification.

These, and other factors principally related to a lack of conventions and guidelines for proposals to the IHO GI Registry (see S-100WG2-09.4A), have resulted in extremely inconsistent and varied content in the FCD Register. It is also considered that the content of the FCD Register is not conformant with the principles for Registry content as outlined in S-100/S-99 and associated ISO Standards.

It is proposed that, in order to rationalise the content of the FCD Register; and provide Register content that is concise yet suitable for application in the diverse range of S-100 based Product Specifications and related applications specific to hydrography, a full review of the current FCD Register content be conducted. This review must be conducted to align with guidelines and conventions for Register content (under development – see S-100WG2-09.4A). It is further suggested that the outcome of such a content review could be coordinated with the implementation of a “true” Concept Register (if established - see S-100WG2-09.3A) such that the resultant content of this Register would be “clean” in terms of compliance with accepted guidelines and conventions for Register proposals and content.

Additional considerations:

- It is considered important that such a content review be conducted as soon as possible, so as to have a little impact as possible on S-100 related Product Specifications in development.
- The content review is not intended to comment or impact on the modelling constructs that have been done for specific S-100 based Product Specifications. The main impact of the review on Product Specification development will likely be the re-naming of concepts (features/ attributes/ enumerates) within these constructs.
- The work will be coordinated by the TSSO, as the FCD Register Manager, with assistance from the IHO GI Registry Project Team (if established) and input from the FCD Control Body as required. Changes will be applied using the Registry proposal process so as to retain a full history of the changes made.

Conclusions

The content of the FCD Register in the IHO GI Registry is inconsistent and in some cases may be considered to be inappropriate. A complete systematic review of the content of the FCD is required, to rationalize the Register content and align all registered items in conformance with accepted IHO GI Registry content conventions and guidelines.

Recommendations

1. S-100WG to approve a full review of the content of the FCD Register of the IHO GI Registry so as to rationalise the content of the Register to conform to IHO guidelines and conventions for Register content (proposed Annex to S-99).
2. S-100WG to approve that this work be coordinated by the TSSO, with assistance from the IHO GI Registry Project Team (if established) and input from the FCD Control Body.

Justification and Impacts

Rationalized and standardized Register content will be a key enabler in ensuring consistency and interoperability in S-100 based products and services.

It is hoped that by conducting such a content review at this early stage in the operation of the Registry, there will be a minimal impact on Product Specifications in development. However it is expected that there will be some impact on these Product Specifications as existing registered concepts are rationalized (e.g. many concept names are likely to change). The TSSO, as the FCD Register Manager, will assume the bulk of the responsibility and work in conducting the content review as part of the “day to day” responsibility of the Register Manager, with input from the IHO GI Registry Project Team (if established) and the FCD Register Control Board as required.

Action required of S-100WG

The S-100WG is invited to:

- a. **Note** this paper.
- b. **Approve** the content review of the FCD Register, and assign the task to the TSSO as the FCD Register Manager, with assistance from the IHO GI Registry Project Team and the FCD Register Control Board as required.