

Paper for Consideration by S-101PT

DCEG Changes for S-101 Edition 2.0.0

Submitted by:	IHO Secretariat
Executive Summary:	Ongoing review of the S-101 DCEG continues as a result of the IHO GI Registry content review and decisions made at the GI Registry Workshop and S-100WG4 meeting (February 2019).
Related Documents:	S-101 Annex A – Data Classification and Encoding Guide.
Related Projects:	IHO GI Registry content review and standardization.

Introduction / Background

1. Since the publication of S-101 Edition 1.0.0 in December 2018, progress has been made on various components of the S-100 infrastructure. In particular, progress on the Guidelines and Conventions for IHO GI Registry Content document (S-99 Annex A); and decisions taken at the S-100WG4 meeting in February 2019, have enabled the progression of amendments to the contents of the FCD Register of the GI Registry so as to provide consistent content for population of the Concept and Data Dictionary Registers of the “new” Beta Registry. These amendments to the FCD Register content impact on the S-101 data model, and therefore Annex A to S-101 – Data Classification and Encoding Guide. This paper introduces the draft changes made so far for consideration of the S-101PT.

Analysis/Discussion

2. At the IHO Geospatial Information (GI) Registry Workshop and S-100WG4 meetings (Aalborg, Denmark – 25 February – 01 March 2019), a number of fundamental conventions regarding the structure and syntax for items registered in the IHO GI Registry were approved. This has resulted in the commencement of a programme to apply these conventions to the current Feature Concept Dictionary (FCD) Register content so as to provide consistent content for migration to the “Beta” Registry Concept and Data Dictionary Registers.
3. As these changes have been made applied to the FCD Register, corresponding draft amendments have been made to the new draft of S-101 Annex A – Data Classification and Encoding Guide (DCEG). In addition, a number of suggested amendments have been made based on outstanding discussion items from the development of Edition 1.0.0 of the DCEG, for consideration of the S-101PT.
4. The results of the initial evaluation of the FCD Register content, which were used to inform the decisions made by the S-100WG regarding fundamental Registry conventions, have been included in a spreadsheet “IHO GI Registry FCD Register Content Review”. This spreadsheet is being incrementally updated as amendments to the FCD Register content are made, and can be found on the S-100WG page of the IHO web site (http://www.iho.int/srv1/index.php?option=com_content&view=article&id=626&Itemid=978&lang=en), in the Miscellaneous section at the bottom of the page.
5. The draft DCEG Edition 2.0.0 is included as an attachment to this Agenda item, with all changes made to Edition 1.0.0 indicated using track-changes. In addition, the DCEG Change Log spreadsheet detailing the changes made (indicated by a date in the “Date Applied” column) is also included as an attachment. A summary of the main changes made is as follows:
 - Clause 2.2 (Table 2.1): Add missing feature **Coastline** to list of features and allowable geometric primitives.
 - Clause 5.3: Amend definition for feature **Coastline** to the IHO Hydrographic Dictionary definition.
 - Clause 6.1: Amend definition for feature **Built-Up Area** to the DGIWG FDD definition; and adapt this definition to account for built-up areas encoded over water.
 - Clause 16.4: Amend definition for feature **Anchor Berth** to the IHO Hydrographic Dictionary definition.
 - Clause 20.6: Amend definition for feature **Coast Guard Station** to the IHO Hydrographic Dictionary definition.
 - Clause 27.1: New Boolean type attribute **based on fixed marks** added to replace enumerated type attribute **category of recommended track**.

- Clause 27.2: Amend definition for **beacon shape 6** (cairn) to the IHO Hydrographic Dictionary definition.
 - Clause 27.4: Amend names for various enumerate values for **buoy shape** (consistency – convention approved at S-100WG4).
 - Clause 27.16: Amend name for **buoy shape 1** (consistency – convention approved at S-100WG4).
 - Clause 27.17: Amend definition for **category of crane** of 5 to be consistent with Registry.
 - Clause 27.25: Amend definition for **category of fog signal** of 7 to be consistent with Registry.
 - Clause 27.31: Amend names for various enumerate values for **category of installation buoy** (consistency – convention approved at S-100WG4).
 - Clause 27.33: Amend name for **category of landmark 10** (consistency – convention approved at S-100WG4).
 - Clause 27.34: Amend definition for **category of lateral mark** so as to include other types of marks than buoys.
 - Clause 27.38: Amend name for **category of mooring/warping facility 6** (consistency – convention approved at S-100WG4); and definition to the IHO Hydrographic Dictionary definition.
 - Clause 27.40: Add new value for **category of obstruction** of 21 (submarine volcano).
 - Clause 27.40: Amend definition for **category of obstruction 14** (artificial reef) to an authorized definition.
 - Clause 27.41: Amend name for **category of offshore platform 4** (consistency – convention approved at S-100WG4).
 - Clause 27.49: Amend name for **category of pylon 3** (consistency – convention approved at S-100WG4).
 - Clause 27.52: Amend name for **category of radio station 14** (consistency – convention approved at S-100WG4).
 - Clause 27.58: Amend various names for values of **category of sea area** to IHO Hydrographic Dictionary or B-6 definitions.
 - Clause 27.109: New Boolean type attribute **IMO adopted** added to replace enumerated type attribute **category of traffic separation scheme**.
 - Clause 27.176: Amend names for various enumerate values for **topmark/daymark shape** (consistency – convention approved at S-100WG4).
6. Pending approval of the changes made so far by the S-101PT, it is intended to continue applying similar changes to the DCEG, until the FCD Register review is completed. It is anticipated that this review will be completed before the end of 2019.

Recommendations

7. The S-101PT is requested to approve the changes made to the DCEG as applied in the accompanying draft redline document; and approve the continuing review of the document based on the ongoing review and standardization of the IHO GI Registry FCD Register content.

Justification and Impacts

8. The work done so far is the continuation of the process of harmonizing the S-101 DCEG with the IHO GI Registry. This work is also the beginning of a much larger process aimed at providing a single source for authoritative definitions of hydrographic-related terms spanning the Registry, derived S-100 based Product Specifications and the Hydrographic Dictionary (as well as any other IHO Publications such as B-6 that contain definitions); with the IHO GI Registry as the principle focus point.

Action Required of S-101PT

9. The S-101PT is invited to:
- a. **Discuss** this paper and its attachments;
 - b. **Approve** the draft changes made to the S-101 DCEG;
 - c. **Approve** the continuation of the review of the S-101 DCEG in tandem with the ongoing standardization of the IHO GI Registry FCD Register;
 - d. **Recommend** any further action.

Attachments:

1. Redline draft S-101 DCEG Edition 2.0.0
2. DCEG Change Log spreadsheet