

6th HSSC Meeting
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Need for S-100 Registry Support: U.S. Response to HSSC6-04.3A

Submitted by:	United States of America
Executive Summary	The need for a dedicated resource to manage the routine operations of the S-100 Registry <i>AND</i> to contribute to the ongoing development of S-100 and S-100 based products is discussed. The HSSC is asked to consider developing a concrete plan to clearly identify the skills required and a strategy to fill the position in as short a time as possible.
Related Documents:	CONF.EX5/REP.02, Report on the Technical Capacity of the IHB
Related Projects:	HSSC6-04.3A, Outcome EIHC-5 Affecting HSSC S-100 and S-100 based product developments

Introduction / Background

The recent *Report on the Technical Capacity of the International Hydrographic Bureau*, presented to the 5th Extraordinary International Hydrographic Conference (EIHC-5), noted:

“To ensure reliability and an appropriate level of support to users, the maintenance and day to day management of the S-100 Registry requires a dedicated registry manager. Since its inception, the S-100 Registry has been managed by the Chair of the Transfer Standard Maintenance and Application Development (TSMAD) WG on a part-time basis, through the generous and continuing support of UK.”

“Failure in performance of the Registry or of the S-100 standard and its dependent and associated standards will now have a serious impact on the reputation of the IHO and its participating Member States.”

Proceedings of EIHC-5, which was just held last month, have not been published yet, but HSSC document [HSSC6-04.3A, Outcome EIHC-5 Affecting HSSC](#) notes that Conference agreed that, “the recruitment of an IHB staff member to undertake the duties of S-100 Registry Manager should be given priority as soon as an opportunity occurs.

Analysis/Discussion

The U.S. agrees with the technical capacity report; if the Registry fails to meet the expanding needs of the budding community of S-100 based product developers¹, it will have a serious impact on the credibility of the IHO. More importantly, failure to adequately support maintenance and expansion of the registry will diminish confidence in S-100 as a viable model for developing the many emerging products that will enable enhancing the functionality of ECDIS and e-navigation capabilities.

Given the strain already evident in supporting S-101 in the registry, the U.S. believes the IHO cannot afford to wait until “an opportunity occurs” to act. The TSMAD Chair, who is currently developing and maintaining the registry (in addition to the other TSMAD work that he does in his two-days-per-week part-time position) could decide to retire or simply become overwhelmed by the mounting needs of other S-100 based products.²

¹ There are already over 20 S-100 based products that have been assigned names and specification numbers (see Annex A).

² One can get an idea of the growing tempo of registry use by reviewing the sample of references to the registry made in papers submitted to HSSC-6 (see Annex B).

Recommendations

- HSSC should act now to identify the required skills, education and experience needed to fill the position of Registry Manager.
- IHB should consider other options for filling the need, such as use of a contractor or other types of resources.
- HSSC and IHB should develop a plan for implementing a registry maintenance solution within six months.

Justification and Impacts

Failure to act in a timely manner to ensure the sustainability of the S-100 Register may severely impact the future development and acceptance of S-100 and S-100 based products.

Action Required of HSSC

The HSSC is invited to:

- a. **Note** the commendable efforts of the TSMAD Chair in developing and maintaining the Registry up to this point.
- b. **Note** the risks of not planning for a near-term permanent registry maintenance solution.
- c. **Establish** a small project team to identify the required skills, education and experience needed to fill the position of Registry Manager.
- d. **Consider** other options for filling the need, such as use of a contractor or other types of resources.
- e. **Develop** a plan for implementing a registry maintenance solution within six months.

Named S-100 Based Product Specifications Annex A

1. IHO S-101 ENC
2. IHO S-102 Bathymetric Surface
3. IHO S-103 Sub-surface Navigation
4. IHO S-111 Surface Currents
5. IHO S-121 Maritime Limits and Boundaries
6. IHO S-122 Marine Protected Areas;
7. IHO S-123 Radio Services
8. IHO S-124 Navigational warnings
9. IHO S-125 Navigational services
10. IHO S-126 Physical Environment
11. IHO S-127 Traffic Management
12. IHO S-1xx Marine Services
13. IHO S-1xx Digital Mariner Routeing Guide
14. IHO S-1xx Harbour Infrastructure
15. IHO S-1xx (Social/Political)
16. IALA S-201 Aid to Navigation Information
17. IALA S-20x Inter-VTS Exchange Format
18. IALA S-20x Application Specific Messages
19. IALA S-20x (Maritime Safety Information)
20. IEHG S-401 Inland ENC
21. JCOMM S-411 Sea Ice
22. JCOMM S-412 Met-ocean forecasts

HSSC6-04.2A Report of the Correspondence Group on HSSC Working Groups' Restructuring (CGHR)

- 31. UK suggests that if the new structure is approved then the DQWG should be considered as a project below the NICWG. Australia recommends migrating the Hydrographic Dictionary into a register of the S-100 GI Registry.

HSSC6-04.3A Outcome of EIHC-5 affecting HSSC

- 6. that the recruitment of an IHB staff member to undertake the duties of S-100 Registry Manager should be given priority as soon as an opportunity occurs.

HSSC6-05.1B rev1 Proposed registry based procedure for the allocation of S-100 product specification identifiers

- "TSMAD to prepare a detailed registry based procedure for the allocation of product specification identifiers." Implementation of this proposal will require changes to the GI Registry and S-99 which are to be considered.

HSSC6-05.4A rev1 Report of the Standardization of Nautical Publications WG (SNPWG)

- The resulting collection of features and attributes is ready to be listed within the Geospatial Information (GI) Registry.
- Although various suggestions have been made by the SNPWG at HSSC5 to improve the GI Registry performance, the GI Registry has remained in the previous status during the last reporting period. It is still not possible to incorporate elements to the relevant register in a sufficient way. Neither the "sandbox" nor the bulk loading functions are available (see HSSC5-05.4A).
- SNPWG progress in populating elements to the NPUP register is limited because of this lack of progress with the GI registry.
- Although knowing that the context features and some MPA attributes may require revision, the SNPWG is working on an MPA Feature Catalogue (FC) with a special Feature Catalogue Builder (FCB) outside the IHO GI Registry.
- Having considered the need for an effective working tool to develop and maintain the SNPWG data dictionary and having considered the lack of functionality of the IHO registry, the SNPWG used the SNPWG Wiki for the data model development.
- Dependent on the development of the Product Specifications, the relevant items of the dictionary will be moved to the NPUB GI register as soon as its functionality support this.

HSSC6-07.3A Status Report on Inland ENC Development and Standardization

- The Inland ENC domain within the S-100 registry is up-to-date.
- IEHG will also follow the developments of the Portrayal Register, and intends to establish an Inland ENC Portrayal domain once the final specifications become available.
- Portrayal – the IEHG intends to ...establish an Inland ENC Portrayal Domain in S-100 ... Utilize SVG symbols [and] ... Register all inland specific symbols
- Of concern to the IEHG is the status of the existing IHO S-100 Registry. The current register contains enumerated attribute values that are presently being used in the production of IENCs. During the assessment and comparison of the existing IENC Feature Catalogue to the S-101 Data Classification and Encoding Guide (DCEG) it was discovered that there are a number of enumerated values in the DCEG which conflict with the enumerated values in the S-100 Registry. The IEHG would like assurance that the enumerated values that are already

registered within the HYDRO and IENC registers will remain intact and will not be changed with the adoption of the DCEG.

HSSC6-07.9Ab Development of the S-100 based Ice Information Product S-411

- Feature catalogue is already in IHO registry (FCD Register “ICE”).

HSSC6-07.9B S-412 Weather Overlay Project Update

- September 2014: Applied to IHO for ETMSS to become a Submitting Organization (able to apply for an IHO registry)
- November & beyond: IHO Registry (Registry application, feature/attribute input into online IHO database and feature catalog builder)