

**7th IHO-HSSC Meeting
Busan, Republic of Korea, 10-13 November 2015**

Status Report on Inland ENC Development and Standardization

Submitted by:	Inland ENC Harmonization Group (IEHG)
Executive Summary:	This paper describes the activities of the IEHG as it relates to Inland ENC development/implementation in Europe, North and South America, Russia and Asia. An explanation is provided about the activities of IEHG in regard to the S-100 GII Registry, S-99 and IHO Working Groups.
Related Documents:	IHO S-57 Edition 3.1 → IHO S-100 → IHO S-101; S-99
Related Projects:	HSSC and S-100WG Work Plans

Current Activities

2015 Annual Meeting

The 13th Meeting of IEHG was held from 13-15 October 2015 in Nanjing, Peoples Republic of China. Twenty-nine (29) persons attended including representatives from four major regions (Europe, North and South America, Asia). Key topics for discussion included updates on IENC activities in the various regions, review and acceptance of change requests, status of IHO S-100, S-99 and S-101 development, IEHG participation in S-100 Registry, the future alignment with IHO S-100 based standards and IEHG S-401 developments.

Alignment with new IHO S-100, S-99 and S-101

The Inland ENC domain within the S-100 registry will be brought up-to-date as soon as the registration of new elements is possible again. IEHG continues to follow the development of S-101 and intends to align the Product Specification for Inland ENCs with the new Product Specification for 'maritime' ENCs. 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. Referencing the 5th HSSC Meeting, Shanghai, China, IEHG plans to name the future Inland ENC Product Specification: **IEHG S-401 Inland ENC**.

Producer Identifier IEHG
Organization Inland ENC Harmonization Group
Identifier IEHG S-401

Change Requests

At IEHG13, four (4) Change Requests were reviewed, all of which were adopted. Change requests that affect the Inland ENC Product Specification (2.4) will not be implemented until the release of the next production specification.

Effective Dates of IENC Standards

The following table provides a summary of editions, version numbers, and effective dates of the various IENC related standards.

Feature Catalogue & Product Spec	Date effective	Encoding Guide	Date effective	Validation Checks	Date effective
2.0		1.0	Oct 2005		
	---	1.1	Oct 2006		
	---	1.2	Dec 2006		
2.1		1.3	Feb 2008		
	---	1.3.1	May 2008	2.1	Jun 2010
2.2	Feb 2010	2.2.0	Feb 2010		
2.3	Feb 2011	2.3.5	Mar 2013	2.3.5 corr 1	Oct 2013

2.3 corr. 2	Apr 2013	2.3.6	Jul 2014		
2.4	[Fall 2015]	2.4	May 2015		
IEHG S-401 (to be aligned with S-101)	[tbd]				

Alignment of IEHG S-401 with IHO S-101

At IEHG13 meeting, several IHO S-101 development-related matters were discussed:

- 1) Portrayal – the IEHG intends to:
 - a. align its approach with S-101 Portrayal domain
 - b. use S-101 symbols where possible; inland-specific symbols have been agreed and will be produced by the end of 2015
 - c. establish an Inland ENC Portrayal Domain in S-100
 - d. Utilize SVG symbols
 - e. Register all inland specific symbols
 - f. use of the Portrayal Catalogue Builder when made available
- 2) Feature Catalogue – IEHG planned approach:
 - a. follow S-101 as much as possible to ensure compatibility
 - b. the feature catalogue will use the features of S-101 which are currently described in the IENC EG and features that might be needed for inland waterways in the future, and all attributes and enumeration of the included S-101 features and all inland specific elements will be included
 - c. continue to use the Encoding Guide as the central element of standardization.
 - d. use of the Feature Catalogue Builder when finalized
 - e. IEHG has performed tests of the draft FC builder and delivered feedback
- 3) Product Specification: The June 2015 draft of the S-101 Product Specification has been used as the basis for a draft S-401 Product Specification which has been discussed in detail at IEHG 13.

The status of the existing IHO S-100 Registry is still of concern to the IEHG. 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.

Inland ENC Website

All Inland ENC publications and functions are hosted at a consolidated Inland ENC site: [<http://ienc.openecdis.org>].

Key publications include:

- IEHG Product Specification, Ed. 2.1/2.2/2.3/2.4 (May 2015)
- Feature Catalogue, Ed. 2.1/2.2/2.3/2.4corr1 (May 2015)
- Encoding Guide, Ed. 1.3.1/2.2/2.3.6/2.4.0 (March 2015)
- Recommended Validation Checks for Inland ENCs, Ed. 2.1/2.3corr1 (October 2013)

The site also contains:

- Information about the work of the IEHG (Terms of Reference, Meeting Minutes, presentations, etc.)
- Status of IENC coverage and availability (as reported by region)
- Papers related to Inland ENC matters
- Links to authorities who are producing Inland ENCs
- Companies who are providing Inland ENC applications.

Discussions regarding Inland ENC-related issues may be found on the IENC Discussion Forum: [<http://operations.usace.army.mil/nav/IEHG/start.cfm?Option=Login>]

Date/location for 14th Annual IEHG meeting

10 – 13 October 2016, Manaus, Brazil

Submitted by:

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Action Required of HSSC

HSSC7 is invited to:

- Monitor the developments of the IHO S-100 Register as it relates to the Inland ENC domain to ensure that enumerated values within the register which are already in use by the IEHG are maintained.

 - Note the activities related to Inland ENC standards development and implementation.
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