6th IHO-HSSC Meeting
Viña del Mar, Chile, 11-14 November 2014

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 TSMAD Work Plans

Current Activities

2014 Annual Meeting
The 12th Meeting of IEHG was held on 6-9 October 2014 in Berlin, Germany. Twenty-two (22) 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, and future alignment with IHO S-100 based standards.

Alignment with new IHO S-100, S-99 and S-101
The Inland ENC domain within the S-100 registry is up-to-date. 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 IEHG12, sixteen (16) Change Requests were reviewed, most of which were adopted. The next edition of the Inland ENC Product Specification (2.4) is expected to be presented at IEHG 13 (fall 2015). All Change Requests which have been adopted since 2011 which affect the feature catalogue will be included in the next edition (2.4).

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	[Spring 2015]		
IEHG S-401 (to be aligned with S-101)	[tbd]				

Alignment of IEHG S-401 with IHO S-101
At IEHG12 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; focus will be on inland-specific objects
   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 only the features of S-101 which are currently described in the IENC EG, however all attributes and enumeration of 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 made available
3) Product Specification: The IEHG will utilize S-101 as the basis for its Product Specification; a draft is planned to be presented at IEHG 13.

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.

Inland ENC Website
All Inland ENC publications and functions are hosted at a consolidated Inland ENC site: [http://ienc.openecdis.org].
  Key publications include:
    IENC Product Specification, Ed. 2.1/2.2/2.3 (May 2011)
      Feature Catalogue, Ed. 2.1/2.2/2.3 (April 2013)
      Encoding Guide, Ed. 1.3.1/2.2/2.3.6 (July 2014)
    Recommended Validation Checks for Inland ENCs, Ed. 2.1/2.3 (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 13th Annual IEHG meeting
    September / October 2015, Location TBD

Submitted by:
 Co-Chairs:
    Bernd Birklhuber, Federal Ministry of Transport - Austria (Bernd.Birklhuber@bmvit.gv.at)
    Denise LaDue, U.S. Army Corps of Engineers (Denise.R.LaDue@usace.army.mil)
Vice Chairs:
    Flavia Mandarino, Directorate of Hydrography and Navigation - Brazil (flavia@chm.mar.mil.br)

FEI Weijun, Waterborne Transport Institute of the Ministry of Transport of the Peoples Republic of China (fwj@wti.ac.cn)

Technical Coordinators:

North America - Brian Tetreault, US Army Corps of Engineers (Brian.J.Tetreault@usace.army.mil)

Europe - Pieta Kluytenaar, Serendipity, Unlimited. (pieta@serendipity.nl)

Russian Federation - [currently vacant]

South America - Angel Terry, Jeppesen Marine (Angel.Terry@jeppesen.com)

Asia - Yong Baek, Korean Hydrographic and Oceanographic Administration (ybaek@korea.kr)

Action Required of HSSC

HSSC6 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.

_____