Inland ENC Harmonization Group

13 - 15 October 2015

Nanjing, China

Welcome, introduction, organization

Many thanks to Zhang Hua for the organization of the meeting!

Introductions

Organizational details**:**

please copy your presentations to the USB-stick

All presentations will be published at http://ienc.openecdis.org

Agenda

1. Welcome, introduction of participants, organizational details
2. Inland ENCs and IEHG: status of implementations in the regions
3. Inland waterways, navigation and cartography of new participants
4. Inland ENC applications
5. Working methods of IEHG
6. Core Group, election of chairs, amendment of ToR
7. Updates to the Encoding Guide and Product Specification
8. Bathymetric Inland ENCs
9. Update intervals and processes
10. Quality standards for Inland ENCs
11. S-99, S-100, S-101
12. Alignment of the Inland ENC Product Specification with S-101
13. S-57 to S-100 converter development
14. Use of USAGE and SCAMIN in Inland ENCs
15. Annual report to HSSC
16. Information document on Inland ENCs
17. Future operation of ienc website and discussion forum
18. Any other business
19. Next meeting

Agenda

Time schedule

Tuesday, 13 October

- 09:00 - 10:30 morning session
- 10:30 - 10:50 coffee break
- 10:50 - 12:00 midday session
- 12:00 - 13:00 lunch break
- 13:00 - 14:30 afternoon session
- 14:30 - 15:00 coffee break
- 15:00 - 16:30 continuation of afternoon session

Time schedule

Wednesday, 14 October

- 09:00 - 10:30 morning session
- 10:30 - 10:50 coffee break
- 10:50 - 12:00 midday session
- 12:00 - 13:00 lunch break
- 13:00 - 14:30 afternoon session
- 14:30 - 15:00 coffee break
- 15:00 - 16:30 continuation of afternoon session

Time schedule

Thursday, 15 October

- 09:00 - 10:30 morning session
- 10:30 - 10:50 coffee break
- 10:50 - 12:00 midday session and end of meeting
- 12:00 - 13:00 lunch
- 13:00 - 16:00 further work on the S-101 Alignment and work of Core group on the conclusions of the meeting

Inland ENCs and the Inland ENC Harmonization Group (IEHG)

Inland ENCs

Update on the legal and organizational background and the status of implementation

Brazil

China

Europe

USA

- **Planned** (names of waterways & no. of km)
- **Completed** (names of waterways & no. of km)
- **Available** (e.g., from website)

Overview

Inland ENC Harmonization Group

Open action points

- Please provide an email to Bernd containing updates to the information on Inland ENC coverage.
- The IEHG website contains a list of both National Organizations and Private Companies involved with IENCs. If not listed, please provide web address to Bernd for inclusion on the website.

Inland ENC applications

- Caris
- ESRI
- IIC Technologies Inc.
- Laurel Technologies
- SuperMap Co Ltd.
- Tinnos Inc.

List of IENC applications:
http://ienc.openecdis.org/?q=content/links

The Inland ENC Harmonization Group

- **Objective**: to develop and to maintain a harmonized standard for Inland Electronic Navigational Charts (IENCs) suitable for inland navigation that is based on the standards of IHO for ‘maritime’ ENC

- **Goal**: to agree upon specifications for Inland ENCs that are suitable for all known inland ENC data requirements for safe and efficient navigation in European, North and South American, Russian Federation and Asian inland waterways.
  - It is further intended that IENC standards meet the basic needs for Inland ENC applications, worldwide

IEHG - recognition

- As the competent international technical group on Inland ENC technical standards development, implementation and maintenance, IEHG is recognized by:
  - Europe - European Union, Economic Commission for Europe of the UN and the Central Commission for Navigation on the Rhine
  - North America – US Army Corps of Engineers
  - Russian Federation - Russian Ministry of Transport
  - Brazil, Peru and Venezuela – Hydrography and Navigation Services
  - Asia – Ministry of Transport of PRC and KHOA of Republic of Korea
  - International Hydrographic Organization (IHO)
- Since there are several countries with Inland Navigation that are not Member States of IHO, IEHG does not intend to become a member of IHO.
- Instead, IEHG supports, advises and provides input to IHO regarding Inland ENC matters as a recognized NGIO.

IEHG – recognition (2)

- In 2009, IEHG has been recognized by IHO as a Non Governmental International Organization (NGIO) with observer status
- Current members of IEHG are all European countries with inland waterways, the Russian Federation, the United States of America, Brazil, Peoples Republic of China, Republic of Korea, Peru and Venezuela

IEHG – composition and organization

Composition - IEHG is a combined government/non-government technical group

Regions – IEHG regions are comprised of countries within a continent (North America, South America, Asia) or a recognized social-economic region (Europe, Russian Federation).

Organization – By simple majority vote, chairpersons, vice-chairs and technical coordinators are elected.

ToR

IEHG – membership

All the members of IEHG should have current expertise in the field of Inland ENCs.

Participants – Anyone who is involved in the production of Inland ENCs or the production of Inland ENC applications and representatives of user groups can participate in IEHG, make proposals and take part in the discussions.

Members - Representatives of competent authorities involved in the provision of Inland ENCs are entitled to become members. If proposed by a competent authority, membership can also include expert contributors.

ToR

IEHG – procedures

Meeting Schedule - The IEHG normally meets once per year. If required, there can be an additional meeting or the meeting can be postponed.

Discussion Forum - The IEHG uses the internet as a discussion platform in the time between the meetings. Every participant of IEHG is entitled to start a new discussion topic and to take part in discussions about Inland ENCs.

Task Groups - The IEHG may decide to form a task group for the drafting of specific proposals.

Proposal Submission and Review: see Terms of Reference

ToR

IEHG – formalization of standards

The IEHG submits Inland ENC standards for formalization to:

- Interested international organisations like IHO, the European Commission (EC), the Central Commission for Navigation on the Rhine (CCNR), the Danube Commission (DC), the Economic Commission for Europe of the United Nations (UN/ECE) and the Mekong River Commission
- National waterway authorities (e.g., United States Army Corps of Engineers (USACE), Russian Ministry of Transport) and
- National Hydrographic Services (e.g. Directorate of Hydrography and Navigation of the Brazilian Navy (DHN))

ToR

What can IEHG do for you?

- Europe had developed an Inland ENC standard based on Edition 3.0 of S-57 (with inland specific amendments)
- Edition 3.1 of S-57 used the same enumerations for different purposes
- The “European Inland ENC standard” became incompatible with the maritime standard, had to be revised, and all existing Inland ENCs had to be corrected
- This was an update without backward compatibility!
- IEHG and the use of the Product Specification for Inland ENCs guarantees that all inland specific elements are taken into account by IHO for new developments

What can IEHG do for you? (2)

- When IEHG has established a portrayal register in the S-100 registry and a S-101 compatible Product Specification: S-100 based ECDIS and ECS on maritime vessels will be able to read and display Inland ENCs correctly
- IEHG provides the possibility to participate in the developments of IHO
- IEHG provides a forum for chart producers and application builders for exchange of experiences and knowledge

Election of the Core Group

- By simple majority vote, chairpersons, vice-chairs and technical coordinators are elected.
  - Chair – Two persons (co-chairs) each from a different region. Only representatives of waterway authorities can become chairpersons.
  - One vice-chair from each region, which is not already a chair.
  - Technical Coordinators - One technical coordinator for each region.
  - Core Group – The two Chairs, the vice-chairs and Technical Coordinators.

Election of chairs

- Chair – Two persons (co-chairs) each from a different region. Only representatives of waterway authorities can become chairpersons.
- One vice-chair from each region, which is not already a chair

Current co-chairs:

Denise LaDue (USACE, North America)
Bernd Birklhuber (MoT of Austria, Europe)

Current vice-chairs:

Flavia Mandarino (DHN, South America)
Weijun Fei (WTI, Asia)

Proposals for the coming period?

Election of technical coordinators

- Technical Coordinators - One technical coordinator for each region

  Current technical coordinators:

  Brian Tetreault (USACE, North America)
  Pieta Kluytenaar (Serendipity, Europe)
  [Vladimir Sekachev] (Russia)
  Angel Terry (Jeppessen, South America)
  Yong Baek (KHOA, Asia)

  Proposals for the coming period?

Election of representatives for S-100

- IEHG has to nominate representatives for the Domain Control Body and the Executive Control Body of the S-100 registry
- Current representatives:

  Denise LaDue and Pieta Kluytenaar
- Proposals for the coming period?

Adopted documents (since last meeting)

Product Specification for Inland ENCs, edition 2.4

Inland ENC Encoding Guide, edition 2.4.0

Inland ENC Feature Catalogue, edition 2.4corr1 XML

Online Inland ENC Feature Catalogue

Questions on the discussion forum

- One feature that covers more than one cell
  A lock is located and under authority of A.
  The lock has a lot of related features in the surroundings of this lock (C_AGGR C_ASSO) and the COMARE of this lock should have area geometry in both different authorized IENCs.
  There are also lock related noticemarks that are located in the area that is covered by an IENC of authority B. The question is how the make and maintain a C_AGGR or C_ASSO connection with these features in area B to this lock in area A?

Questions on the discussion forum

- J.3.1 Obstruction & QUASOU
  The features like WRECK, ROCK contain the attribute QUASOU.
  Question : why didn’t we add the attribute QUASOU for Obstruction?
- I.3.1 is stating that external indicators of gauges may not be encoded as depth indicators. There is no other possibility to encode them.
  Is there a need to amend the Product Specification for Inland ENCs to allow the encoding of external indicators of gauges?
  sistaw, catsiw: 18 INFORM: dangerous value of water level
  OBJNAM: gauge name?

Change Requests since the last meeting

New Change Request form

Change Request units

Change Request verdat 44

Discrepancies compared to S-100

Discrepancies xls

Enumeration codes

catfrq	18021	code previously used for lc_lg2 which has been removed from 2.4
catplg	18025	code previously used for lc_sp2 which has been removed from 2.2
catvol	18022	code previously used for lc_dr1 which has been removed from 2.4
fnctsn	18020	code previously used for lc_lg1 which has been removed from 2.4
shrnum	18026	code previously used for lc_wd1 which has been removed from 2.4
refgag	18018	code previously used for lc_bm1 which has been removed from 2.4
casten	18019	code previously used for lc_bm2 which has been removed from 2.4

Questions and proposals from China

Product Specification for Inland ENCs, edition 2.4

Inland ENC Encoding Guide, edition 2.4.0

Inland ENC Feature Catalogue, edition 2.4corr1 XML

Change Request China

Bathymetric Inland ENCs

- Bathymetric Inland ENCs presentation

Update intervals and processes

- An update of the EG can be adopted by IEHG within 6 weeks
- Adopted updates may be used in a region (depending on regional regulations), but a new edition of the EG, FC and Product Specification is only published after a decision of the IEHG meeting (procedure adopted by IEHG in 2009)
- Ed. 2.4 has been published by IEHG in spring 2015
- When should the next edition be published?
  (Do we wait for the edition which is in line with S-101 or do we need an intermediate update?)
- Time schedule for the next edition?

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Quality standards for Inland ENCs

- Recommended validation checks for IENCs — 2.4
- minimum content of Inland ENCs — xls
  Action point: the South American countries are invited to investigate whether a different definition of minimum content is necessary for the Amazon river basin and to submit a proposal (if necessary).
- accuracy information in Inland ENCs developments for S-101? — ?

S-99, S-100, S-101 and future alignment

- S-100 has entered into force on 1st January 2010
- The final draft of S-101 is available since 2014
- Copied feature classes and attributes have to be replaced and are already marked as “retired” in the register
- The additional attributes and enumerations have to be registered
- The FC, the EG and the Product Specification have to be updated (completely new edition “IEHG S-401” in line with S-101)

S-99, S-100, S-101 and future alignment

- The CoRISMa project on RIS enabled corridor management is providing funds for the alignment with S-101
- CoRISMa is developing proposals for the alignment, but the decisions have to be made by IEHG
- The documents that are developed by CoRISMa are posted on the IENC discussion forum and every member of IEHG is invited to contribute to the discussions

alignment

S-57 to S-101 converter development

Converter development

- IHO is providing a converter for S-57 datasets
- We have considered to develop an Inland ENC converter within CoRISMa, but it won't be possible
- The providers of Inland ENC production software are planning to include converters in their tools
- Do we need an independent converter?
- If yes: who is going to pay, who is going to develop, who is going to maintain? Central web service or local installations?

Annual report to HSSC

- Annual report to the Hydrographic Services and Standards Committee (HSSC) of the International Hydrographic Organization (IHO) about IEHG

Report 2014

Information document on Inland ENCs

- IEHG has developed a document that provides information on Inland ENCs and the relation and the differences to maritime ENCs
- The first edition has been accepted at the last IEHG meeting
- The document can be used by every member of IEHG for presentations, discussions, explanations
- Comments?
- Amendments?

  Action point: All members of IEHG are invited to submit proposals for amendments of the information document on Inland ENCs (Inland ENC.ppt on ienc.openecdis.org).
- Article for HYDRO International

information

Operation of Web Services

Future operation of

- ienc.openecdis.org website
  now hosted by Periskal on behalf of EC

http://ienc.openecdis.org

- Discussion forum

http://operations.usace.army.mil/nav/IEHG/start.cfm?Option=Login

would it be possible to add a status column? (pending/adopted/rejected and datum)

- IENC domain in the registry of IHO

http://registry.iho.int

Any other business, Next Meeting

- Publish Recommended validation checks (Bernd)
- Report to HSSC (Denise)
- Inland ENC ppt (Bernd, input from everybody, Gustavo for Spanish)
- Keep track of S-101 developments and the consequences for IENCs (Cameron, Tom, Angel)

Any other business, Next Meeting

- How to encourage other countries to join IEHG? South America / Asia
- Any other business?
- Next meeting of IEHG: where and when ? South America?
- Changes to the agenda of next meeting?
- Departures

Thank you, Fei Weijun, for the hosting of the meeting and the hospitality!
Thank you all for participation!