

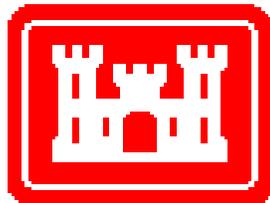


Inland ENC Harmonization Group

11th Annual Meeting

October 15th – 17th 2013

Secaucus, NJ, USA



**Inland ENC Harmonization Group
11th Annual Meeting**

**US Army Corps of Engineers
Secaucus, New Jersey, USA**

October 15th – 17th 2013

Participants

Name	Affiliation
Lee ALEXANDER	University of New Hampshire, US
Bernd BIRKLHUBER	Ministry of Transport, AT
John CONYON	IIC Technologies Vancouver, Canada
GU Qun	China Waterborn Transportation Institute
Wieland HAUPT	Fachstelle fuer Geoinformation Sued, DE
Chris HUDSON	IIC Technologies Washington DC, USA
Pieta KLUYTENAAR	Serendipity, on behalf of Ministry of Transport, NL
Denise LaDUE	US Army Corps of Engineers, US
LI Dechun	MoT, China
LIU Li	China Waterborn Transportation Institute
Flavia MANDARINO	DHN, BR
Cameron MCLEAY	Caris
Gert MORLION	NV De Scheepvaart, BE
Tony NILES	USACE (via phone conference)
Damir OBAD	RGO, Croatia
Gustavo PUENTE	Quadrant-ENC
Robert RAFAEL	RSOE, Hungary
Baichuan SANG	Changjiang Waterway Survey Center
Angel TERRY	Jeppesen Marine
Brian TETREAUULT	USACE (via phone conference)
Baocen YANG	Changjiang Waterway Survey Center

Minutes of the meeting

(basic presentation: IEHG_2013.pdf)

1. Welcome, Introductions of Participants, organizational details

Denise LaDue and Bernd Birkhuber welcomed the participants. Bernd Birkhuber thanked Denise LaDue from the USACE for the organization of the meeting and Caris and IIC Technologies for the support.

2. Presentation on Inland ENCs and IEHG

The following presentations were given under this agenda point:

Inland ENCs and IEHG (Inland_ENC.pdf, slides 1-17)

Bernd Birkhuber

Legal and organizational background in
U.S. (USACE_Status-report-2013.pdf)
Europe (Status_report_Europe_2013.pdf)
Brazil (Inland ENC BR 2013.pdf)
Peru (I-ENC for the Peruvian rivers_2013.pdf)
China (IEHG-China.pdf)

Denise LaDue
Bernd Birkhuber
Flavia Mandarino
Gustavo Puente
Li Liu

IEHG decided to publish an overview of the status of IENC production on the website. The overview will be a living document and will be updated based on the input of the IEHG members. It will contain:

- planned chart production (names of waterways & no. of km),
- completed chart production (names of waterways & no. of km),
- information about the availability (e.g., from website).

3. **Presentations by the new participants about their river/inland waterway network, navigation and cartography**

The agenda point was skipped because India had informed IEHG shortly before the meeting that it would not be possible to participate in this meeting and no other new countries were present.

4. **Presentation of Inland ENC applications by private companies**

The following presentations were given under this agenda point:

CARIS and IENC case study (USACE CARIS HPD Trial Project.pdf) Cameron McLeay

IENC Bathymetric Overlay: Channel condition surveys for the Southwest passage (IENC Bathymetric Overlay Channel condition surveys for the Southwest passage.pdf) John Conyon

Angel Terry informed IEHG that Jeppesen is now also able to deal with Inland ENCs.

5. **Working methods of IEHG**

(IEHG_2013.pdf, slides 10-18).

The agenda point was skipped because no new countries were present.

6. **Election of the Core Group of IEHG**

Denise LaDue and Bernd Birkhuber were confirmed as Co-Chairs.

Flavia Mandarino and Fei Weijun were confirmed as Vice Chairs.

Lee Alexander, Pieta Kluytenaar, Angel Terry and Yong Baek were confirmed as Technical Coordinators. Lee Alexander will be replaced by Brian Tetreault from the USACE by 1st of January 2014.

IEHG thanked Lee Alexander for his engagement and all his contributions since the beginning of IEHG.

Action point: Lee Alexander and Angel Terry offered to contact Russian representatives regarding a nomination of a replacement for Vladimir Sekachev.

The meeting checked the Terms of Reference and came to the conclusion that an amendment is not necessary.

Denise LaDue and Pieta Kluytenaar were confirmed as the representatives of IEHG in the Domain Control Body and the Executive Control Body of S-100.

The meeting checked the Introduction of the Encoding Guide for Inland ENCs and came to the conclusion that an amendment is not necessary.

7. **Annual Report to HSSC about IEHG**

IEHG is recognized as a NGIO with observer status by IHO and is therefore presenting a report on the status of Inland ENC standardization and implementation each year to HSSC.

Action points: some members of the Core Group will prepare the report to HSSC and a ppt presentation immediately after the meeting.

As HSSC is in Shanghai this year and none of the chairs will be able to attend, the Chinese delegation was asked to present the report at the HSSC meeting. If this is not possible the Chinese delegation was asked to inform the chairs. The report could in that case be presented by a representative of the Netherlands or of Brazil.

8. Status of development of S-99, S-100 and S-101 and future alignment of Inland ENC Product Specification with these standards

(IENC and S_101.pdf)

The separation of the S-100 Registry into a main register (for e.g. the HYDRO domain) and a supplementary register (for e.g. the IENC domain) has been abolished. All domains are now in the same register.

S-101 will provide the possibility to use **complex attributes**. In many cases existing simple attributes are replaced by complex attributes which are able to provide better information. Examples include: the attributes INFORM and NINFOM are replaced by the complex attribute information with the sub-attributes text and language (encoded in accordance with ISO 639-3, optional); the simple attributes for all kinds of clearances are replaced by complex attributes with the sub-attributes clearance and distance uncertainty (optional). Since the new complex attributes should be able to provide better information, and a partially automatic conversion of the existing simple attributes is possible, IEHG decided to use these complex attributes for the future Inland ENCs.

Complex attributes can also be used to replace combinations of object classes with a master slave relation (example: a buoy with a topmark and a light is currently encoded as a boylat as master object and TOPMAR and LIGHTS objects as slaves) with one object with complex attributes (example: buoy, topmark and lights; each of the complex attributes would have the same attributes as the current object classes). S-101 is going to replace the object class TOPMAR with a complex attribute topmark, but will still use LIGHTS as part of a structure/equipment association. IEHG discussed the advantages and disadvantages of this approach and decided to follow the approach of S-101.

China has buoys which send Morse codes. The proposal to introduce the possibility to encode this feature should be sent to TSMAD, because these buoys exist in maritime as well as in inland navigation.

Action point: China is invited to send a proposal regarding the encoding of buoys with Morse codes to the TSMAD working group of IHO.

The new S-101 information type could be used to provide accuracy information about different features within one Inland ENC. S-101 is proposing that it could be used to replace CTNARE so as not to have so many alarms.

Composition type should only be used where it would be of clear benefit to inland navigation. However, this assumes that chart production software has an option not to delete all information contained in the full composition.

IEHG intends to use the S-100 Feature Catalogue Builder.

IEHG was informed that some European countries will have funds for the work on the alignment of the IENC Product Specification with S-101 in the years 2014 and 2015 from a project of the European Union. IEHG decided to start working on alignment with IHO S-101 (based on the release of draft IHO S-101, foreseen for Dec 2013), in 2014. All IEHG members will be involved via the discussion forum.

The first step should be the decision on the features, attributes and enumerations to be used in the future. This will be the basis for the registration of necessary elements in the S-100 registry and the development

of the new Feature Catalogue. The alignment of the main text of the Product Specification and the Encoding Guide would be later steps.

Action point: the European project partners are invited to start with the alignment. All members of IEHG are invited to participate in the discussions on the forum.

Pending acceptance of HSSC5.05.1E (HSSC5-05.1E_S-100_Product_Specification_Identifiers.pdf), IEHG plans to name the future Inland ENC Product Specification: IEHG-101.

Producer Identifier	IEHG
Organization	Inland ENC Harmonization Group
Identifier	IEHG-101

Action point: the IEHG representatives for S-100 should register the Producer Code IEHG and inform IHO about the future Product Specification Identifier as soon as IHO has decided on the format.

The meeting discussed who might have sufficient knowledge of UML for future development. None of the participants had the knowledge.

Action point: all members of IEHG are invited to investigate who has knowledge of UML.

9. S-57 to S-100 converter development

There are no new developments. IEHG concluded that it is important to state very clearly that a converter can only convert existing data and that new data elements will have to be added manually. For example: the current INFORM and NINFOM attributes can be converted into the new complex attribute. For the content of INFORM it is possible to add the information that the language is English, but for the content of NINFOM the information about the language has to be added manually.

Action point: all members of IEHG are invited to perform tests with the converter and their Inland ENCs and to deliver feedback to Tom De Puyt.

10. Updates to the Encoding Guide and Product Spec

The following documents have been published since the last meeting:

Inland ENC Encoding Guide, edition 2.3.5
Inland ENC Feature Catalogue, edition 2.3 corr2 (pdf and XML)
Recommended Validation Checks for Inland ENCs, edition 1.1
Recommended Validation Checks for Inland ENCs, edition 2.3

IEHG decided to publish a correction to the Recommended Validation Checks for Inland ENCs, edition 2.3

Action point: Bernd Birkhuber to upload the Recommended Validation Checks for Inland ENCs, edition 2.3 corr1.

All the Change Requests which have been submitted since the last IEHG meeting in Iquitos were presented.

D.1.3	Bay – Denise LaDue will fix an error in CATSEA and re-submit with the same accepted date (for 2.4)
G.3.5	Ponton – CR withdrawn. Denise LaDue will submit a new CR to amend the definition of pontoon, add picture and encoding instruction for US floating docks & US SCAMIN for SLCONS shall be used
G.3.25	Water Intake Structure – Denise LaDue will add “Water” to page two of proposal (for 2.4)

G.4.7	adopted if no veto before 20131104, will become part of EG 2.3.6
L.1.2	adopted, will become part of EG 2.3.6
L.3.2	adopted, will become part of EG 2.3.6
L.3.4	Historic Marks – withdrawn. It should be checked whether it would be possible to use the wtwaxs or a recommended track for the automatic calculation of distances by the applications
N.1.2	adopted if no veto before 20131104, will become part of 2.4
AF	adopted if no veto before 20131104, will become part of EG 2.3.6
Terminal	adopted if no veto before 20131104, will become part of 2.4
INFORM/NINFOM	adopted if no veto before 20131104, will become part of 2.4

For the results of the discussions see CR_collected_2013.pdf and Overview_CRs_2013.pdf).

IEHG discussed the possibilities to encode roofs above the waterway. It was decided to propose to amend BUISGL with the attribute vertical clearance and additional FUNCTN values and to allow BUISGL above water in the Recommended Validation Checks.

IEHG discussed the possibilities to encode suction spouts for the loading and unloading of vessels and agreed to use the new category of conveyor which will be registered in the HYDRO register by IHO.

11. Update intervals and processes

The meeting discussed when the next version of the Encoding Guide and the next edition of the Product Specification and the Feature Catalogue should be published. China announced to submit CRs (which would affect the Feature Catalogue) in the coming year. IEHG is also expecting CRs from Venezuela, India and Italy.

The meeting decided to publish a version 2.3.6 of the Encoding Guide which can be used with the existing edition 2.3 of the Product Specification and the Feature Catalogue and does therefore not require new software. It will include all CRs which are adopted before the end of 2013 and do not affect the Feature Catalogue.

Action points: Denise LaDue to produce version 2.3.6 of the Inland ENC EG at the beginning of 2014.

All members of IEHG are invited to submit CRs,
 - which do not affect the FC before 15th November 2013
 - which affect the FC as soon as possible, but before end of August 2014.

12. Portrayal domain and specification for Inland ENCs

Up to now IEHG has only dealt with the harmonization of Inland ENCs. There were different standards for the display of these charts in the various regions (e.g. the "Inland ECDIS standard" in Europe), because inland vessels do not travel from one region to another.

At the 8th meeting IEHG decided to set up an Inland portrayal domain within the S-100 registry, because one of the goals of IEHG is to ensure that maritime vessels are able to use Inland ENCs when they are using inland waterways. The development of this new domain has to be based on the portrayal domain for maritime ENCs.

IEHG agreed that it is too early to set up an IENC Portrayal domain in the S-100 Registry, but to use 2014 to agree on the symbolization of inland specific features. The symbolization in accordance with the European Inland ECDIS standard is defined in the Presentation Library which is available at the website. The symbols can be seen in the small program "Inland ENC legend" which is also available on the website. The Brazilian Aids to Navigation are not included in the European standard. IEHG agreed to use the S-52 (respectively S-101) symbolization for all maritime features.

Action points: Angel Terry will ask Eivind Mong to keep track of S-100 Portrayal Developments and report back to IEHG.

Europe will provide an overview of the symbolization of inland specific features in accordance with the European Inland ECDIS standard and submit it on the discussion forum.

Brazil will provide a proposal for the symbolization of the Brazilian Notice Marks (vector symbols).

13. Proposals for quality standards for Inland ENC

The IEHG meeting 2012 had discussed whether it is necessary to define a different minimum content of Inland ENC for the Amazon river basin, but did not come to a conclusion. The South American countries were invited to investigate whether a different definition of minimum content is necessary for the Amazon river basin and to submit a proposal (if necessary). Flavia Mandarin informed the meeting that it is not necessary to define a different minimum content for Brazil.

The development of IHO standards regarding accuracy information in Inland ENC has not been completed. The meeting decided to wait for the decisions of IHO.

14. The use of web-services for the publication of Inland ENC

Wieland Haupt presented the German web map services (German_IENC_WMS.pdf)

The web map services are not intended for navigation, but for information of e.g. users in the logistic area. IEHG came to the conclusion that there is no need for standardization by IEHG.

The development of push services for the automatic distribution of Inland ENC updates would ensure that vessels are always using the latest charts. The European project IRIS Europe 3 is evaluating the use of web services for a harmonized Inland ENC data exchange.

15. The use of AIS AtoN messages in inland navigation

Bernd Birkhuber informed IEHG that the European expert groups have started to discuss the use of the AIS AtoN messages on inland waterways and have identified some problems, but do not yet have solutions (AtoNs_Europe.pdf)

Brian Tetreault informed IEHG about the developments of USACE (Tetreault_IEHG_Update_20131015.pdf)

Damir Obad informed IEHG about the developments in the European project NEWADA II (RGO_AtoN_Pilot_Danube_2013_10_16.pdf)

Gustavo Puente presented American developments (QUADRANT-ENC_MTC_AIS Solution and I-ENC requirement_for the Peruvian rivers_2013.pdf)

IEHG decided that encoding rules for real AtoNs with AIS transponders should be added in the EG. Whether the rules for the display of AIS AtoN messages will become part of the IENC Product specification or could be standardized by a different expert group (e.g. for AIS) will be decided later.

The topic will be kept on the agenda of the upcoming meetings.

Action point: The European members are invited to transmit a proposal for the encoding of AtoNs with AIS in Inland ENC as soon as there are results from the European expert group.

16. Use of USAGE and SCAMIN in Inland ENC

No new developments. The topic is closed and will not be on the agenda of the next meeting unless there is a specific request.

Action point: Bernd Birkhuber will upload an evaluation produced by Pieta Klytenaar to the papers section of the ienc website.

17. Updates of the Information documents on Inland ENCs

IEHG agreed that the Inland_ENC.ppt, the report of IEHG to HSSC and an article for HYDRO international should be updated and aligned. Lee Alexander announced to take care of the article, the Core Group members offered to work on the other two documents immediately after the meeting.

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).

IEHG agreed to add a FAQs section to the website if there are any FAQs.

18. Future operation of:

the ienc.openecdis.org website

Bernd Birkhuber informed the meeting that the website is funded by the European Union and now hosted by the company Periskal instead of CRUP.

discussion forum for Inland ENCs

Denise LaDue informed the meeting that the USACE is continuing to operate the discussion forum.

IENC domain (as part of S-100 Registry)

Denise LaDue and Pieta Klytenaar informed the meeting that the operation of the IENC domain is guaranteed.

19. Any other business

The meeting discussed how to encourage more countries/regions to join IEHG. Angel Terry and Gustavo Puente will continue to inform South American countries about IEHG. Gustavo Puente offered to translate documents of IEHG to Spanish, if needed.

20. Next meeting

According to the principle of rotation the next meeting should be in Europe. Wieland Haupt invited IEHG on behalf of the German Ministry of Transport to have the next meeting in Berlin in the week from 6th to 10th October 2014. IEHG agreed that the meeting itself will start on the morning of the 7th and will occupy three full days until 9th afternoon. Germany is considering to organize an excursion to a locklift, a workshop about German activities and a trip on the Berlin waterways on the 6th, the 10th, or in the evening. IEHG thanked the German delegation for the invitation.

Action point: Wieland Haupt and the Core Group will develop the detailed agenda for the next meeting.

IEHG thanked Denise LaDue, Caris and IIC Technologies for the organization of the meeting.