



Inland ENC Harmonization Group

14th Annual Meeting

October 10th – 12th 2017

Niteroi, Brazil

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Participants

| Name | Affiliation |
|-------------------|---|
| Bernd BIRKLHUBER | Ministry of Transport, AT |
| Tom DEPUYT | ESRI |
| FEI Weijun | China Waterborne Transport Research Institute |
| Wallace FERNANDES | DHN, BR |
| Vanessa FOLLY | DHN, BR |
| GU Qun | China Waterborne Transport Research Institute |
| Wieland HAUPT | Fachstelle fuer Geoinformation Sued, DE |
| Chris HUDSON | IIC Technologies |
| Oliviera JUAREZ | DHN, BR |
| Adam KUSCERA | via Donau |
| Denise LADUE | US Army Corps of Engineers, US |
| Dave LEWALD | United States Coast Guard |
| LIU Li | China Waterborne Transport Research Institute |
| Flavia MANDARINO | DHN, BR |
| Ana MILEZE | DHN, BR |
| Gert MORLION | NV De Scheepvaart De Vlaamse Waterweg nv , BE |
| Juarez OLIVIERA | DHN, BR |
| Marc PEERSONS | Periskal |
| Iohana SANCHES | DHN, BR |
| Vladimir SEKACHEV | Moris LLC |
| Luciana VIANA | SSN9, BR |
| ZHANG Lu | China Waterborne Transport Research Institute |

Minutes of the meeting

(Basic presentation: IEHG_2017.pdf)

1. Welcome, Introductions of Participants, organizational details

Director Carlos Augusto Silva welcomed the members of the IEHG to DHN.

Denise LaDue and Bernd Birkhuber welcomed the participants. Bernd Birkhuber thanked Director Silva for the hosting of the meeting and Flavia Mandarino for the organization.

2. Inland ENCs and IEHG

This presentation was skipped because no new countries were present

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

- Brazil (Status report Brazil 2017.pdf) Flavia Mandarino
- China (Status report China 2017.pdf) Liu Li
- Europe (Status report Europe 2017.pdf) Wieland Haupt
- USA (Status report US 2017.pdf) Denise LaDue
- (US Coast Guard IEHG 2017.pdf) David Lewald

IEHC Production Overview on the IEHG website.

- 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)

Action Items:

Please provide an email to Bernd containing updates to the information.

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

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

4. Presentation of Inland ENC applications by private companies

- Esri (ESRI IEHG 2017.pdf) Tom Depuyt
- IIC Technologies Inc. (IIC IEHG 2017.pdf) Chris Hudson
- Moris Ltd. (Moris IEHG 2017.pdf, FIFA-2018_IWW-ENG.pdf) Vladimir Sekachev
- Periskal (Periskal IEHG 2017.pdf) Marc Persoons

Action Item: 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.

5. Working methods of IEHG

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

6. Election of the Core Group of IEHG

- Co-Chairs: Denise LaDue and Bernd Birkhuber were confirmed as Co-Chairs.
- Vice Chairs: Flavia Mandarino and Fei Weijun were confirmed as Vice Chairs.
- Technical Coordinators: Cameron McLeay and Yong Baek and Vladimir Sekachev were confirmed as Technical Coordinators. Nuno Silva was elected as the new Technical Coordinator for South America. The European Inland ECDIS Expert Group will propose a new Technical Coordinator for Europe.
- IEHG thanked the former Technical Coordinators Pieta Kluytenaar and Angel Terry for their work.
- IEHG Representatives in the S-100 Domain & S-100 Executive Control Bodies: Denise LaDue was confirmed as a representative. Gael Billet was elected as the new representative. (Email Jeff Wootton S100 registry.pdf)
- IEHG thanked Pieta Kluytenaar for her work.

7. Updates to the Encoding Guide and Product Specification

- Questions on the discussion forum:

- o Posted 5/30/16 by ReneVisser
Unknown or UNKNOWN

Dear all

We found out that the encoding guide is not that consequent with the use the attribute value unknown Sometime in uppercase and sometime in lowercase.

Is there a reason for? Or should we go to one case?

BR René

drladue on 5/31/16 12:08

Dear René,

There is no reason for the inconsistency other than a mistake on my part when populating those attributes in the database.

Best regards, Denise LaDue

Conclusion of IEHG: All values should be changed to “unknown”.

Action Item: D. LaDue to make the necessary changes in the Encoding Guide

- o Posted 4/10/17 by renevisser
TXTDSC & NTXTDS

In EU, a lot of the TXTDSC files (facility scheme s) contains information in a national langue. I should be in the English language . Is it useful to incorporate the NTXDS attribute again? BR René

Bernd Birkhuber on 4/11/17 2:04

Dear René, the attribute NTXTDS is one of the attributes that are associated with all geo object classes according to part B - General Guidance, section B, of the Encoding Guide. It is available in the Feature Catalogue. It is not mentioned in the Object Encoding on the individual pages of the Encoding Guide, because we decided that it is available, but not recommended for use. Do you want to include it in the Object Encoding as a recommended attribute? If yes: should it be added on all pages of the EG, only on the pages that are mentioning TXTDSC at the moment, or only on some specific pages? And do you have a proposal for an Encoding Instruction in that case?

Best regards Bernd

Thank you Bernd. You're right. In the EG 2.4 it's written down properly. In the EG 2.3.6 this information is missing. And indeed ntxtds is part of the FC. So the issue is solved. Kind Regards René

Conclusion of IEHG: No action needed

- o Posted 4/10/17 by ReneVisser
encoding high rising buildings as landmark

Encoding high rising buildings is important in ie estuaria. According the EG we only encode a single building if the building has a nautical/navigational function. It is stated in the EG we should encode such a skyscraper as a landmark. The feature landmark misses a catlmk value like high rising building . Remark : high rising building = value 5 of the attribute BUISHP for the maritime S57 feature BUISGL. Attribute BUISHP is not part of the Inland Ecdis standard.

So we could propose: Add high rising building as a catlmk , but this has to be done in corporation with IHO, I suppose; Skip the idea that BUISGL should only be encoded if the building has a navigational function plus add the maritime BUI_SHP attribute (5)

Ideas ? BR René

Bernd Birkhuber on 4/11/17 2:24

Dear René, the real world picture on page G.1.2 of the Encoding Guide is showing such a high rising building. It is standing in Vienna and we have encoded it as CATLMK 17 (tower). It is a building containing offices and apartments and it is called "Millenium Tower", so it was an easy choice to use the attribute value "tower". Maybe we should amend Encoding Instruction B and mention high rising buildings and skyscrapers, too. Would that be a solution?

Best regards Bernd

Conclusion of IEHG: Encode the feature as a Landmark with CATLMK = 17 (tower)

- o Posted 8/15/17 by ReneVisser
Encoding a Aquaduct

An aqueduct is encoded as G.4.8 Exceptional Navigational Structure ; catexs 2. an aqueduct has in most cases a defined depth (DEPARE) but also a defined width. Question : why is there no horclw attribute to encode like a lockbasin (or HORWID but I think horclw 'll be better) BR René

Bernd Birkhuber on 8/18/17 2:44

We do not have experience with aqueducts in Austria but I assume that it would be useful to have the possibility to encode horclw. I suppose that the only reason why it is not available at the Moment is that it has not been included in the original proposal. If there is no oposition from countries who do have aqueducts I would recommend to submit a Change Request.

Best regards Bernd

Conclusion of IEHG: Flavia to propose the addition of CATBRG = 11 (aqueduct) for a Non-navigable aqueduct

Action Item: Flavia to create new CR

- o Posted 9/12/17 by ReneVisser
CATSLC

The IENC Feature Catalog (2.3.6 & 2.4) tells that CATSLC is a mandatory attribute for SLCONS. However the Encoding Guide 2.3.6, dated Jul 2014, and also version 2.4.0, dated 9 April 2015, says that CATSLC should be omitted when encoding a dyke (section G.2.1). And indeed one is forced to omit it, as there is no suitable value which can be used.

This is a contradiction.

Possible solutions : A) add 19 (dyke) to catslc ; B) make catslc (C) conditional.

I suppose the proposal B is the most easiest one to implement

BR René

Reaction by gertM on 9/12/17 6:28

René,

Your conclusion is correct but I prefer solution A (add a new value to the enumeration). I think that adding a new value to the enumeration will be easier. If you change the CATSCL- attribute into conditional, you'll need to add the conditions into the encoding instructions for each feature where it is used! By adding a new value to the enumeration, you'll only need to delete an instruction for one feature (Dyke/Levee)

Best regards,

Gert

Conclusion of IEHG: Request Rene to clarify whether groin or levee is meant, because dyke/levee is a DYKCON not a SLCONS

Action Item: Rene to clarify

- Change Requests (since IEHG XIII)

For the results of the discussions see (Overview CRs IEHG 2017.pdf) and IEHG discussion forum at <https://operations.erd.cdrn.mil/nav/IEHG/start.cfm?Option=Start>.

- Discrepancies Compared to S-100 (HYDRO_and_IENC_Register_discrepancies_20150910.xlsx)
 - o Spreadsheet
 - **Action Item:** Denise to ensure resolution of existing discrepancies and verify no additional discrepancies have developed
- IHO has updated the “Use of the Object Catalogue” of S-57. IEHG considered whether some of the amendments have to be taken into account in the Encoding Guide for Inland ENC’s. S-57 Appendix B.1 Annex A UOC Ed 4.1.0_Draft_Redline_BB.pdf).
 - o 2.1.5 Dates
IEHG decided to include the entire new text
 - o 2.1.5.1 Seasonal Objects
IEHG decided to include the last two sentences of the new text
 - **Action Item:** Denise to update the Encoding Guide Letter J to reflect the applicable changes and to submit a CR regarding the use of ‘sensor’
- Germany intends to produce a multilingual version of the Encoding Guide for Inland ENC’s in docbook format (IENC_EG_in_DocBook-format.pdf).
 - o IEHG decided that docbook would be a possible enhancement of the on-line creator for Encoding Guides to KHOA is working on.
 - **Action Item:** Wieland to present the next version of the EG at the next IEHG meeting.
 - **Action Item:** Chris Hudson to contact Yong Baek

8. 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. It was decided that the Encoding Guide would be updated to version 2.4.1, however at this point no changes or updates to the Product Specification and the Feature Catalogue will be made. A decision to update to IENC 2.5 or to S-401 has been postponed until the next meeting of the IEHG.

Action item: All - Update change requests regarding the EG before 1 December 2017. Change requests with no opposition will be adopted on 12 January 2018.

Action Item: Denise to update the Encoding Guide by 31 January 2018, which will enter into force 6 weeks later, if no opposition.

IEHG has to maintain the Product Specification for Inland ENC’s, the EG, the FC, the IENC domain in the S-100 registry and the Recommended Validation Checks for Inland ENC’s. Most of the CRs have an influence on all the documents.

Even if all the consequences of a CR are indicated in the CR, they are normally just indicated (e.g “add the new feature to the FC”); the text of the necessary amendment (in this case a whole page for the feature and a page for each attribute) is normally not provided in the CR.

IEHG discussed who has to provide the resources for the implementation of CRs in all documents.

Bernd Birkhuber presented a proposal for a Guideline for CRs (CR_IEHG_Guidelines.docx). IEHG decided to publish a guideline to encourage a better quality of CR submittals. Incomplete CRs will be accepted, however they may be returned for completion. The organization / region submitting the CR is responsible for ensuring that the CR was correctly implemented in the Product Specification.

Action Item: Bernd to submit the proposal for the Guideline on the IEHG Discussion Forum.

Action Item: All – provide feedback to the Draft Guidelines.

9. Quality Standards for Inland ENC

- Recommended validation checks for IENCs 2.4

Action Item: Wieland to update and provide Edition 2.4.1 of the Recommended Validation Checks.

- Minimum Content of Inland ENC
 - o Applicable for Europe, but columns on updates and accuracy were determined not to be applicable for other regions.

Action Item: Brazil & China to investigate whether a different definition of minimum content is necessary for their respective waterways.

- Accuracy information in IENCs – development for S-101
 - o IHO Data Quality Working Group is pursuing this activity
 - o Recommendation to wait for results from IHO prior to adopting or pursuing this endeavor.

10. Status of development of S-99, S-100 and S-101

- S-99 – No new information available.
- S-100
 - o Edition 3.0.0 adopted in April
 - o Beginning to work on 4.0
- S-101
 - o Feature Catalogue should be functional
 - o Goal is to get S-101 Edition 1.0 out in 2018, not anticipated that it will be adopted. 2019 would be the soonest that production might begin.
 - o New version of DCEG & Product Specification (S101_Data Classification and Encoding Guide_Final 0.0.2 Clean.pdf S-101 ENC Product Specification 20170705 Baseline 0.0.2.docx)
 - o S-101 sub-working group meeting in June
 - o Feature Catalogue Builder – hope to have it operational before HSSC
 - “Official” Feature Catalogue is 8.8, but there’s a new version that’s not yet on the street
 - o Portrayal Catalogue Builder – will not be available before HSSC
 - o (Answers from Julia regarding S101.pdf)
 - o Symbology
 - Recommend staying away from conditional symbology
 - SVG or something similar can be used.
 - Should wait until S-101 testing is complete to see what’s effective unless we want to develop our own test bed
 - ECDIS testing – proposal from D. Lewald to engage in RTCM S-109
- S-40X – Bathymetric Inland ENC

- o It was recommended by J. Powell, S100WG Chair, that the IEHG request the registration of S-402 for the Bathymetric Inland ENC Production Specification

Action Item: Denise to make the request at HSSC-9 for S-402 to be assigned to the IEHG for Bathymetric Inland ENCs.

11. Alignment of the Inland ENC Product Specification with S-101 (S-401)

The RIS COMEX project of the European Union on RIS Corridor Management Execution is providing funds for the alignment with S-101. COMEX is developing proposals for the alignment, but the decisions have to be made by IEHG. The documents that are developed by COMEX are posted on the IENC discussion forum and every member of IEHG is invited to contribute to the discussions.

(S-401 COMEX 2017.pdf
 SVG-symb-lib_S-401_V0.3.pdf
 List_of_all_Inland_AtoN_symbols.xlsx
 S-401-EUR-Symbole_RUS_AtoNs-mod.xlsx
 InlandECDIS_svg-symbols.zip

Action Item: COMEX should submit proposals on the Discussion Forum.

Action Item: All members of the IEHG are invited to provide feedback.

12. Portrayal domain and specification for Inland ENCs

- Necessary steps toward an S-401 Portrayal Catalogue:
 - o Registration of existing symbols in the S-100 registry when the registry becomes available for use.
 - o Portrayal rules will be based on current Lookup Tables.
 - o The use of Condition Symbolology has been discouraged by the S100WG.
 - o IEHG decided to incorporate portrayal in the Change Request form (CR_IEHG_nr-XXX_X_Y_Y_vY_JJJJ_portrayal.docx).
 - o IEHG decided that the symbolization of AIS should not become part of the Portrayal Catalogue

Action Item: All – provide regional specific symbols in SVG or any other format, along with size requirements and portrayal rules, to Wieland for conversation to SVG and inclusion in the portrayal catalogue. (S-401-EUR-Symbols_RUS_AtoNs-mod.xls, SVG-symb-lib_S-401_V0.3.pdf)

Action Item: Bernd to submit the amended CR form on the Discussion Forum

13. S-57 to S-100 converter development

The converter tool will be updated by Esri when the S-401 Feature Catalogue is available.

14. 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: Denise and Bernd to prepare the ppt presentation to HSSC immediately after the meeting. (HSSC-9-07-6A - IEHG_Report – Pres.pdf)

15. Updates of the Information documents on Inland ENCs

No new developments.

Action point: All members of IEHG are invited to submit proposals for amendments of the information document on Inland ENCs (Inland ENC.ppt on the IEHG website).

16. Future operation of the:

- IEHG Website (<http://ienc.openecdis.org>)
 - o Bernd Birkhuber informed the meeting that the website is funded by the European Union and hosted by the company Periskal
- Discussion Forum for Inland ENCs (<http://operations.usace.army.mil/nav/IEHG/start.cfm?Option=Login>)
 - o Denise LaDue informed the meeting that the USACE is continuing to operate the discussion forum.
 - o The current Discussion Forum is lacking in functionality. Denise is investigating a new tool for meeting the needs of the IEHG:
 - Submission of CR documents
 - Automatic enumeration of CRs
 - A column for providing the status of the CR
- IENC domain (as part of S-100 Registry)
 - o Denise LaDue informed the meeting that the operation of the IENC domain is guaranteed.

17. Any other business

Action points:

- Keep track of S-101 developments and the consequences for IENCs (Cameron, Chris, Tom, René)
- Update CRs and submission on the discussion forum (Bernd)
- Registration of symbols in S-100 (Gert)
- Preparation of 2.5, including draft FC 2.5 (Denise)
- Update of list of members (Bernd)
- Meeting minutes (Denise and Bernd)
- Start information exchange with IALA regarding S-201 and RTCM regarding SC 129 (Dave)

18. Next meeting

According to the principle of rotation the next meeting should be in the US. Denise LaDue is making arrangements to hold the meeting in New Orleans, Louisiana.

Potential Dates: 9-11 or 16-18 October 2018

19. Final Remarks

The IEHG thanked Director Carlos Augusto Silva for hosting the meeting and Flavia for her perfect hosting of the meeting.