



# Inland ENC Harmonization Group

**9<sup>th</sup> Annual Meeting**

**October 19<sup>th</sup> – 20<sup>th</sup> 2011**

**Chongqing, Peoples Republic of China**

**9<sup>th</sup> Annual Meeting of the Inland ENC Harmonization Group**  
Chongqing, Peoples Republic of China  
19-20 October 2011

**Participants**

<b>Name</b>	<b>Affiliation</b>
Lee ALEXANDER	University of New Hampshire, US
BAEK, Yong	KHOA, South Korea
Bernd BIRKLHUBER	Ministry of Transport, AT
Juan CARBALLINI	CARIS
Tom DePUYT	ESRI
FEI, Weijun	Waterborne Transport Research Institute, CN
Swetlana FIEDLER	7 Cs
HA, Gigab	KESTI
GONG, Yanping	Waterborne Transport Research Institute, CN
Wieland HAUPT	Fachstelle fuer Geoinformation Sued, DE
HE, Mingxian	Changjiang Waterway Survey Center, CN
Pieta KLUYTENAAR	Serendipity, on behalf of Ministry of Transport, NL
Denise LaDUE	US Army Corps of Engineers, US
Felipe LOPEZ	Hydrography and Navigation Service, VE
Flavia MANDARINO	DHN, BR
PENG, Wen	Changjiang Waterway Survey Center, CN
Magaly ROJAS	Hydrography and Navigation Service, VE
Eric ROTTMANN	SevenCs
Angel TERRY	Jeppesen Marine
YU, Xiujuan	Waterborne Transport Research Institute, CN

**Minutes to Meeting**

**1. Welcome, Introductions of participants, organizations details**

Acceptance of Agenda (IEHG\_9\_Agenda.pdf)

**2. IEHG Core Group and related activities**

a. Election of the chairs

Co-Chairs

Europe - Bernd Birkhuber

North America - Denise LaDue

Vice-Chairs

South America – Flavia Mandarino

Asia - Fei, Weijun

Technical Coordinators

North America – Lee Alexander

Europe – Pieta Kluytenaar

Russia – Vladimir Sekachev

S. America – Angel Terry

Asia – Baek, Yong

- b. Amendment of the Terms of Reference  
- (ToR\_for\_IEHG\_2011.pdf)
- c. Representatives for IHO S-100 Registry  
- Pieta and Denise are the IEHG representatives for the Domain Control Body and the Executive Control Body
- d. Introduction of the IENC Encoding Guide  
- This was updated (Introduction\_EG – 19Oct2011.pdf)

### **3. Information on Experience with Inland ENCs**

CARIS – Juan Carballini gave a presentation (CARIS\_HPD\_for\_IENC\_final.pdf, see workshop)

- Have implemented the IEHG validation checks in S-57 Composer and HPD. No problems were noted.

- In the Encoding Guide 2.2.0, (J.1.1 Rocks) the ‘area’ of UWTROC is listed as an option. UWTROC does not exist in S-57 as an area object (only as a point object), therefore UWTROC cannot be used. This is a legacy error so it cannot be changed without changing the feature catalogue.

ESRI – Tom DePuyt gave a presentation (Esri Nautical Solution – Inland ENC and Paper Chart Production. Pdf, see workshop)

SevenCs – Swetlana Fiedler and Eric Rottmann gave a combined presentation (7Cs.pdf, see workshop)

Jeppesen/C-Map/dKart – Angel Terry explained that the recent IEHG standards have not yet been implemented.

T-Kartor – Lee Alexander mentioned consideration is being given to implement the IEHG standards into T-Kartor software tools.

### **4. Annual Report to HSSC3**

Lee Alexander previously prepared a draft. The new wording now contained in the revised IEHG TOR and Intro to IENC Encoding Guide was incorporated ( HSSC3-06-1A – IEHG.pdf)

- The report included brief highlights of the decisions/outcome of IEHG9. A key issue is a request that IHO assign a S-100 related number for the Inland ENC Product Specification.

### **5. Status of S-100, S-99, and S-101 and Future Development of IENC Product Specification**

S-100 Registry Overview – Lee Alexander gave a brief presentation previously prepared by Robert Ward of IHB (S-100 Registry.pdf)

S-100 Technical Details – Eric Rottmann (SevenCs\_S-100.pdf)

#### **Questions:**

a) How should IEHG participate in development of S-101?

Ans: probably start with translating the current IEHG S-57 Object Catalogue → S-100 Feature Catalogue

- Denise will try to attend S-101 Data Specification and Encoding Guide WG to learn more about the process.

b) When does IEHG develop new IENC Product Spec based on S-100?

Ans: wait for now to see what occurs with S-101 ‘maritime’ ENC

c) Who is able to provide a first draft?

Ans: Denise will try to first draft a S-10x Feature Catalogue. Also, she will find out whether it will be a MS Word document or XML? If XML, are there tools that have been developed?

- d) Are we only going to convert the existing FC into the new format or do we also consider to use the newly introduced possibilities like e.g. attributes of attributes?

Ans: will be decided later

Overall: Let IHO gain more experience on S-100 and S-101.

## 6. S-57 to S-101 Convertor development

- Tom De Puyt explained and gave a brief demo (Esri IEHG S-101 Convertor Update.pdf)
- Convertor requires additional testing, and will be modified as S-101 is further developed.
- Copies of the Convertor are available from Tom.

## 7. Updates to Encoding Guide and Product Specification

- Eight Change Requests were reviewed, most of which were adopted. The adopted changes will be included in the next version of the IENC Product Spec (CR\_collected\_2011.pdf)

The CR regarding WLAN was already adopted for Europe and will be resubmitted by Denise LaDue for the other regions.

The CR regarding the introduction of CATLND attribute values for LNDRGN will be amended with the values for agricultural land and parkland and resubmitted.

The CR regarding Minor Lights which was only referring to the US will be resubmitted for all regions.

A new CR for the encoding of sensors will be drawn up on the basis of the general discussion on this topic by Denise LaDue.

It was concluded that there is no worldwide standard for the naming of paper versions of IENCs. The topic is also outside of the scope of IEHG.

A new CR for the simplification of the encoding of time schedules will be drawn up on the basis of the general discussion on this topic by Bernd Birkhuber.

The meeting checked the proposal for an updated version of the CR form and adopted it with some improvements (CR\_form\_2011.zip)

## 8. Update Intervals and Process

- Edition 2.3 was published in spring 2011.
- Edition 2.4 will likely be published after the next meeting of IEHG in 2012 (most likely, some CRs may be submitted by China, Korea, Venezuela and Peru).
- If future discrepancies are found between the Feature Catalogue (FC) and the Encoding Guide, the numbering scheme of the FC will be based on edition/version/"correction" number (e.g., 2.3.corr1)

## 9. Portrayal domain and future IENC specifications

- There was brief discussion about the overall scope of what IHO appears to be focusing on in regard to what constitutes “portrayal”. Brief mention was also made of what IALA is doing in terms of the portrayal of e-navigation related information.

- For now, it is probably best that IEHG take a wait-and-see approach before developing IENC portrayal specifications that go beyond what is contained in the Encoding Guide.

## 10. Proposals for quality standards for IENCs

### a. Recommended validation checks (based on S-58)

- The proposal has successfully been implemented by CARIS. The existing document is based on edition 2.1 of the Product Specification for Inland ENC and has to be updated to edition 2.3. Bernd will check at the upcoming meeting of the European Inland ECDIS expert group if there are volunteers for the drafting of the proposal. Germany offered already during the meeting to participate in the task force.

### b. Minimum content of IENCs

- The minimum content of an Inland ENC is currently defined in the introduction of the Encoding Guide for Inland ENC. The description is very general (e.g. “any facility that is considered a hazard to navigation”) and is not sufficient if a competent authorities contracts a private company for the chart production. Pieta explained the latest version of a matrix that has been developed by the waterway authorities of Flanders and the Netherlands to define the full scope of what would be required, based on the real world objects of the EG (IENC min content v2.xls)

It was agreed to work on the document and invited IEHG members to deliver feedback. It might be necessary to introduce different lists for different regions. These requirements could become a part of the EG in the future. It would be possible to mark a real world object e.g. as “minimum content”, “minimum content in Europe” or “minimum content, if in the fairway”.

### c. Minimum accuracy requirements (results of IRIS II)

- Bernd provided a brief update (Accuracy\_Update\_Requirements\_Dept\_Data\_IRIS\_v1p0\_final.pdf) It was concluded that the results of the European IRIS II project cannot be applied to other regions. The document will provided as an IENC related paper on the website. The USACE will provide a paper on accuracy requirements and a definition of “bottom” in the US.

### d. Accuracy information & proposal for indication of quality

- Wieland Haupt presented the procedures for the production of depth data with high accuracy in Germany. A very effective algorithm for the reduction of the survey data -- without loss of information necessary for safety of navigation -- has been developed. (Quality\_depth\_information\_IENC.pdf)

## 11. Use of standardized XML-format for water level messages

a. Lee and Bernd showed two examples of water level issues (water level issues.pdf & WLM\_BAW\_example.pdf)

b. IRIS II – web-based water level service (see WLM\_IRIS\_XML\_changes\_v1p0.pdf)

c. A Change Request was submitted to correct some XML issues. The CR was adopted. The description of the XML file will become an annex of the next edition of the EG. In the meantime it is available for download at <http://ienc.openencdis.org/?q=node/11>

(waterlevel\_v1\_0.xsd) Bernd reminded that depths need to be IAW with 1.1.2 in IENC Encoding Guide if they should be used together with a water level model.

- In Europe a water level service is available for seven pilot stretches via website (access via 3G/4G network)

#### 12. Use of USAGE and SCAMIN in Inland ENC's

- Pieta provided a brief overview of challenges (too much “clutter” on the screen); no work currently being performed to remedy the situation.

#### 13. IENC Information documents

- The IENC PowerPoint Presentation was edited and updated.

(Inland\_ENC.ppt)

#### 14. Future operation of:

- Website (ienc.openecdis.org)
- Discussion Forum for IEHG
- IENC Register (part of IHO S-100 Registry)

No changes

#### 15. Other business

a. There was a brief discussion on how to encourage more countries/regions to join IEHG  
South America – Next year’s meeting (IEHG10) in Iquitos, Peru should result in more South American members and participants. Flavia, Angel and Lee will contact some key persons that have previously expressed interest in the work of IEHG (e.g., Uruguay).

Asia – Fei, Weijun mentioned that China is one of six countries that the Mekong River flows through. This includes: China, Myanmar (Burma), Laos, Thailand, Cambodia, and Vietnam). He will make an effort to promote the work of IEHG.

Africa – Lee Alexander will meet with two graduate students from the Nigerian Hydrographic Office that attend the University of New Hampshire.

While new members and participants are most welcome, there is no need to pressure more countries to join IEHG.

b. Fei Weijun, Yu Xiujuan, the Chongqing Shipping Exchange and the Changjiang Waterway Survey Center were extensively thanked for the perfect organization of the meeting and the overwhelming hospitality.

#### 16. Next meeting

Iquitos, Peru – some time during October - November 2012 (exact date TBD).

Ideally, it will be possible to arrange a 2nd Fluvial Hydrographic Workshop beforehand. Lee, Angel, and Flavia will help to organize. In particular, Lee will contact Hugo Montoro (SEHINAV, Peru) and Hugo Gorziglia (Director at IHB, Monaco) in regard to the IHO Capacity Building Committee providing some travel support that enables members of the various South American countries involved in fluvial waterway hydrography/navigation to attend the Workshop – and IEHG10 meeting.