

4th Inland ENC Harmonization Group Meeting
St. Petersburg, Russia, 11-13 October 2006

23 October 2006

Minutes – Draft Version 3

[Note: These Minutes follow the list of topics that Bernd Birkhuber provided prior to the Meeting (see program st petersburg3.doc). They are not listed in order of importance or in discussion sequence.]

1. Amendments to the Encoding Guide (EG)

Docs: Inconsistencies and errors in the IENC Encoding Guide BB PK.doc
Danube Canal SLCONS.jpg

A number of Change Requests have already been submitted during the past year. However, Eric Rottmann detected some additional inconsistencies -- especially with regard to the definition of mandatory, conditional or optional attributes. Almost all of them were reviewed and agreed during the meeting. The consolidated list of these changes will be published on the OEF. Participants of IEHG, who have not been at the meeting, will have the possibility to react on the change requests within six weeks. Remaining points – like the question of how to encode vertical shore line constructions of canals – will be discussed on the OEF.

Proposed changes will be posted on the OEF by Bernd next week at which point they will be available for comment. Pending no opposition to the proposals, they will come in to effect six (6) weeks after they are posted to the OEF. Vladimir will look into how they encode similar features along Russian waterways and report back to us.

The EG does not contain detailed instructions for the encoding of some types of natural and artificial shorelines (e.g., a vertical wall with steps for a boat landing). It was agreed to add some pages or to amend existing encoding instructions.

The use of meters (“m”) for vertical elevation units has caused some problems in the USA. It was agreed to include feet as vertical elevation unit for USA inland waters.

The IENC Encoding Guide 1.1 will become updated document 1.2. As clarified during the meeting, this will occur approximately six (6) weeks after the change proposals are posted on the Open ECDIS forum (tentatively 1 Dec 2006).

- “conditional” primarily refers to attributes, less so to features.
- whenever “conditional” is used, it must be adequately defined in the Encoding Guide.
- fairways are “conditional” (required in Europe but not N. Am.)

2. Status of the “Technical specification for Inland ECDIS” within the framework of the European RIS directive

Doc: Inland ECDIS – Committee (v13 09 06).pdf

The European Inland ECDIS Expert Group has transmitted Edition 2.0 of the European Inland ECDIS standard (including the common Encoding Guide) to the Commission of the European Union. The proposal was discussed and accepted by the RIS-Committee on 29 September 2006, but it still needs to be formally adopted by the member states of the European Union. Once this is done, it will be published in the Official Journal of the European Union and will enter into force as a binding regulation on the day after publication. Most probably this will occur in the first quarter of 2007.

3. European Proposal for a “Common” Product Specification for Inland ENC

Doc: IES-20-Section-2ProdSpec.doc

The European Inland ECDIS Expert Group had to include a “Product Specification for Inland ENCs” in the annex of Edition 2.0 of the European Inland ECDIS Standard. Basically it is the same as what is contained in the IHO ENC Product Specification (IHO S-57 3.1, Appendix B.1). However, there are some additions/extensions that pertain to inland/river navigation.

These include:

2.1 - Three additional Navigational Purpose categories to address inland/river navigation uses (7-9). USACE agrees with this, and may begin to use Category #7 for so-called “mini-IENCs” that provide more detailed bathymetry (contour lines) which can be separated from the “base cell” by using usage # 8. This however requires the additional use of the Category “L”. . Potentially, all future IENCs will be Category 7 rather than Category 5 (Harbour). “Mini-IENCs” will likely use either Category 7 or possibly Category L - overlays.

2.2 - Overlay cells can overlap (Nav Purpose L), but not those cells that pertain to Group 1 (skin-of-the-earth).

2.2 - Adequate data coverage should occur within the radar range on either side the waterway.

3.2 – Only those features, attributes and enumerations which are defined in the IENC Feature Catalogue (<http://ienc.openecdis.org>) may be used in an IENC.

3.3 – The geometric primitives of the features permitted or use in an IENC can be found in the IENC Encoding Guide.

3.5.2 – Mandatory attributes of features are contained in Inland ENC Encoding Guide.

3.7 – The IENC may contain [time-dependent] information about magnetic variation, tides, tidal streams and currents. The display of depth information may adjusted by tidal height or gauge information.

3.10.1 – flodoc, hulkes, and ponton are not Group 1 features while FLODOC, HULKES and PONTON are still Group 1 features..

3.11.1 – the IENC Encoding Guide contains detailed information on language.

4.4 – Depths/heights can be meters or feet; distance can be nautical and statute miles.

5.1 – Images are not restricted to just “.tif” files. IENC Encoding Guide allows both “.tif” and “.jpg.”

5.3 – IENC data may be protected by a security scheme (not just encryption).

5.6.4 – Text and picture files are named according to the IENC Encoding Guide.

5.8 – Data may be provided via any physical media or telecommunication links.

6.3.2.1 – To recognize a S-57 data set as an IENC, the content of the subfields PRSP and PRED differ from S-57 ENC.

6.6.2.3 – now includes feet and statute miles

7 – Participants of the IEHG can submit proposals for amendments or changes.

It was agreed that it be adopted by the IEHG as a basis for future development.

In regard to the use of the **Encoding Guide** an annex of the IENC Product Specification, the following are the expected timeframes for implementation:

Produce new IENCs

CCNR – end of Nov 2006

EU – end of March 2007

USA – target Oct 2007

Russia – end of 2008

Begin converting existing IENCs → new edition

CCNR – when content needs to be updated

EU - when content needs to be updated

USA – June 2007

Russia – end of 2007

4. Inland ENC Register

Eric Rottmann has set up the Inland ENC register on the basis of the definitions of S-100 of IHO. This is being done in cooperation with the UKHO who is developing the overall IHO Registry on behalf of IHO. UK HO site is almost complete (www.ukhftp.gov.uk/home). The lack of funding for Peter Kluytenaar and SevenCs to operate the IENC Register has resulted somewhat of a standstill. Requests to the EU for funding (~40K Euros) so far were unsuccessful. Attempts are made to get intermediate funding from one of the member states. One possible solution may be to use the EU funds for RIS implementation (IRIS project).

5. Open ECDIS Forum (OEF)

Due to declining use by IHO CHRIS WGs, at the CHRIS 18th meeting it was recommended that IHB no longer fund the operation of the OEF. However, sufficient funding is still available for UNH to continue its operation for at least another year (end of 2007). Unlike IHO, IEHG has increasing requirements for the OEF. As agreed at the meeting, these include:

1. E-mail notification to all IEHG Discussion Group members:
 - every time something is posted
 - for all responses
 - time limit for discussion
 - a statement of final conclusion of a certain topic (would be done by Discussion Leader)
 - a way to archive
 - proposal for other topics
2. A way to call-up and review all past postings (history)
3. Participant registration
4. Download section
 - ToR
 - Rules of Procedure
 - Form for transmitting proposals for changes (to Core Group)
 - How to post questions/discussions
 - Minutes to IEHG Meetings
5. IENC Publications
 - Encoding Guide
 - Product Spec
 - Feature Catalogue
6. Inland ECDIS PP presentations
7. Source of Inland ENC data
 - USA
 - Europe
 - Russian Federation
8. Link to Inland/River Administration sites for other info/pubs (specifically related to Inland ENCs).

Bernd Birkhuber agreed to serve as IEHG Discussion Forum Leader for the OEF.

In regard to past Inland ENC discussions on the OEF, it is OK to provide these to others (e.g., potential South American colleagues).

6. Terms of Reference of the IEHG

Doc: ToR for IEHG – 13Oct06.doc

The IEHG has been recognised by IHO and the European Union as the group responsible for the development of international standards for Inland ENC data. Since the status of the group has become more official and the responsibilities are growing, there is a need to adopt an IEHG “Terms of Reference.” In addition to describing the main objective, guiding principles, authority,

composition and membership, there is also a need to establish “rules and procedures” on how proposals are submitted and reviewed. There is also a need to establish voting procedures and how Inland ENC standards are to be submitted and implemented.

Based on the draft version 0.1 (12 Sep 06) initially prepared by Bernd Birkhuber and Jörg Vogel, the meeting discussed and agreed on a Terms of Reference (ToR). The main components include:

- Objective
- Guiding Principles
 - Goal
 - Framework (key documents)
- Authority
- Composition, Organization and Membership
- Procedures (Annex A)
- Management of Inland ENC Register (Annex B)

7. Cooperation with the RIS Committee of the European Union, CCNR and other political entities for Future Amendments

There are a number of political bodies that are deciding about the application of the standards that have been developed by IEHG. These include:

- US Army Corps of Engineers (USACE)
- Russian Federation
- European Union (EU)
- Central Commission for Navigation on the Rhine (CCNR)
- Danube Commission
- Economic Commission for Europe of the United Nations
- PIANC

National governments of European countries that are not member states of the EU (e.g., Switzerland, Croatia, Serbia, Moldavia, and Ukraine)

As such it is important to insure that all organizations are kept informed as to the official versions of the standards for Inland ENCs. This will be done on the OEF.

8. Harmonization of Standards for Inland ECDIS Applications

Russia proposed to deal not only with Inland ENCs, but also with ECDIS in the IEHG and to develop a common standard for applications. The European participants explained that there are some boundary conditions that would have to be taken into account if IEHG would decide to standardize requirements for applications. The current regulations for navigation systems in the European Inland ECDIS standard are based on the Radar Regulations of the CCNR. These regulations will become a part of the directive of the European Union on technical regulations for inland navigation vessels (directive 82/714/rev.). Neither the European Inland ECDIS Expert Group nor IEHG has a mandate to change these regulations. So there are only two ways to harmonize the regulations for Inland ECDIS applications in navigation mode. The first would be to accept the European Radar regulations as a basis. The second would be to harmonize the Radar regulations before IEHG starts to discuss the requirements for Inland ECDIS applications. The participants from the US explained that they do not want to deal with the standardization of applications at this time. As Russia is already a member of the European Inland ECDIS expert group, there is no need to deal with this subject in IEHG.

9. Looking ahead

CCNR – Ideally, the change requests and adopted changes discussed at IEHG 4 will be accepted. If so, the current versions of Inland ENC standards would be:

IENC Encoding Guide 1.2 (proposed date for adoption: November 2007)

IENC Product Specification 2.1 (proposed date for adoption: November 2007)

IENC Feature Catalogue 2.1 (proposed date for adoption: November 2007)

EU – There may be benefit of looking at the RIS structure in Europe as to the way ahead for other regions of the world.

USACE – Formal declaration of adoption requires approval of USACE HQ, but do not anticipate any difficulty; target date is June 2007.

Russia – A decision was made by President Putin to define new charting/topography requirements for Russia. Specifically there will be a new list of required features/objects for safety-of-navigation on rivers/inland waterways. A meeting will be held at the Russian Ministry of Transport on what is needed to produce Russian IENCs based on international standards.

There are two major challenges:

- 1) Convert current IENCs to new/harmonized IENC standard.
- 2) Translate IENC documents from English into Russian.

10. Technical IENC Discussion Group

Within the next year, there should to be an IENC “technical exchange” forum on new IENC requirements (water levels, current flow, etc.). In particular, there would be benefit in establishing a new OEF discussion forum topic related to future/advanced IENC requirements.

11. Next meeting

It was agreed that the 5th Meeting of IEHG will be held at the University of New Hampshire, Durham, NH USA (100KM north of Boston).

- early Oct 2007

- 3 days (Tuesday - Thursday)

Lee Alexander will organize/host.

Meeting Attendees

	<u>Country</u>	<u>Organization/Company</u>	<u>e-mail</u>
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