



Inland ENC Harmonization Group

19 - 20 October 2011
Chongqing

Welcome, introduction, organization

Many thanks to Fei Weijun and Yu Xiujuan for organizing the meeting!

Introduction of participants

Organizational details: please copy your presentations to the USB-stick

Does somebody need printouts of documents?

WLAN: ?

Time schedule

Wednesday, 19 October

- 09:00 - 11:00 morning session
- 11:00 - 11:20 coffee break
- 11:20 - 13:00 midday session
- 13:00 - 14:00 lunch break
- 14:00 - 15:30 afternoon session
- 15:30 - 15:50 coffee break
- 15:50 - 17:30 continuation of afternoon session

Time schedule

Thursday, 20 October

- 09:00 - 11:00 morning session
- 11:00 - 11:20 coffee break
- 11:20 - 13:00 midday session
- 13:00 - 14:00 lunch break
- 14:00 - 15:30 afternoon session
- 15:30 - 15:50 coffee break
- 15:50 - 17:30 continuation of afternoon session

Agenda

1. Welcome, introductions of participants, organizational details
2. Enlargement of Core Group, election of chairs, amendment of ToR
3. Experiences of private companies with Inland ENCs
4. Annual report to HSSC (former CHRIS)
5. S-99, S-100, S-101 and future alignment
6. S-57 to S-100 converter development
7. Updates to the Encoding Guide and Product Spec
8. Update intervals and processes
9. Portrayal domain and specification for Inland ENCs
10. Quality standards for Inland ENCs
11. Change request regarding XML-waterlevel messages
12. Use of USAGE and SCAMIN in Inland ENCs
13. Information document on Inland ENCs
14. Future operation of ienc website and discussion forum
15. Any other business
16. Next meeting

Enlargement 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 Birkhuber (MoT of Austria, Europe)

Current vice-chairs:

Flavia Mandarino (DHN, Brazil)

Weijun Fei (WTI, Asia)

Proposals for the coming period?

Election of technical coordinators



Technical Coordinators - One technical coordinator for each region

Current technical coordinators:

Lee Alexander (UNH CCOM, North America)

Pieta Kluytenaar (Serendipity, Europe)

Vladimir Sekachev (TRANSAS, Russia)

Angel Terry (Jeppessen, South America)

Yong Baek (KHOA, Asia)

Proposals for the coming period?




Amendment of the ToR



The Terms of Reference have to be amended to take into account the new members and the latest developments at IHO

ToR

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?

Update of the Introduction of the EG



The Introduction of the Encoding Guide for Inland ENC's is containing a short history of IEHG and should be updated

Introduction draft

Experiences by private companies

Information on experiences with Inland ENC's

(critical remarks welcome)

CARIS

ESRI

Jeppesen

7 Cs

Annual report to HSSC

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

Draft Report

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



S-100 has entered into force on 1st January 2010



S-101 is expected for

Lee



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 in line with S-101)

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

-  How do we participate in the development of S-101?
-  When do we start to develop a new Product Specification on the basis of S-101?
-  Who is able to provide a first draft?

S-57 to S-100 converter development








IHO is developing a converter from S-57 to S-100

Tom




Updates of the Encoding Guide

Change Requests 2011

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. 2.3 has been published by IEHG in spring 2011
-  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?






Corrections of the Feature Catalogue

-  Current approach: an edition of the Product Specification is referring to a certain edition of the Feature Catalogue, every change of the Feature Catalogue leads to a new edition of the Product Specification
-  This is necessary if e.g. a new feature is introduced
-  Would it be possible to publish corrected versions of an edition of the FC?

Portrayal domain and specification

- 📌 At the last meeting IEHG agreed to establish a Portrayal Domain for Inland ENC's in the S-100 Registry
- 📌 This is necessary to ensure that applications on maritime vessels are able to display Inland ENC specific objects
- 📌 Is the HYDRO portrayal domain implemented?
- 📌 Who is able to develop the IENC portrayal domain?

Quality standards for depth information

-  The European project IRIS II investigated quality requirements regarding depth data in IENCs:
-  Depth data is needed to find the best channel and to determine the maximum amount of cargo
-  Definition of depth in areas with muddy bottom is not easy and has influence on the sounding technology (frequency)
-  The use of multi beam echo sounders is recommended
-  S-44 is the only available international standard for surveying, “special order” should be used for critical sections on inland waterways

IRIS II

Quality standards for depth information 2



Dependencies of required accuracy:

- The shallower the area (within the fairway) the more critical
- The steeper the river bank the less critical
- The harder the river bottom the more critical



Define a “relevant water depth range” (RWDR) for each waterway (e.g. a guaranteed depth or a depth which should be maintained)

IRIS II

Depth (in m)	Maximum acceptable vertical deviation* (in cm)	Maximum acceptable horizontal deviation** (in cm)	Minimal ISO spacing (in cm)
0m to 1m	-	-	no isobaths
1m to (RWDR – 1m)	+/- 50 cm	+/- 100 cm	50
(RWDR – 1m) to RWDR	+/- 20 cm	+/- 50 cm	20
RWDR	+/- 15 cm	+/- 40 cm	10
RWDR to (RWDR + 1m)	+/- 20 cm	+/- 50 cm	20
(RWDR + 1m) to (RWDR + 2m)	+/- 50 cm	+/- 100 cm	50
(RWDR + 2m) to (RWDR + 3m)	+/- 50 cm	+/- 100 cm	100
> (RWDR + 3m)	+/- 50 cm	+/- 100 cm	500

* ... max. acceptable deviation (95 % confidence level) of vertical spacing of depth contours/areas (isobath) displayed in the IENCs

** ...max. acceptable deviation (95 % confidence level) of horizontal accuracy of the depth contours/areas (isobath) perpendicular to the general direction of the traffic displayed in the IENCs

Changes of the river bed	Update interval between 2 surveys
Critical sections (depth within RWDR and unstable river bed with dynamic changes)	New survey when verification soundings indicate a depth that is more than 20% outside the accuracy requirement as defined in chapter 2.2.
Non-critical sections (depth outside RWDR)	Regular verification soundings, Update on demand
After high water and flood events which (might) have an impact on the contour of the river bed.	<p>It is recommended to make a complete measurement of the affected area as soon as possible.</p> <p>In most cases the authority knows from experience that a complete measurement is necessary. Alternatively verification soundings could be done if it is not certain that a complete measurement is necessary.</p>

Quality standards for Inland ENCs



minimum content of Inland ENCs

Pieta



minimum accuracy requirements

IRIS II

xls







accuracy information in Inland ENCs

Pieta

Wieland

Update of the standardized water level file

-  Depth information in Inland ENC's is referred to a reference water level
 -  The real depth is bigger or smaller, depending on the actual water level
 -  The information provided by gauges is only applicable in the vicinity of the gauge because different water levels are not parallel
- example
-  IEHG has developed a standardized XML-format for the provision of detailed water level information

Update of the standardized water level file



This approach has been tested within the European Project IRIS II and the project partners developed some proposals for corrections and amendments in the standardized XML file

presentation

change request

new XSD



Inclusion in the EG?






Use of USAGE and SCAMIN



Evaluation of the use of USAGE and SCAMIN in Inland ENC's

information

Information document on Inland ENC's

-  IEHG has developed a document that provides information on Inland ENC's and the relation and the differences to maritime ENC's
-  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?

information

Operation of Web Services

Future operation of



ienc.openecdis.org website

<http://ienc.openecdis.org>



Discussion forum













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








IENC domain in the registry of IHO

<http://registry.iho.int>

Any other business, Next Meeting

-  Update CR and list of CR (Bernd)
-  Update EG (Denise)
-  Update FDD (Eric, Pieta and Denise)
-  Update FC (Flavia)
-  Update Product Specification (Bernd)
-  Update Recommended validation checks (task force)
-  Investigate Portrayal Register (Lee, Eivind?)
-  Report to HSSC (Lee)
-  Inland ENC ppt (Bernd, input from everybody)
-  Article for HYDRO Int. (Lee)
-  Investigate matters of accuracy portrayal (Lee and Pieta)
-  Invitation letter to S.Am. Countries (Core Group and Carlos)

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 ?
Invitation from Peru to Iquitos
-  Changes to the agenda of next meeting?
-  Departures

Thank you, Weijun and Xiujuan, for the
organization!
Thank you all for participation!