



# Inland ENC Harmonization Group

14 - 16 November 2012  
Iquitos



# Welcome, introduction, organization

***Many thanks to Helena Rowland for organizing the meeting!***

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

***Does somebody need printouts of documents?***

# Time schedule

## Wednesday, 14 November and Thursday, 15 November

- 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

## Friday, 16 November

- 09:30 - 11:00 morning session
- 11:00 - 11:20 coffee break
- 11:20 - 13:00 midday session and end of meeting
- 13:00 - 14:00 lunch
- 14:00 - 18:00 work of Core group and/or small groups on open questions

# Agenda

1. Welcome, introduction of participants, organizational details
2. Inland ENC and IEHG
3. Inland ENC applications
4. Working methods of IEHG
5. Inland waterways, navigation and cartography of new participants
6. Research and development in the area of Inland ENC
7. Core Group, election of chairs, amendment of ToR
8. Experiences of private companies with Inland ENC
9. Annual report to HSSC (former CHRIS)
10. S-99, S-100, S-101 and future alignment
11. S-57 to S-100 converter development
12. Updates to the Encoding Guide and Product Spec
13. Update intervals and processes
14. Portrayal domain and specification for Inland ENC
15. Quality standards for Inland ENC
16. Use of USAGE and SCAMIN in Inland ENC
17. Information document on Inland ENC
18. Future operation of ienc website and discussion forum
19. Any other business
20. Next meeting

# Inland ENCs and the Inland ENC Harmonization Group (IEHG)

Inland ENCs, the Inland ENC Harmonization Group (IEHG), its legal and organizational background in the US, Europe, Russia and Brazil

IENTCs

USA

Europe and Russia

Brazil

China

# New participants

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

Peru

# Inland ENC applications

CARIS

ESRI

Periskal

Hypack



# The Inland ENC Harmonization Group



**Objective:** to develop and to maintain a harmonized standard for Inland Electronic Navigational Charts (IENCs) suitable for inland navigation that is based on the standards of IHO for 'maritime' ENC



**Goal:** to agree upon specifications for Inland ENCs that are suitable for all known inland ENC data requirements for safe and efficient navigation in European, North and South American, Russian Federation and Asian inland waterways.



It is further intended that IENC standards meet the basic needs for Inland ENC applications, worldwide

# IEHG - recognition



As the competent international technical group on Inland ENC technical standards development, implementation and maintenance, IEHG is recognized by:

- Europe - European Union, Economic Commission for Europe of the UN and the Central Commission for Navigation on the Rhine
- North America – US Army Corps of Engineers
- Russian Federation - Russian Ministry of Transport
- Brazil, Peru and Venezuela – Hydrography and Navigation Services
- Asia – Ministry of Transport of PRC and KHOA of Republic of Korea
- International Hydrographic Organization (IHO)



Since there are several countries with Inland Navigation that are not Member States of IHO, IEHG does not intend to become a member of IHO.



Instead, IEHG supports, advises and provides input to IHO regarding Inland ENC matters as a recognized NGIO.

# IEHG – recognition (2)



In 2009, IEHG has been recognized by IHO as a Non Governmental International Organization (NGIO) with observer status



Current members of IEHG are all European countries with inland waterways, the Russian Federation, the United States of America, Brazil, Peoples Republic of China, Republic of Korea, Peru and Venezuela

# IEHG – composition and organization

Composition - IEHG is a combined government/non-government technical group

Regions – IEHG regions are comprised of countries within a continent (North America, South America, Asia) or a recognized social-economic region (Europe, Russian Federation).

Organization – By simple majority vote, chairpersons, vice-chairs and technical coordinators are elected.

ToR

# IEHG – membership

All the members of IEHG should have current expertise in the field of Inland ENC.

**Participants** – Anyone who is involved in the production of Inland ENCs or the production of Inland ENC applications and representatives of user groups can participate in IEHG, make proposals and take part in the discussions.

**Members** - Representatives of competent authorities involved in the provision of Inland ENCs are entitled to become members. If proposed by a competent authority, membership can also include expert contributors.

ToR

# IEHG – procedures

**Meeting Schedule** - The IEHG normally meets once per year. If required, there can be an additional meeting or the meeting can be postponed.

**Discussion Forum** - The IEHG uses the internet as a discussion platform in the time between the meetings. Every participant of IEHG is entitled to start a new discussion topic and to take part in discussions about Inland ENC's.

**Task Groups** - The IEHG may decide to form a task group for the drafting of specific proposals.

**Proposal Submission and Review:** see Terms of Reference

ToR

# IEHG – formalization of standards

The IEHG submits Inland ENC standards for formalization to:

- 🌐 Interested international organisations like IHO, the European Commission (EC), the Central Commission for Navigation on the Rhine (CCNR), the Danube Commission (DC), the Economic Commission for Europe of the United Nations (UN/ECE) and the Mekong River Commission
- 🌐 National waterway authorities (e.g., United States Army Corps of Engineers (USACE), Russian Ministry of Transport) and
- 🌐 National Hydrographic Services (e.g. Directorate of Hydrography and Navigation of the Brazilian Navy (DHN))

ToR

# Election 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, South America)

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] (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

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 ENCs

(critical remarks welcome)

CARIS

ESRI

IIC Technologies

Hypack

Jeppesen

Periskal

# Annual report to HSSC

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

Report 2012

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

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

- 🌐 S-101 is expected for ....

Denise






- 🌐 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

-  After a discussion on the forum it is proposed to use IEHG-101 for the Product Specification for Inland ENC's that will be aligned with S-101
-  Based on the discussions at HSSC 4 IHO might reserve S-20x numbers for standards of other groups; decision pending
-  How do we participate in the development of S-101?
-  When do we start to develop IEHG-101?
-  Who is able to provide a first draft?

# Updates of the Encoding Guide

Change Requests 2012

# 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?

CR overview





# S-57 to S-100 converter development



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

Tom

# Portrayal domain and specification

-  At the 2010 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 Inland ENCs



Recommended validation checks for IENCs

Wieland

Changes



minimum content of Inland ENCs

Pieta



minimum accuracy requirements





xls



accuracy information in Inland ENC  
developments for S-101 (next slide)

Pieta

# Quality information in S-101

-  UKHO made a user survey, big majority would prefer dynamic colour overlay (red – amber – green)
-  Overall quality should be based on a lot of factors including temporal degradation of data quality and vessel requirements
-  The user should have the possibility to drill down to the individual factors
-  UKHO and University of Southern Mississippi will present proposal before July 2013

# Use of USAGE and SCAMIN



Evaluation of the use of USAGE and SCAMIN in Inland ENC

information








# Research and development

Research and development in the area of Inland ENC's

?

# 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

-  Article for HYDRO International

# 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 (Denise with Pieta)
-  Corr2 FC (Denise)
-  Update Recommended validation checks (Wieland with task force)
-  Investigate Portrayal Register (Lee, Angel)
-  Report to HSSC (Co chairs and Lee)
-  Inland ENC ppt (Bernd, input from everybody)
-  Article for HYDRO Int. (Lee)
-  Monitor matters of accuracy portrayal (Lee and Pieta)

# 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 ?  
US?
-  Changes to the agenda of next meeting?
-  Departures

Thank you, Helena and Hugo, for the  
organization!  
Thank you all for participation!