

## TERMS OF REFERENCE

### International Inland ENC Harmonization Group (IEHG)

27 December 2023

#### 1. Objective

To develop and to maintain a harmonized standard for Inland Electronic Navigational Charts (IENC) suitable for inland navigation that is based on the standards of the International Hydrographic Organization (IHO) for S-57/S-101 Electronic Navigational Chart (ENC).

#### 2. Guiding Principles

a. 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. However, it is intended that IENC standards meet the basic needs for Inland ENC applications, worldwide.

b. The framework for Inland ENC standards includes:

1. Use of **IHO S-57** (Edition 3.1), including:
  - ‘Maritime’ ENC Product Specification (Appendix B1)
  - Object Catalogue (Appendix A)
  - Use of Object Catalogue (Appendix B.1, Annex A)
2. A minimum **Inland ENC Product Specification** that includes mandatory requirements for safety-of-navigation on inland waterways, worldwide.
3. An **Inland ENC Encoding Guide** that provides guidance on recommended object classes, attributes, and attribute values for encoding IENC data.
4. Inland ENC **Feature Catalogue**.
5. Operation of an **Inland ENC Domain** within the S-100 Geospatial Information Registry.
6. Use of an e-mail based discussion forum as a means of communication.
7. Align with **IHO S-100** Framework for Marine Geospatial Data.

#### 3. 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 United Nations and the Central Commission for Navigation on the Rhine  
North America – US Army Corps of Engineers  
Russian Federation - Russian Ministry of Transport  
South America – Directorate of Hydrography and Navigation of the Brazilian Navy (DHN), Hydrography and Navigation Service of Venezuela and Directorate of Hydrography and Navigation of Peru  
Asia – Korea Hydrographic and Oceanographic Administration (KHOA) and Waterborne Transport Research Institute, Ministry of Transport of the Peoples Republic of China  
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 part of IHO. Instead, IEHG supports, advises and provides

input to IHO regarding Inland ENC matters as a recognized Non-Governmental International Organization (NGIO).

#### 4. Composition, Organization, and Membership

a. Composition - IEHG is a combined government/non-government technical group that works towards the development of international standards meant to facilitate the implementation of inland electronic charting and navigation, worldwide.

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

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

1) Chair – Two persons (co-chairs) each from a different region. Only representatives of waterway authorities can become chairpersons.

2) One vice-chair from each region, which is not already a chair.

3) Technical Coordinators - One technical coordinator for each region.

4) Core Group - The two Chairs, the Vice-Chairs, the Technical Coordinators and the representatives for S-100 listed in Annex B

d. Membership

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

1) **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.

2) **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, such as representatives of:

- international governmental organizations in the area of inland navigation and members of the working groups of these organizations that are dealing with Inland ENCs
- inland navigation user groups
- private companies that are producing Inland ENCs or applications for Inland ENCs.

Acceptance of expert contributor as a full member is decided on by a simple majority vote of the regions. Current expert contributors do not vote in this process. A prerequisite for an expert contributor is that they have provided substantial input to the IEHG for at least one year, and their further involvement is needed for the further development of the standard. If these prerequisites are no longer fulfilled, membership of an expert contributor can be revoked.

#### 5. Procedures

See Annex A.

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## Annex A

### IEHG Procedures

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

2. **Discussion Forum** - The IEHG uses an e-mail based discussion forum 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 ENCs.

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

#### 4. **Proposal Submission and Review**

Every participant of IEHG is entitled to transmit proposals for amendments of the standard together with an explanation via the discussion forum. The participants of IEHG are requested to react as soon as possible. An objection against a proposal has to contain an explanation for the objection.

If the proposal does not affect the S-100 Geospatial Information Registry and there is no objection within six weeks, the proposal is adopted.

If the proposal affects the S-100 Geospatial Information Registry and there is no objection within six weeks it has to be sent forward to the Domain Control Body of the IHO Geospatial Information Register. The proposal will be formally adopted once approved by the Domain Control Body.

If there is an objection, there are several options:

- The proposal can be withdrawn.
- The proposal is updated then resubmitted, and handled as a new proposal.
- If requested by the Proposer, the proposal is deferred and decided upon at the next annual meeting of the IEHG.

The IEHG will make every effort to come to a common agreement about a proposal. If it is not possible to reach an agreement on international level, the proposal could be considered for adoption as a regional encoding rule. If common agreement cannot be reached, then a formal voting procedure would make a final decision.

If a new proposal is made during a meeting of IEHG, it may be discussed at the meeting, but it has to be distributed to all the participants of IEHG and – if it is affecting the S-100 Geospatial Information Registry – the relevant Domain Control Body for formal adoption after the meeting.

## 5. Voting procedure on Proposals

Almost all decisions of IEHG are made by consensus. However, if a vote is required to decide on a proposal, this is done on a regional basis. Each region has two votes. One vote is by the competent waterway authorities and the other by the expert contributors of that region. The decision of IEHG consists of a simple majority of the IEHG regions and the expert contributors associated with each region. The voting procedure for the individual regions follows the rules of the respective international or national organizations.

### Inland ENC Encoding Guide:

If it is not possible to reach a common agreement, the geographical applicability of the proposal is restricted (e.g. “US only” or “Europe only”). Expert contributors might be included in the voting procedure of the region in that case.

### Inland ENC Feature Catalogue:

Deleting existing entries is only possible, if there is no objection from a waterway authority or from a simple majority of the expert contributors. Other changes of the Inland ENC Feature Catalogue can be adopted with a simple majority.

### Inland ENC Product Specification that results from changes of the Inland ENC Feature Catalogue or changes of the ‘maritime’ ENC standards of IHO:

Inland ENC Product Specification that results from changes of the Inland ENC Feature Catalogue or changes of the maritime ENC standards of IHO can be adopted with a simple majority.

### Other proposals regarding the Inland ENC Product Specification:

Other changes of the Inland ENC Product Specification can be adopted as an official proposal of IEHG with a two third majority of the regions and a two third majority of the expert contributors. This official proposal of IEHG will become part of the Common Base Product Specification, as soon as it is adopted in all the regions, which are participating in IEHG.

### Proposals regarding changes of the Terms of Reference (including the Rules of Procedure):

Changes of the Terms of Reference have to be adopted by consensus of the regions and the expert contributors.

## 6. Submission and Implementation

The IEHG submits Inland ENC standards for formalisation to:

- Interested international organisations like IHO, the European Commission (EC) and the Central Commission for Navigation on the Rhine (CCNR) via the European Committee for drawing up standards in the field of inland navigation (CESNI), the Danube Commission (DC), the Economic Commission for Europe of the United Nations (UN/ECE) and Mekong River Commission,
- National competent authorities.

## Annex B

### Management of the Inland ENC Domain in the IHO registry

1. Any participant of the **Inland ENC Harmonization Group** can submit a proposal to the Inland ENC Domain. But, the proposal must:
  - a. be in an established format (available on the <https://ienc.openecdis.org> Website)
  - b. describe how the new object (or feature) will be accommodated in the IENC Encoding Guide
2. The **Inland ENC Domain Manager(s)**:
  - a. Reviews the submitted proposal for completeness, and may request additional information/clarification from the Proposer. The proposal is also distributed to IEHG Core Group (Domain Control Body) and the Executive Control Body of the IHO Geospatial Information Registry for review/comment.
  - b. Officially posts the proposal on the Inland ENC Domain. It is initially flagged as **NOT-VALID**.
  - c. Places the proposal on the IENC Discussion Forum to start discussion about the proposal.
  - d. This process should be completed within 14 days.
3. Approval Process (6 weeks; can be extended by the proposer or the Core Group):
  - a. If a consensus is reached to accept, the proposal is then flagged as **VALID**.
  - b. If no consensus is achieved, it remains flagged as **NOT-VALID**.
  - c. When not adopted:
    - 1) the submitter can decide to withdraw the proposal
    - 2) the proposal can be revised and re-submitted
    - 3) any participant of the IEHG can ask that the proposal be considered at the next annual meeting of the IEHG
  - d. The Inland ENC Domain Manager announces the outcome on the IENC Discussion Forum.

#### Participants

Domain Owner:	IEHG
Domain Control Body Members:	currently, Denise LaDue and Gert Morlion
Submitting Organization:	IEHG

Submitting Organization Representatives:	currently Denise LaDue and Gael Billet
Representatives in the Executive Control Body:	currently Denise LaDue and Gael Billet

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