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Agenda item 5 (b)

INLAND ECDIS EXPERT GROUP MEETING
6-7 March 2006, Mainz, Germany
(Informal report)

The meeting was held in the premises of German Federal Waterways and Shipping Administration, South-West. The following items were in the agenda of the meeting:

- Co-operation with the Commission of the European Union in connection with the Directive 2005/44/EC
- Structure of the edition 2.0 of Inland ECDIS Standard
- Discussion of text proposals for sections 1, 2, 2a, 3, 4 and 5. Agreement on the final text.
- Introduction of the environment for the digital parts of the Inland ECDIS Standard

Jorg Fogel, Chairman of the Inland ECDIS Expert Group (IEEG), presented the following information:

The current edition 1.02 has to be replaced by a new one because of several developments within the last 3 years:

• The COMPRIS-project came up with proposals for amendments of the IES in order to mainly improve voyage planning.

• A co-operation between the North-American "Inland ENC community" (mainly the US Army Corps of Engineers), Russia and the (European) Inland ECDIS Expert Group lead to improved and harmonized encoding rules for uniformly encoded Inland ENCs which are written down in the "Inland ENC Encoding Guide". The group named itself "Inland ENC Harmonization Group" (IEHG).

• The current IES is partly based on IHO's S-57, edition 3.0. IHO is currently using edition 3.1 and developing a new version, named S-100, and a new product specification, named S-101. S-100 and S-101 will follow ISO's Geospatial Standards. This means that new structures and terms will be introduced. The IES has to be adopted to this new approach in order to avoid incompatibilities in the future and to receive full recognition by IHO.

• The Directive 2005/44/EC (EC-RIS-Framework-Directive) requires the adoption of an IES before the 20th of Oct. 2006. If only edition 1.02 would be available a technically old approach with limitations would have to be adopted.

One goal for the Inland ECDIS Expert Group is to make maintenance of the IES easier. Maintenance is a problem because error corrections or minor changes or amendments have always to be adopted by political bodies like CCNR, Danube Commission or UN ECE. This simply takes to much time and hampers the development of the IES. Therefore some parts shall become only digital parts which could be maintained by IEHG for Inland ENC matters and by the Inland ECDIS Expert Group for Inland ECDIS matters. Paper versions are only needed to show the political bodies the statuses of

these parts at the time of adoption - not as parts of the IES.

Each section of the current IES refers to a separate standard of maritime ECDIS. As IHO has substituted Annex A of Appendix A (S-57) by S-62 "ENC Producer Codes" it's logical to create a new *section 2a "Codes for Producers and Waterways".*
For maintenance reasons it was decided to have additionally the "Codes for (Official) Producers" as a living digital part of the IES maintained by the Inland ECDIS Expert Group. The paper document "Status of Codes for Producers and Waterways" is only needed to show the political bodies the status of this digital part at the time of adoption - not as a part of the IES.

As the ***"Inland ENC Encoding Guide"*** *is much more detailed than the Annex A of Appendix B "Use of the Object Catalogue for Inland ENC" and enables the production of uniformly encoded Inland ENCs it shall substitute this annex. Another advantage is the fact that the starting points for the encoding rules are always the real-world entities.*
For maintenance reasons it was decided to have the "Inland ENC Encoding Guide" as a living digital part of the IES maintained by IEHG. The paper version is only needed to show the political bodies the status of the Encoding Guide at the time of adoption - not as a part of the standard.

The IHO approach for the future of S-57 requires to have a ***feature catalogue*** *instead of an object catalogue with all allowed combinations of features and attribute values. (Objects are named features in the future.) The solution was to take all combinations of objects and attributes which are used in the "Encoding Guide" and to create out of them the feature catalogue.*
For maintenance reasons it was decided to have the feature catalogue as a living digital part of the IES maintained by IEHG. The paper version is only needed to show the political bodies the status of the feature catalogue at the time of adoption - not as a part of the standard.

As IHO has already decided that the future product specification, which is a pure technical instruction for ENC producers, will be a separate standard S-101 it's wise to make it also within the IES a separate part.
For maintenance reasons it was decided to have the product specification for Inland ENCs as a living digital part of the IES maintained by the IEHG. The paper version is only needed to show the political bodies the status of the product specification for Inland ENCs at the time of adoption - not as a part of the Standard.

The same proposals is made for ***presentation library for Inland ECDIS.***

While the digital parts of the IES shall be published at http://ienc.openecdis.org all ***supplementary recommendations to the IES which are not parts of the IES*** *have to use another website for publication. It was decided that the Open ECDIS Forum (http://www.openecdis.org) shall serve as a platform for such recommendations.*
One supplementary recommendation could be foreseen so far: "Codes for (Private) Producers and Waterways"

How is the changed structure for the IES, edition 2.0, interwoven with the new approach of IHO for the future of S-57 ?

• IHO is planning to establish a registry with several registers on the web. This is a consequence from the alignment of IHO's S-57 with ISO's Geospatial Standards.
• One of those registers is already reserved for Inland ENCs. It will contain a Feature Data Dictionary (FDD) with all additional features, attributes and enumerants (= attribute
values) for Inland ENCs.
• Each entry of the register will be classified: valid or superseded or retired or not valid.

The feature catalogue with all allowed combinations of features and attribute values is comprised of a selection from different registers.

For Inland ENCs these will be mainly the Hydro register and the Inland (ENC) register.

Technical Assistant Secretary of Danube Commission on navigation Olexander Vdovichenko took part in the meeting.

Mr Vdovichenko informed participants about the decisions adopted by the last Technical Working Group meeting concerning RIS Standards and about the work that was done for the translation Inland ECDIS Standard ver. 1.02 into Russian and it adaptation to DC requirements.

They found some omissions and inaccuracies during the translation from three languages that may be useful for experts. Mr. Vdovichenko submitted text of the standard on three languages and summary table of comments to the IEEG.

Representative of DC Secretariat informed IEEG about willingness to translate the final version of the standard into Russian. He also noted that some problems have to be solved for the adaptation of the standard to DC requirements and primarily it should be universal as well as references to DC documents and recommendations should be. Some traditional for Danube facilities, marks (new and future) and types of vessels also should be included. For example, signal mark "A.4.1 - Avoidance maneuvers and overtaking of composite vessels prohibited" will be introduced into navigational regulations of DC and UNECE.

Mr. Vdovichenko proposed to consider the future applications of the standard and noted that it would be useful to know opinion about standard from other organizations and groups such as IEEG and GIS Forum Danube.

During the discussions around text of the Inland ECDIS Standard the comments from all participants were distributed as well as Russian proposals that generally contains the following proposals to Section 1 of the standard (full text enclosed):

- Exclude highlighted words from the text (1c) "Inland ECDIS (Operating System Software, Application Software and Hardware) shall have a high level of reliability and availability at least of the same level as other means of navigation **for the navigation mode as specified in Section 4 of this standard"** in order to extend this requirement to all modes of Inland ECDIS as to navigational equipment onboard.
- Exclude from the 1d that Inland ECDIS "can be designed for information mode only" but write that it "may operate in information mode and navigation mode".

ECDIS that is designed for information mode only should not be considered as ECDIS by definition but simply is a viewer.

- Amend the definition of Inland ECDIS by adding positional means and supplementary information that is necessary for the safe navigation (2.1a).
- Amend the definition of Inland ENC by adding information necessary for safe navigation (2.1c).
- Delete from (3.1c, d) words “if the chart is intended to be used for navigation mode…” because it is no such kind of IENC specially produced for any mode.
- Edit (3.2f) regarding chart and updating information (see enclosed).
- Edit 4.1b concerning display size for navigation and information modes that should not contradict each other because, as it was mentioned above, there is no special ECDIS for information mode only. By the same reason 4.2 also proposed to be deleted.
- Edit 4.3 concerning possibilities of north-up and head-up orientations and true and relative motions that all shall be available in Inland ECDIS and local regulations and skipper should define which mode to be used. It should not be a functional limitation of Inland ECDIS.
- Exclude from 4.5a the requirement of radar highest display priority and that it is only allowed to be presented in the relative motion, head-up mode.
- Add to 4.5d that radar information should not degrade the SENC information and it should be clearly distinguishable from the SENC information.
- Add to 4.6c that skipper select safety limits from those that are defined in SENC.
- Cancel the prohibition of north-up orientation and true motion in navigational mode from 5.2d.
- Exclude the chart automatic switching off if the SENC position does not match the radar picture from 8.1 adding suitable alarm or indication for these situations. It may lead to fatal results during the navigation and inadequate display.

All above proposal were attentively considered but for the most part they were not taken into account.