



Hydrographic Services and Standards Committee

IEC Activities affecting HSSC

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Introduction / Background - ECDIS

- ✦ This presentation provides information about the IEC process to create a new edition 4.0 of the IEC 61174 ECDIS standard. The new IEC edition is intended to be based on new editions of the IHO S-52, S-63 and S-64.
- ✦ This presentation also provides preliminary information about IEC intention to extend the IEC 61162 series interface standards to describe how onboard navigation and communication equipment could transfer to S-100 based information.



Analysis / Discussion - ECDIS

- ✦ IEC 61174 is the testing standard for type approval of ECDIS. It covers testing of compliance with IHO S-52, S-57, S-63 and S-64. Current edition is 3.0 from Sep 2008.
- ✦ Based on IHO and IMO ECDIS anomalies discussions, IEC TC80 agreed to establish during 2012 a maintenance team for IEC 61174 to address the issue.
- ✦ The maintenance proposal was submitted for voting in Sep 2012 and the MT7 was established in Dec 2012: Hannu Peiponen was selected as the convenor of MT7.
- ✦ The MT7 was given following dates as milestones: CDV Mar 2014, FDIS Mar 2015 and IS Sep 2015.



Analysis / Discussion – ECDIS / part 2

✦ Short description of IEC process:

- First step is to establish a maintenance team (MT). The MT can publish committee drafts (CD) in order to get feedback about the content of the new draft from the IEC National Committees.
- The MT has time until the date of committee draft for voting (CDV) to draft the content of the new edition.
- After issuing of the CDV only the convenor remains available for the secretary of the TC80.
- The CDV comments are processed by the secretary of TC80 who creates the next voting draft, the final draft international standard (FDIS).
- The FDIS comments are processed by IEC headquarter and they create the International Standard (IS).
- The process is compatible with World Trade Organization (WTO) rules to remove bias of individual experts and to remove bias of the secretary.
- The process delay from CDV to IS is long – about 1.5 years



Analysis / Discussion - ECDIS / part 3

- ✦ It is important to note that the technical experts are part of the process until the CDV, for which May 2014 was set for new edition of IEC 61174 ECDIS.
- ✦ Second point to note is that the CDV may contain references to external items which are not yet published on the date of publishing of the CDV, but are published before the deadline of the CDV voting.
- ✦ The CDV was published on 26th Sep 2014 and the voting and review comments period ends on 9th Jan 2015.
- ✦ The final steps of FDIS and IS are expected to go as planned for the publication of the IS in Sep 2015.



Analysis / Discussion - ECDIS / part 3

- ✦ The final publishing of S-52, S-63 and S-64 should be synchronized. The working order is such that first the content of the S-52 and S-63 are agreed and then the related S-64 can be developed including tests for all aspects available in the new edition of S-52 and S-63.
- ✦ IMO has published circulars related to ECDIS software upgrading up to the latest IHO standard. IEC has been pleased to note that new draft edition of the IHO S-52 standard includes a concept of grace periods to allow practical implementation time for the new edition.
- ✦ The smooth transition from current editions of IHO S-52, IHO S-63, IHO S-64 and IEC 61174 requires careful orchestration.
- ✦ IEC has been pleased to note that the co-operation between technical work groups of both IEC and IHO have been synchronized, productive and well attended by both IEC and IHO experts.



Conclusion, justification and impacts - ECDIS

- ✦ The process of new clarifying editions of all ECDIS related standards is a response:
 - to address known "ECDIS anomalies"
 - to address implementation irregularities
 - to improve the overall clarity of the specification.
- ✦ The result addresses also feedback of end users as noted by the IMO ECDIS stakeholder meeting in Oct 2012 to discuss about ECDIS and ECDIS anomalies



Action requested of HSSC - ECDIS

- ✦ To note the information provided



Introduction / Background - Interfaces

- ✦ IEC 61162 series interface standards are recognized by IMO Performance Standards for onboard navigation and communication equipment.
- ✦ IEC 61162 series standards set the baseline for interoperability between equipment from various manufacturers installed onboard SOLAS ships
- ✦ IEC TC80 Plenary is the highest decision making body within IEC TC80.
- ✦ In Sep 2013 the IEC TC80 Plenary agreed that TC80 needs to address the IMO decision about S-100 being the baseline of e-Navigation. The IEC TC80 plenary agreed that the IEC TC80/WG6 should address the issue.
- ✦ The plan of WG6 is to start discussion in Dec 2014 meeting based on the first draft idea how to handle the issue from Dr Kwangil Lee / Republic of Korea.



Analysis / Discussion – Interfaces – part 1

- ✦ The IEC process is assumed to check availability of suitable objects and attributes for all traditional elements/fields in the IEC 61162-1 sentences.
 - This may lead to introduction of additional objects and attributes for the S-100 GI registry
- ✦ It is assumed that the new IEC 61162 series standard will describe how to encode and decode S-100 objects and attributes in order that they can be transferred over existing IEC 61162 interfaces.
- ✦ Such interfaces are currently available for various technical methods including serial line (4800 bit/s and 38400 bit/s), CAN-bus and Ethernet.
- ✦ Further it is assumed that this encoding and decoding process might be similar to what is currently defined for onboard AIS transponders (i.e. the radio communication interface of AIS follows ITU M.1374 standard while the AIS interface from transponder to other onboard equipment follows IEC 61162-1 standard).



Analysis / Discussion – Interfaces – part 2

- ✦ It is assumed that IEC interfaces do not need an S-10X product specification.
- ✦ An open issue is if there is a need to have a domain owner to maintain the interface related items in a S-100 GI registry.
- ✦ IEC welcome any guidance from IHO for these subjects.



Conclusion, justification and impacts - Interfaces

- ✦ There is a need for IEC and IHO to co-operate for this issue.
- ✦ The process is justified by the IMO decision of setting IHO S-100 as the baseline for e-Navigation.
- ✦ The process will have positive impact for the implementation of the e-Navigation.



Action requested of HSSC - Interfaces

- ✦ To note the information provided

