Guideline to new IHO and IEC ECDIS standards

Background

ECDIS anomalies and safety critical issues have been identified, through investigations, where improper use of ECDIS and ENC data have been found to be a possible root cause.

Because of these investigations, ECDIS and data standards have been revised and updated. The new standard versions from IEC (ECDIS standards) and IHO (ENC data standards) were published in August 2015 and are detailed below:

The new standards

IHO

S-52 Edition 6.1 - Specifications for Chart Content and Display Aspects of ECDIS
S-52 Annex A Edition 4.0 - Presentation Library
S-64 Edition 3.0 - Test Data Sets for ECDIS
S-63 Edition 1.2 - Data Protection Scheme

IEC

IEC 61174 Edition 4.0 - Electronic chart display and information system (ECDIS) - Operational and performance requirements, methods of testing and required test results
IEC 62288 Edition 2.0 - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results

When new standards come into force

- The new IEC standards affect all new type approvals from 19. August 2015
- The new IHO standards will affect already installed ECDIS, which must be compliant with new standards from 31. August 2017
Main benefits from the new standards

IEC 61174 ed 4.0 address the following main areas

- Consistent use of symbols and abbreviations
- Alarm categorization
- Alarm visualization
- Reducing a number of audible alerts
- ECDIS default control settings
- Route exchange format «RTZ»

New IHO standards

- New design of Chart object info functionality (Pick report) makes access to ENC chart information easier and understandable for user
- Reorganization of alert management resulting in less alarms being generated by ENC objects
  - Crossing navigational hazards (isolated dangers and aids to navigation) as well as areas with special conditions (TSS, anchorage areas, etc.) will generate only visible alarms now
  - Safety contours continue to create audible and visible alarms
- Standardized way of making ENC update status report will allow mariners and Port State Control inspectors to confirm that the ENCs installed in an ECDIS are up-to-date
- ECDIS viewing groups extension based on Mariner feedback for detailed control of ENC features
- Chart management and ENC status reports
- ENC test data sets
- Other modifications - new symbols, names of fairways and anchorage areas, highlighting ENC updates, date dependent objects, new chart display layers, and some more