

**14TH CHRIS MEETING
SHANGHAI, CHINA, 15-17 AUGUST 2002**

REVIEW OF ECDIS PERFORMANCE STANDARD

submitted by Australia, USA (USCG), IEC

Introduction

1. The International Maritime Organization (IMO) Performance Standard (PS) for ECDIS was adopted by IMO in 1995 as IMO Resolution A817(19). Two additions to the PS have been made subsequently (IMO Resolutions MSC64(67) and MSC86(70)). These additions incorporated some minor adjustments to the existing text but were principally the addition of Appendix 6 - *Back-up requirements* and Appendix 7 - *RCDS mode of operation*.
2. The International Electrotechnical Commission (IEC) has drawn up IEC 61174 to provide test standards and specifications against which ECDIS equipment is tested to ensure conformance with the ECDIS PS. IEC 61174 Edition 1 was issued in 1997 and Edition 2 was issued in 2001.
3. At the request of IMO (IMO NAV 47/13 (4.8) of 26 July 2001), IEC is now engaged in the development of a new and broad ranging performance standard for the harmonised presentation of all navigation-related information to the mariner. This will result in IEC 62288. A consequence of this work will be to recommend revisions to several existing IMO Performance Standards related to navigation equipment.
4. The work on IEC 62288 is being undertaken by IEC Technical Committee 80 Working Group 13 (IEC TC80/WG13). WG13 will identify and recommend adjustments to existing Performance Standards to ensure consistency and to best support the new IEC 62288. Part of the work of WG13 is therefore to examine the existing Performance Standard for ECDIS.
5. Preparation and review of IEC 61174 has already identified a number of shortcomings or inconsistencies in the ECDIS PS. Experience from certain HO's and other parties has also revealed shortcomings and limitations. C&SMWG and IEC TC80/WG7 have described such shortcomings at various times. In particular, at the 13th Meeting of the C&SMWG, a draft letter was prepared for CHRIS to send to IMO NAV regarding a "*Conflict in Requirements for ECDIS Standard Display and Base Display*." IEC TC80/WG13 is likely to reveal more inconsistencies. This is not surprising considering that the existing ECDIS PS was essentially predictive in nature because it was drawn up at a time when operational ECDIS was in its early stages of development and comprehensive ENC's had yet to be developed.
6. Any changes proposed by WG13 are aimed at removing anomalies and inconsistencies, and to reflect contemporary requirements, for example by dealing with SENC distribution and data protection. In addition, extending the capabilities of ECDIS will be considered, for example permitting the application of tides to bathymetry, and clarifying time-dependent updates.
7. IHO is represented in WG13 through the Chair, C&SMWG and Chair, HGMIO. In addition, WG13 is open to "*experts of IMO Members States and Observers*". WG13 membership indeed includes many such experts, including national HO representatives who also participate in the IMO NAV Technical Working Groups.
8. WG13 will present its recommendations to the IMO Sub-Committee on the Safety of Navigation (NAV) at its 49th meeting (NAV49) in June 2003.

Discussion

9. There is an obvious benefit in IHO contributing to the work of WG13. Noting the sometimes troubled history of ECDIS discussion in IMO, it is opportune for the IHO to include its observations and proposals for the ECDIS PS into the WG13 submission to NAV49, rather than to present a separate and perhaps conflicting submission at some later date. This will have the effect of presenting IMO with a united proposal that should enjoy wide support from all interested parties and one that can boast a broad ranging consideration of views and input from the outset. This is also consistent with the IHO-IEC agreement reached in June 2001 whereby members of the relevant CHRIS and TC80 working groups enjoy *reciprocal observer status*, to ensure such coordination. Such a combined approach also minimises any requirement to convene the IMO/IHO Harmonization Group on ECDIS (HGE). Considerations at IMO MSC75 agenda item 6 (MSC75/6/5) and NAV49 (NAV49 agenda item 4) indicate that the IMO does not appear to favour the involvement of HGE.

10. Any IHO input should concentrate on ensuring harmony between the ECDIS PS and the current understanding and implementation of S-52 specifications for chart content and display aspects and the S-57 ENC Product Specification. Areas for scrutiny might include the S-52 main document which defines default values for the safety contour; Appendix 1 which provides a detailed guide on how the update functions of ECDIS should work, and Appendix 2, Edition 3.3 (Presentation Library) which contains operational requirements called "Mariners Objects" that are not chart-related. There will be others.

Action Required

11. The CHRIS is requested to:

- a.
 - (1) **Invite** TSMAD and C&SMWG to review the ECDIS PS to harmonize the current understanding and implementation of S-57 and S-52 with the ECDIS PS.
 - (2) **Request** that any recommended amendments be submitted to the Chairman of CHRIS by February 2003.
- b. **Invite** interested parties to submit proposals to TSMAD, C&SMWG or CHRIS members as appropriate for consideration.
- c. **Invite** IEC TC80 WG13 to exchange relevant information on proposed changes to the ECDIS PS with TSMAD and C&SMWG
- d. **Collate** submissions then **seek endorsement** of proposals from CHRIS membership.
- e. **Liaise** with IEC TC80 (WG13) to **develop** a joint IHO-IEC submission to NAV 49.