

**18<sup>th</sup> CHRIS MEETING**  
**Cairns, Australia, 25-29 September 2006**

**STATUS OF IHO PUBLICATIONS ON ECDIS**  
*(IHB - September 2006)*

**SUMMARY**

<b>Executive summary:</b>	This document provides a brief description of the status of all IHO ECDIS-related publications, as of September 2006.
<b>Actions to be taken:</b>	The meeting is invited to take note of this paper.
<b>Related documents:</b>	None

**Note:** The main changes from the previous, 2005 version of this document have been emphasized in **green colour**.

**1. S-52                      SPECIFICATIONS FOR CHART CONTENT AND DISPLAY ASPECTS OF ECDIS, 5<sup>TH</sup> EDITION, DECEMBER 1996**

S-52 provides specifications and guidance regarding the issuing of ENC's, their display in an ECDIS and their updating.

English and French versions of S-52 (main document) were distributed to Member States with CLs 2/1997 and 47/1998, respectively. This edition has subsequently been updated following adoption by IHO Member States of the SENC delivery option (Decision by IHC/16, April 2002).

IHO body responsible for this publication: CHRIS.

Following an action from the 16<sup>th</sup> CHRIS Meeting (May 2004) and a subsequent joint Greece-IHO submission to MSC 80 (May 2005) on amending the IMO Performance Standards for ECDIS, a revision of the ECDIS PS was prepared by a Correspondence Group. NAV 52 (July 2006) has agreed that this revision be sent for adoption to MSC 82 (December 2006). Promulgation of these revised ECDIS PS will have a significant impact on S-52, which will be re-structured to focus on addressing the ECDIS display aspects.

**S-52 includes three separate appendices, which are as follows:**

**.1      Appendix 1 - Guidance on Updating the ENC, 3<sup>rd</sup> Edition, December 1996**

S-52 Appendix 1 provides guidance on ENC updating.

English and French versions were distributed to Member States with CLs 15/1997 and 54/1998, respectively.

IHO body responsible for this publication: CHRIS.

The following statement was agreed at CHRIS/16 and may impact on any future edition of this appendix : *Since Appendix 1 was drafted, much practical experience with ECDIS and its updating mechanisms have been gained and advanced requirements for operational behaviour of ECDIS updating mechanisms contained in IEC61174 may supersede the guidance given in Appendix 1 of this Specification.*

## **.2 Appendix 2 - Colour and Symbol Specifications for ECDIS, Edition 4.2, March 2004**

S-52 Appendix 2 Specifies how to display an ENC on ECDIS.

A new edition 4.2 was published in March 2004. The main change from the previous edition 4.1 was the removal of the "hard copy addendum" (ECDIS Chart 1, Colour Differentiation Test Diagrams, symbol names and plot of symbols) which was transferred to the Presentation Library (see below).

IHO body responsible for this publication: CSMWG (of CHRIS)

S-52 Appendix 2 includes the following Annex A, which is published separately on CD-Rom:

### **Annex A - IHO ECDIS Presentation Library, Edition 3.3, March 2004**

The IHO Presentation Library for ECDIS (PresLib) Provides details and procedures for implementing the display specifications contained in S-52 Appendix 2, by decoding and symbolizing the elements of the SENC. It includes a full description of the symbol library for use on ECDIS.

A new edition 3.3 of the PresLib was published in March 2004. Edition 3.3 is formed of Part I (users' manual, tables and symbolisation procedures, ECDIS Chart 1, symbol plots, etc.), Part II (mariners' navigational objects) and an Addendum containing a detailed description of the symbol library. A digital version of the PresLib (.dai file), optional, is also provided with Edition 3.3 for convenience. However, it may not be available in future editions of the PresLib.

Edition 3.3 of the PresLib is delivered on CD and is on sale from the IHB at the cost of 1,500 Euros (500 Euros as update for earlier subscribers and free for attendees of, or contributors to the IHO Colours and Symbols Maintenance WG). This relatively high price is intended for recovering part of the cost of developing the PL and to make provision for funding its future maintenance. The PresLib CD includes Edition 4.2 of S-52 Appendix 2.

S-52 Appendix 2 and its Appendix A, i.e. the PL, are maintained by means of Maintenance Documents which are produced from time to time under the authority of the CSMWG and placed on the IHO website ([www.iho.shom.fr](http://www.iho.shom.fr)). MDs contain amendments to S-52 Ap.2 and/or the PL, which are classified as "immediate" or "deferred" depending on their importance for the safety of navigation.

IHO body responsible for this publication: CSMWG (of CHRIS)

### **.3 Appendix 3 - Glossary of ECDIS-Related Terms, 3<sup>rd</sup> Edition, December 1997**

The English version was distributed to Member States with CL 12/1998. Also available to the general public from the IHO Web-site.

Following decision by CHRIS/17 (September 2005), the content of the ECDIS Glossary has been transferred to the IHO S-32 "Hydrographic Dictionary" WG. S-52 App. 3 will be disbanded when the incorporation of its content into S-32 has been completed

IHO body responsible for this publication: CHRIS, then IHO Dictionary WG.

### **2. S-57 IHO TRANSFER STANDARD FOR DIGITAL HYDROGRAPHIC DATA, EDITION 3.1, NOVEMBER 2000**

S-57 describes the data standard to be used for the exchange of digital hydrographic data, and for the distribution of digital hydrographic products to manufacturers, mariners, and other data users. Presently, the most significant digital product being delivered in the S-57 format is the Electronic Navigational Chart (ENC).

Edition 3.1 of S-57 was published in November 2000 (re: CL 52/2000) and has been frozen until further notice. It contains limited changes from Ed 3.0, incorporating approximately forty additional attribute values but no other new information. Ed. 3.0 ENCs and updates ceased to be valid after December 2004 (re: CL 68/2003). Edition 3.1 is distributed on CD. A booklet accompanies the CD and provides general information on the Standard.

CHRIS/17 (September 2005) decided that:

- ✓ An interim edition 3.1.1 of S-57 would be developed to accommodate new IMO measures that require new chart features, e.g. PSSA or ASL, and to make provision for undefined "placeholders", with target date of September 2006 for completion. See CL 94/2005.
- ✓ A new major ISO-compliant edition of the IHO transfer standard would be developed as S-100, with target date of end 2007 for completion. See CL 93/2005.
- ✓ An ENC Product Specification based on S-100 would be developed as S-101, with target date of end 2012 for completion. See CL 93/2005.

IHO body responsible for this publication: TSMAD (of CHRIS)

### **3. S-58 RECOMMENDED ENC VALIDATION CHECKS, EDITION 2.0, OCTOBER 2003**

S-58 specifies a minimum set of checks that producers of ENC validation tools need to include in their validation software. These software are used to ensure that ENC data are compliant with the S-57 Product Specification for ENC. This document was previously part of S-57 Edition 3.1.

IHO body responsible for this publication: TSMAD (of CHRIS)

**4. S-61 PRODUCT SPECIFICATION FOR RASTER NAVIGATIONAL CHARTS (RNC), 1<sup>ST</sup> EDITION, JANUARY 1999**

S-61 defines the minimum requirements that a Raster Navigational Chart (RNC) must have to fulfill the requirements of the Raster Chart Display System (RCDS) Mode of Operation, as described in the IMO Performance Standards for ECDIS. An amendment to the IMO PS was adopted in December 1998, allowing the use by ECDIS of RNCs where there is no ENC coverage.

The English version was distributed to Member States with CL 13/1999.

IHO body responsible for this publication: TSMAD (of CHRIS)

**5. S-62 ENC PRODUCER CODES, EDITION 2.2, MARCH 2006**

S-62 provides a list of Agency Codes for all ENC producers, mainly Hydrographic Offices.

IHO body responsible for this publication: IHB

**4. IHO S-63 IHO ENC DATA PROTECTION SCHEME, EDITION 1.0, OCTOBER 2003**

S-63 describes the IHO recommended standard for the protection of ENC information. It defines security constructs and operating procedures that must be followed to ensure the data protection scheme is operated correctly and to provide specifications that allow participants to build compliant systems. It is intended for use by all those ECDIS manufacturers and data distributors participating in an ENC service with data encrypted.

Edition 1.0 of S-63 (re: CL 65/2003) is derived from the Primar Security Scheme and includes, in addition to the S-63 documentation, test data (jointly produced by the UKHO and the Norwegian ECC) and a software kernel (developed by the CHS). S-63 is delivered on CD; it is also available free of charge from the IHO website ([www.iho.shom.fr](http://www.iho.shom.fr) > ENC > Data Protection).

The IHB acts as Scheme Administrator for S-63. This IHO standard is maintained by the Data Protection Scheme Working Group (DPSWG) of CHRIS. Edition 1.0 has been frozen until further notice. **Subject to approval by CHRIS/18 (September 2006) a new edition 1.1 of S-63 will be developed, with target date of September 2007 for completion.** Technical issues related to S-63 are addressed through a discussion group on the Open ECDIS Forum ([www.openecdiss.org](http://www.openecdiss.org)) and Frequently Asked Questions (FAQ) are answered on the IHO website.

IHO body responsible for this publication: DPSWG (of CHRIS)

**5. IHO S-64 IHO TEST DATA SETS FOR ECDIS, EDITION 1.0, DECEMBER 2003**

S-64 contains sample ENC data and their updates, as well as the associated graphical representations of the ECDIS display. S-64 also includes sample RNC data

in the two formats in use within the IHO, i.e. HCRF (ARCS) and BSB. These test data are intended for use in conjunction with the Standard IEC 61174 for ECDIS testing and certification/type approval purposes. S-64 is delivered on CD. The ENC test data are available to the general public from the IHO Website.

The ENC and HCRF (ARCS) RNC test data have been produced by the UKHO; the BSB RNC test data by Maptech, Inc., through US-NOAA partnership; and the graphical representations associated with the ENC by Navintra-Furuno, under supervision by the IHO C&SMWG.

IHO bodies responsible for this publication: TSMAD and C&SMWG (of CHRIS)

## **6. IHO S-65 ENC PRODUCTION GUIDANCE, EDITION 1.0, MARCH 2005**

S-65 provides a high level guide to the production, maintenance and distribution of ENCs. It offers a framework to inform HOs of the processes and requirements necessary to produce, maintain and distribute ENCs. It provides references to documentation which can support each stage of the process.

S-65 was developed through UKHO-IHB collaboration, following a decision by WEND/9.

English, French and Spanish versions available (re: CLs 36 and 70/2005 refer).

IHO body responsible for this publication: WEND

---