19th CHRIS MEETING
Rotterdam, Netherlands, 5-9 November 2007

STATUS OF IHO PUBLICATIONS ON ECDIS
(IHB - November 2007)

SUMMARY	
Executive summary:	This document provides a brief description of the status of all IHO ECDIS-related publications, as of November 2007.
Actions to be taken:	The meeting is invited to take note of this paper.
Related documents:	CHRIS19-06.2A, CHRIS19-06.1A

Note: The main changes from the previous, 2006 version of this document have been emphasized in green colour.

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

S-52 provides specifications and guidance regarding the issuing of ENCs, 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).

Following the adoption by IMO/MSC 82 of revised Performance Standards for ECDIS in December 2006 [Res. MSC.232(82)] and the subsequent development of a 3rd edition of the ECDIS test standard (IEC 61174 – See Doc. CHRIS19-04.6A), a new edition of S-52 will be prepared by CSMWG in the 1st half of 2008, with an updated cross-reference table at Annex A and the new IMO Performance Standards for ECDIS at Annex B (See also CHRIS19-06.2A).

IHO body responsible for this publication: CHRIS.

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

2. S-52 Appendix 1 - Guidance on Updating the ENC, 3rd 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.

The following statement was agreed at CHRIS/16: *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 IEC 61174 may supersede the guidance given in Appendix 1 of this Specification.*
CSMWG has suggested that S-52 Appendix 1 be declared "cancelled" or "invalid" (See CHRIS19-06.2A).

IHO body responsible for this publication: CHRIS.

3.   **S-52 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.

Ed. 4.2 of S-52 Appendix 2 was announced by CL 25/2004.

IHO body responsible for this publication: CSMWG

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

4.   **S-52 Appendix 2, 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.

Ed. 3.3 of the PresLib was announced by CL 25/2004. It comprises 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. An optional digital version of the PresLib (.dai file), was provided with Ed. 3.3 for convenience. It may not be available in future editions. Ed. 3.3 is delivered on CD and is on sale from the IHB

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

A 2007 version of the "Symbol Library for Use on ECDIS" (Addendum to the PresLib) was made available on the IHO website.
C&S MD5 was published in July 2007. It includes the symbology developed by CSMWG to display the new objects and attributes introduced by the S-57 Supplement No. 1 (Edition 3.1.1) to accommodate new IMO features, e.g. PSSAs or ASLs.
C&S MD6 has been prepared, which includes all changes resulting from the new IMO Performance Standards for ECDIS. It is planned for release in end 2007.
A new Edition 3.4 of the PresLib is being prepared, which will incorporate all changes contained in MD5 and MD6. It is planned for publication in early 2008.

IHO body responsible for this publication: CSMWG

5.   S-52 Appendix 3 -   Glossary of ECDIS-Related Terms

This has been replaced by S-32 Appendix 1 (September 2007). See CLs 65/2007 and 87/2007.

IHO body responsible for this publication: IHO Dictionary WG.

6.   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 contained limited changes from Ed 3.0, incorporating approximately forty additional attribute values but no other new information. A booklet accompanies Ed. 3.1 of S-57 and provides general information on the Standard.

S-57 Supplement No 1 (Ed. 3.1.1) was released in January 2007 and announced with CL 05/2007. This document entitled "Enhancements Required to Encode S-57 Edition 3.1.1 ENC Data" contains the S-57 objects and attributes required to encode new IMO features, e.g. PSSAs or ASLs. It also make provision for undefined "placeholders".
A new major ISO-compliant edition is being developed as S-100 "*The IHO Geospatial Standard for Hydrographic Data*". A familiarization version is to be published in 2008.
An ENC Product Specification based on S-100 is also under development as S-101, of which a Working Draft is planned for late 2008.

IHO body responsible for this publication: TSMAD

7.   S-58   RECOMMENDED ENC VALIDATION CHECKS, EDITION 3.0, FEBRUARY 2007

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.

IHO body responsible for this publication: TSMAD

8.   S-61   PRODUCT SPECIFICATION FOR RASTER NAVIGATIONAL CHARTS (RNC), 1ST EDITION, JANUARY 1999

S-61defines 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

9.   S-62   ENC PRODUCER CODES, EDITION 2.4, NOVEMBER 2007

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

IHO body responsible for this publication: IHB

10.   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 was announced with CL 65/2003. It 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). The IHB acts as Scheme Administrator for S-63.

Technical issues related to S-63 are addressed through a discussion group on the Open ECDIS Forum (www.openecdis.org) and Frequently Asked Questions (FAQ) are answered on the IHO website.

A new edition 1.1 of S-63 has been developed and endorsed by CHRIS-19. The associated test data is being prepared, with target date of end 2007 for completion.

IHO body responsible for this publication: DPSWG

11.   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.

A new edition 1.1 of S-64 is under preparation, in conjunction with Ed. 3.4 of the PresLib (Annex A to S-52 Appendix 2), with new Test Data Sets including examples for SYMINS objects and the use of SCAMIN, and new plots. It is planned for release in early 2008.

IHO bodies responsible for this publication: TSMAD and C&SMWG

12. 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 are available (re: CLs 36 and 70/2005).

IHO body responsible for this publication: WEND.

Action Required of CHRIS

13. The CHRIS is invited to:

a. **note** this report.