

**3RD MEETING OF THE HYDROGRAPHIC SERVICES AND STANDARDS COMMITTEE
IHB, Monaco, 8-10 November 2011**

**Status Report on IHO Publications on Standards, Specifications and Guidelines
(IHB - October 2011)**

SUMMARY

Executive summary:	This document provides a brief description of the status of all IHO publications on standards, specifications and guidelines, under HSSC responsibility, as of October 2011.
Actions to be taken:	The meeting is invited to take note of this paper.

Note: Changes from the 2010 issue of this information paper have been emphasized in **yellow**.

All the standards and guidelines are subject to the amendments and approval procedures set out in IHO Resolution 2/2007 unless indicated otherwise.

A. STANDARDS AND SPECIFICATIONS

1. S-4 REGULATIONS FOR INT CHARTS AND IHO CHART SPECIFICATIONS

S-4 gives chart specifications of the IHO for compiling nautical charts, together with agreed symbols and abbreviations adopted for general use by Member States. It provides also Regulations for INT Charts. Supplemented by INT 1, INT 2 and INT 3.

Current edition: **Edition 4.2.0, August 2011** (CL 54/2011 refers). English (French and Spanish versions in preparation).

Subject to Res. 2/2007, but not before the current revision cycle of S-4 Part B is completed (expected in 2012). Meanwhile, S-4 spec. B-160 continues to apply.

Associated publications:

- INT1 *Symbols, Abbreviations and Terms used on Charts:*
 - **English: Edition 7, 2011**, published by Germany on behalf of IHO;
 - French: Edition 4, 2006, published by France on behalf of IHO;
 - Spanish: Edition 3, 2007, published by Spain on behalf of IHO.

Not subject to Res. 2/2007
- INT2 *Borders, Graduations, Grids and Linear Scales:*
 - Edition 4, 2007, trilingual English/French/Spanish, published by Netherlands on behalf of IHO.

Not subject to Res. 2/2007
- INT3 *Use of Symbols and Abbreviations:*
 - Edition 4, 2005, English, published by UK on behalf of IHO.

Not subject to Res. 2/2007

Responsible body: CSPCWG

2. S-11 PART A GUIDANCE FOR THE PREPARATION AND MAINTENANCE OF INTERNATIONAL CHART SCHEMES

S-11 provides directions to assist coordinators in following the principles established for INT Chart schemes.

Current edition: Edition 2.004, May 2011, bilingual English/French

Responsible body: CSPCWG

3. **S-12 STANDARDIZATION OF LIST OF LIGHTS AND FOG SIGNALS**

S-12 provides a standardized structure for the publication of List of Lights and Fog Signals.

Current edition: 1st edition, June 2004, English and French

Responsible body: *not assigned*.

4. **S-32 HYDROGRAPHIC DICTIONARY**

Provides definitions of words and terms used in hydrography and associated activities.

Current edition: 5th edition, English (1994), French (1998) and Spanish (1996).

An on-line version of the Hydrographic Dictionary (English and French), based on the 5th edition of S-32, is also available on the IHO website. An on-line version in Spanish is under development.

Definitions endorsed by HSSC-2 and approved by MS have been included in the on-line version (CL 18/2011 refers).

Responsible body: HDWG.

S-32 Appendix 1 - Glossary of ECDIS-Related Terms

S-32, Appendix 1 provides a list of all ECDIS-related terms in use, with specific definitions. It has replaced the former S-52 Appendix 3.

Current edition: September 2007; English and Spanish (French version in preparation).

Responsible body: HDWG.

5. **S-44 IHO STANDARDS FOR HYDROGRAPHIC SURVEYS**

S-44 sets minimum standards for surveys conducted for the safety of surface navigation.

Current edition: 5th edition, February 2008, English, French (rev. 5.0.1 - 2011), Spanish and Portuguese.

Responsible body: S-44 WG (currently dormant)

6. **S-49 STANDARDIZATION OF MARINERS' ROUTEING GUIDES**

S-49 provides a standardized structure for the preparation and publication of Mariners' Routeing Guides.

Current edition: Edition 2.0, April 2010, English

Responsible body: CSPCWG

7. **S-52 SPECIFICATIONS FOR CHART CONTENT AND DISPLAY ASPECTS OF ECDIS**

S-52 provides specifications and guidance regarding the issuing of ENC's and their display in an ECDIS. Its Annex A forms the IHO ECDIS Presentation Library (PL).

Current edition: Edition 6.0, March 2010, English.

Responsible body: DIPWG.

S-52 Annex A - IHO ECDIS Presentation Library (PL)

The PL provides details and procedures for implementing the display specifications contained in S-52, by decoding and symbolizing the elements of the SENC. It includes a full description of the symbol library for use in ECDIS. It is published separately on CD-Rom.

Current edition: Edition 3.4, January 2008, English.

Ed. 3.4 of the PL comprises Part I (users' manual, tables and symbolisation procedures, ECDIS Chart 1, symbol plots, etc.); Part II (mariners' navigational objects); an Addendum containing a detailed description of the symbol library; and an optional digital version of the PresLib (.dai file).

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

Since e3.4 of the PL was published in 2008, two MDs have been issued:

- MD07 in October 2009 (contains Deferred Amendment 8 to the PL)
- MD08 in October 2011 (contains Deferred Amendment 9 to the PL)

Responsible body: DIPWG.

S-52 Appendix 1 - Guidance on Updating the ENC

Current edition: 3rd Edition, December 1996, English and French.

A draft new 4th edition has been prepared by EUWG for HSSC consideration.

Responsible body: to be decided.

8. S-57 IHO TRANSFER STANDARD FOR DIGITAL HYDROGRAPHIC DATA

S-57 describes the data standard to be used for the exchange of digital hydrographic data, and for the distribution of digital hydrographic products such as the ENC to manufacturers, mariners, and other data users.

Current edition: Edition 3.1 (November 2000) plus Supplement 2 (June 2009), English.

Supplement 2 "*Supplementary Information for the Encoding of S-57 Edition 3.1 ENC Data*" includes the contents of Supplement 1 "*Enhancements Required to Encode S-57 Edition 3.1.1 ENC Data*" which was published in January 2007.

Responsible body: TSMAD

S-57 Appendix B.1, Annex A - Use of the Object Catalogue for ENC (UOC)

This document describes how to encode information that the cartographer considers relevant to an ENC. It specifies the conventions that must be used to encode the geometry and semantic description of each object in an ENC.

Member States have agreed that the UOC be unfrozen and approved the new edition 3.0.0 which was prepared by TSMAD (CL 65/2011 refers).

Current edition: Edition 3.0.0, October 2011, English

Responsible body: TSMAD

9. S-58 RECOMMENDED ENC VALIDATION CHECKS

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 by ENC producers to ensure that ENC data are compliant with the S-57 Product Specification for ENC.

Current edition: Edition 4.2.0, February 2011 (CL 21/2011 refers), English.

Responsible body: TSMAD

10. S-60 USER'S HANDBOOK ON DATUM TRANSFORMATIONS INVOLVING WGS 84

Based on data and text provided by the U.S. NGA, it contains constants and formulae to relate local/regional geodetic datums to the WGS-84.

Current edition: 3rd Edition, July 2003 (Last correction August 2008), English.
Responsible body: IHB

11. S-61 PRODUCT SPECIFICATION FOR RASTER NAVIGATIONAL CHARTS (RNC)

S-61 defines the minimum requirements of a Raster Navigational Chart (RNC) intended to fulfill the requirements of the Raster Chart Display System (RCDS) Mode of Operation, as described in the IMO Performance Standard for ECDIS.

Current edition: 1st edition, January 1999, English.
Responsible body: TSMAD.

12. S-62 LIST OF DATA PRODUCER CODES

S-62 provides a list of data producer codes for IHO MS, other States and Other Organizations/Entities.

Current edition: The current edition of S-62 is generated directly from the Data Producer Code Register in the Geospatial Information Registry (see <http://registry.iho.int>), English.

Not subject to Res. 2/2007

Responsible body: IHB

13. S-63 IHO ENC DATA PROTECTION SCHEME

S-63 describes the IHO scheme 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 supplying encrypted data. The IHB acts as Scheme Administrator for S-63.

Current edition: Edition 1.1, March 2008, English and French.

Frequently Asked Questions (FAQ) related to S-63 are answered on the IHO website (www.iho.int > ENCs & ECDIS > ENC Data Protection > S-63 FAQ).

Responsible body: DPSWG

14. S-64 IHO TEST DATA SETS FOR ECDIS

S-64 contains sample ENC data and 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 by Member States, i.e. HCRF (ARCS) and BSB. These test data are intended for use in conjunction with the IEC 61174 – the test specifications for ECDIS certification/type approval.

Current edition: Edition 1.1, December 2008, English.

A draft new edition 2.0.0 of S-64 has been prepared by TSMAD for HSSC consideration.

Responsible body: TSMAD (to be confirmed).

15. S-65 ENC PRODUCTION GUIDANCE

S-65 provides a guide to the production, maintenance and distribution of ENCs. It offers a framework to inform HO 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.

Current edition: Edition 1.2, October 2009, English and French.

A draft new edition 2.0.0 of S-65 has been prepared by EUWG for HSSC consideration.

Responsible body: TSMAD.

16. S-66 FACTS ABOUT ELECTRONIC CHARTS AND CARRIAGE REQUIREMENTS

S-66 is intended to inform both Maritime Administrations and mariners on the practical implementation of the IMO carriage requirements regarding ENC's and ECDIS. It is based on the information booklet "Facts about Electronic Charts and Carriage Requirements" which was developed by HOs of ICENC and PRIMAR and has since been withdrawn in favour of S-66.

Current edition: Edition 1.0.0, January 2010, English, **Spanish**, Japanese and **Portuguese** (French version in preparation).

Responsible body: IC-ENC - PRIMAR Joint Information Working Group (JIWG), on behalf of HSSC.

17. S-99 OPERATIONAL PROCEDURES FOR THE ORGANIZATION AND MANAGEMENT OF THE S-100 GEOSPATIAL INFORMATION REGISTRY

S-99 describes the roles, responsibilities and procedures for operating and managing the S-100 Geospatial Information Registry and its component Registers.

Current edition: **Edition 1.0.0, January 2011** (CL 05/2011 refers)

Responsible body: TSMAD.

18. S-100 IHO UNIVERSAL HYDROGRAPHIC DATA MODEL

S-100 provides a contemporary framework hydrographic geospatial data standard that can support a wide variety of hydrographic-related digital data sources, and is fully aligned with mainstream international geospatial standards, in particular the ISO 19100 series of geographic standards, thereby enabling the easier integration of hydrographic data and applications into geospatial solutions.

Current edition: Edition 1.0.0, January 2010, English.

Responsible body: TSMAD

19. S-101 ENC PRODUCT SPECIFICATION

S-101 is the new Electronic Navigational Chart product specification that is based on S-100 and which is being developed by TSMAD. S-101 will include machine readable feature catalogues and portrayal catalogues.

Adoption of S-101 is planned from 2012.

Responsible body: TSMAD

20. S-102 BATHYMETRIC SURFACE PRODUCT SPECIFICATION

S-102 specifies a navigation surface coverage including both depth and uncertainty together with an optional tracking list of the depth changes that have been manually replaced in the surface by the hydrographer to override the statistical grid value points to ensure safety of navigation.

A draft new S-102 e1.0.0 has been prepared by TSMAD for HSSC consideration.

Responsible body: TSMAD

B. GUIDELINES

20. C-17 SPATIAL DATA INFRASTRUCTURES: "THE MARINE DIMENSION" - GUIDANCE FOR HYDROGRAPHIC OFFICES

C-17 is a procedural guide to assist national hydrographic authorities in establishing their role in Marine Spatial Data Infrastructures (MSDI). It explains the way that HOs might promote, support, and participate in Spatial Data Infrastructures (SDI), through practical advice, simple step by step processes, useful links to reference material and examples of best practice.

Current edition: **Edition 1.1.0, February 2011** (CL 22/2011 refers), English.

Responsible body: MSDIWG

21. **C-51 A MANUAL ON TECHNICAL ASPECTS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA - 1982**

C-51 addresses the relationship between the Law of the Sea and the disciplines of Geodesy, Hydrography, and Geoscience. It provides an overview of a series of technical issues whose satisfactory understanding is key element in the orderly practice of international law in the ocean environment.

Current edition: 4th edition, March 2006, English and Spanish. French version in preparation.

Responsible body: ABLOS

Action Required of HSSC

The HSSC is invited to *note this report*.