

**Joint 18th TSMAD & 1st DIPWG Meeting
Ottawa, Canada, 4-8 May 2009**

Paper for Consideration by TSMADWG/DIPWG

Revision Process for S-52 Main Document

Submitted by:	Chair, DIPWG
Executive Summary:	This paper describes the process used to revise and consolidate S-52 and its Appendix 2 into one unified main document.
Related Documents:	IMO Res.A.817(19), ECDIS Performance Standards as amended IMO MSC.232(82), ECDIS Performance Standards IEC 61174, ECDIS Operational and Performance Requirements CHRIS-20, Rio de Janeiro, Brazil, Nov 2008, Final Minutes DIPWG1-15.1A, Draft S-52 Edition 6
Related Projects:	Future development of S-101

Introduction / Background

On 5 Dec 2006, the IMO adopted revised Performance Standards for ECDIS through Resolution MSC.232(82) applicable for ECDIS systems installed on or after 1 Jan 2009. This replaced the previous ECDIS Performance Standards, IMO Res.A.817(19) (as amended), which continue to apply for ECDIS systems installed after 1 Jan 1996, but before 1 Jan 2009.

As a consequence, IEC published Edition 3.0 of IEC 61174, "ECDIS – Operational and performance requirements, methods of testing and required test results" on 1 Sep 2008. This test standard now refers to the revised ECDIS Performance Standards based on Resolution MSC.232(82).

The release of these two new standards necessitated the revision of S-52 to account for changes in requirements and to update document references. In Nov 2008, at the 20th CHRIS meeting in Rio de Janeiro, Brazil, the CSMWG chair recommended, and CHRIS agreed, that the following three items should be added to the CSMWG (DIPWG) work plan.

Task	Work Item	Affected Pubs/Standard
C.1	Re-structure S-52 including annexes under consideration of the recent revisions of applying documents of IMO and IEC.	S-52 and Annexes
C.2	Liaise with IEC to harmonize the resulting new draft of S-52 with IEC61174 and IEC62288 through the Chairman of IEC/TC80.	S-52 and Annexes
C.3	Present a re-drafted S-52 to HSSC-1.	S-52 and Annexes

Additionally, the 18th CHRIS meeting in Cairns, Australia, in Sep 2006 had also endorsed simplifying the S-52 document structure by merging S-52 Appendix 2 with S-52 main document. The submitted draft Edition 6 of S-52 now addresses the changes in the revised IMO ECDIS Performance Standards and the adapted IEC ECDIS test standards and merges the S-52 and the S-52 Appendix 2 into one main document.

Analysis/Discussion

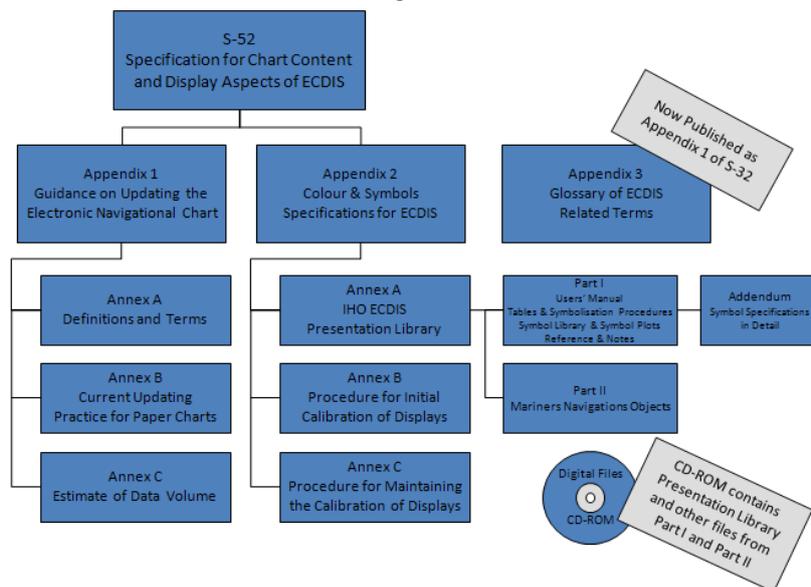
The revision affects only the S-52 main document and the S-52, Appendix 2. DIPWG-members from BSH, NOAA and IHB undertook various aspects of the analysis and editing required to produce the new draft S-52, Edition 6. The general approach used to create the revised document is outlined below:

Restructuring Mechanics (see figures 1 & 2)

- Since the S-52, Appendix 2 is much larger than the S-52 main document, it was decided to retitle Appendix 2 as the S-52 main document and then selectively merge appropriate portions of the old main document into the former Appendix 2.
- The original paragraph numbering in the former Appendix 2 was retained. Therefore, any reference from other documents to sections in S-52, Appendix 2 will have the same paragraph number in the newly merged S-52 main document.
- Annexes A, B and C of the former Appendix 2, became Annexes A, B and C of the merged S-52 main document. The content of these Annexes remains unchanged.
- The group did not touch S-52, Appendix 1 since the newly formed ENC Updating Working Group (EUWG) has been tasked to review this document (Decision 20/17 of CHRIS-20 and Annex G to CHRIS-20 Minutes refer).

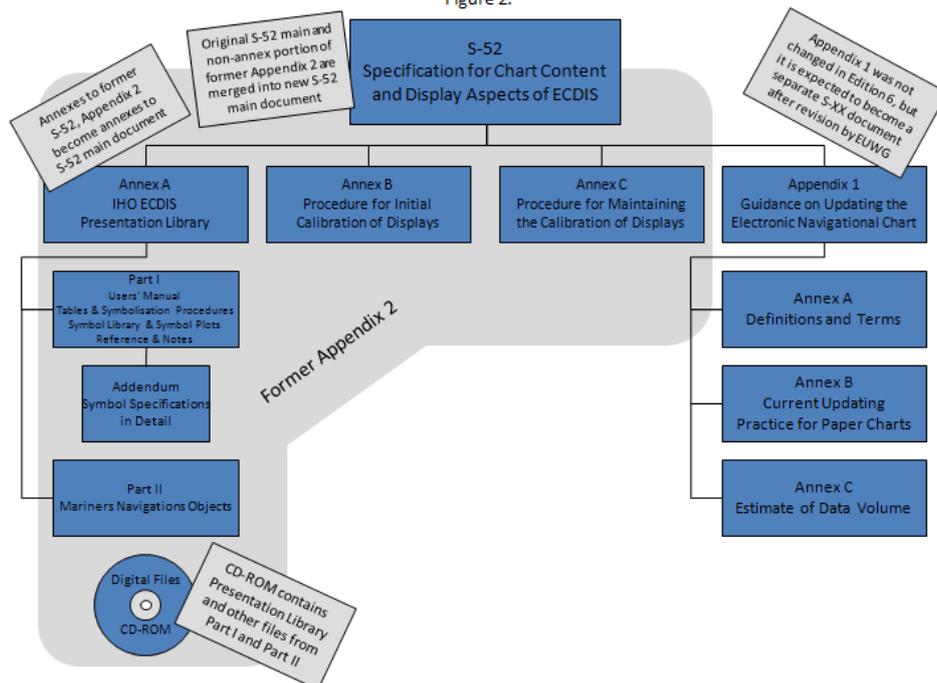
Legacy S-52 Document Structure

Figure 1.



New S-52, Edition 6 Document Structure

Figure 2.



Deletions

- Requirements that were redundant with those specified in the new IMO MSC.232(82), ECDIS Performance Standards (PS) were removed from S-52.
- Commentary related to the relative immaturity of ECDIS, LCD displays or other developing technology that was written for the earliest editions of S-52 was most often deleted, but sometimes was revised to reflect the respective entity's current state of development or use.
- Annex A to the original S-52 main document, "Reference Table between S-52 and the IMO Performance Standards for ECDIS" was deleted.
- Annex B to the original S-52 main document, Performance Standards For ECDIS, IMO Resolutions A.817 (19), Msc.64 (67) And Msc.86 (70)" was deleted.

Updated References

- All references from S-52 to the old IMO Res.A.817(19) PS were changed to the corresponding reference in the new IMO MSC.232(82) PS.
- Figure 1, in section 1.1.4, "International organizations and their related standards for ECDIS," was updated and expanded.
- Figure 2. In Section 1.4, "Structure of the Specifications" was updated to reflect the new S-52 document structure.
- References to CRTs when used in a generic sense were changed to "display"

Amalgamations

- The historical background sections from the S-52 main document and Appendix 2 were combined.
- The document change history from the former S-52, Appendix 2 was updated and expanded to apply to the entire S-52 document.

Conclusions

A restructured S-52, Edition 6 has:

- Removed redundant language that is specified in the IMO Performance Standards
- Updated references in S-52 to the new IMO Performance Standards
- Made S-52 easier to use and maintain
- Provided a more streamlined document that should facilitate the definition of portrayal within a new ENC S-101 specification.

Recommendations

- Follow-up with IEC must still be undertaken to determine how best to resolve the IEC references to sections of S-52 that were deleted in this revision. For the most part these were portions that were redundant with the IMO Performance Standards. This coordination is called for in DIPWG Work Plan Item C.2.
- There are also two references to S-52, Appendix 2 in the new IMO Performance Standards that should be resolved.

Justification and Impacts

The creation of a restructured S-52 in Edition 6 fulfils the DIPWG Work Plan Item C.1, "Re-structure S-52 including annexes under consideration of the recent revisions of applying documents of IMO and IEC."

Action Required of HSSC DIPWG

The HSSC DIPWG is invited to:

- a. endorse the revised S-52, Edition 6 and,
- b. forward S-52, Edition 6 to HSSC for approval.