INTERNATIONAL HYDROGRAPHIC
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Digital Information Portrayal Working Group (DIPWG)

DIPWG Letter: 1/2013
SUBJECT: Review and Approval of S-52 Edition 6.1.0 and Presentation Library Edition 4.0.0
DATE: 3 Dec 2013
TO: DIPWG Members
CC: Hydrographic Services and Standards Committee (HSSC) Chairman

Dear Colleagues,

The purpose of this letter is to initiate the final DIPWG review of the proposed new editions of S-52, "Specifications for Chart Content and Display Aspects of ECDIS" and its Presentation Library (PresLib), and to present the schedule for their subsequent endorsement by HSSC, approval by IHO Member States, and implementation by ECDIS manufacturers.

Background

At the third meeting of the HSSC (Nov 2011, Monaco) DIPWG was directed to develop a new edition of the S-52 Presentation Library. The purpose of the revision was to address known "ECDIS anomalies" and implementation irregularities, and to improve the overall clarity of the specification.

The UKHO prepared an initial draft of the revised PresLib and facilitated two iterations of review prior to the DIPWG-5 meeting (June 2013, Silver Spring). During DIPWG-5, a three-day breakout session of a dozen participants made significant progress in de-conflicting and resolving the review comments received prior to the meeting. However, more time was needed to finalize the document and a sub-working group, composed primarily of ECDIS Original Equipment Manufacturers (OEMs), agreed to meet twice more during the summer. Nine members were able to attend a session in July and seven attended a session in late August. The resulting new version of PresLib, Edition 4.0.0 and a slightly revised S-52 main document, Edition 6.1.0 was presented to HSSC-5 (Nov 2013, Shanghai) by the DIPWG chair.

HSSC agreed to review the new editions of S-52 and the PresLib and vote to endorse them through correspondence to facilitate approval by the IHO Member States by October 2014.

A summary of the changes made to S-52 and the PresLib is provided in Annex A. The schedule for review activities is shown in Figure 1.

Dependencies and Review Strategy

The International Electrotechnical Commission (IEC) is editing a new edition of IEC 61174, "ECDIS -Operational and performance requirements, methods of testing and required test results." The revised IEC 61174 refers all ECDIS chart related tests to S-64, "IHO Test Data Sets for ECDIS." In turn the new version of S-64 will test the new requirements in S-52 Presentation Library Ed 4.0.0.

Development of S-64 is dependent on the completion of the new editions of S-52 and the PresLib. To enable the coordinated implementation of IEC 61174, S-52 and S-64, the development, review and

approval of all three documents is taking place concurrently. There is some risk inherent in this approach, but the new editions of S-52 and the PresLib are stable enough for the Transfer Standard Maintenance and Applications Development Working Group (TSMAD) to complete development of new test datasets for S-64 within the next few months. HSSC will also undertake endorsing the new edition of S-64 by correspondence prior to HSSC-6 in Nov 2014. It is expected that any required changes identified during these reviews will be minor, editorial in nature, and will not necessitate any subsequent rounds of review.

While the DIPWG, HSSC and IHO Member States are reviewing the new editions of S-52 and S-64, these draft specifications will also be available on the IHO website for informational purposes, so that OEMs and other interested parties may familiarize themselves with the new specifications.
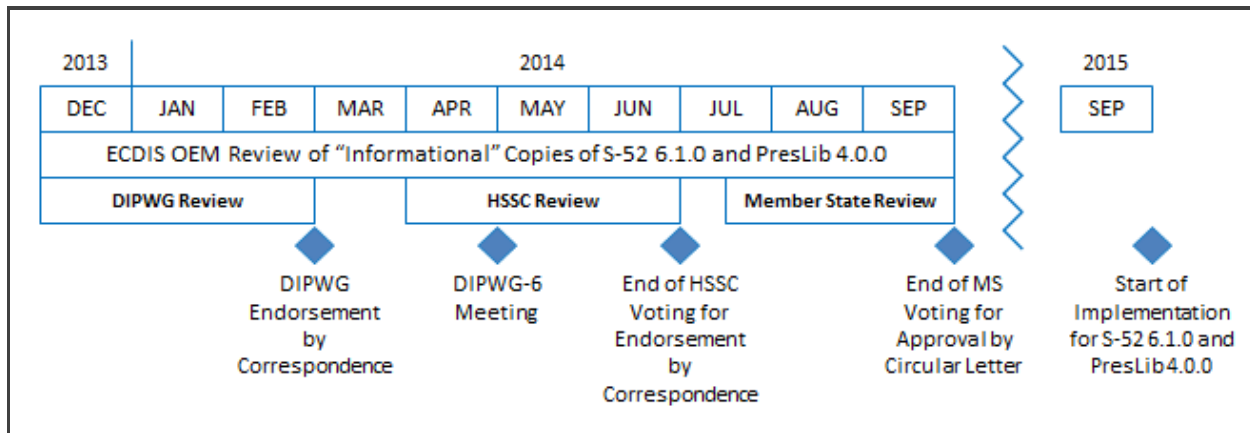

Figure 1

Action Requested of DIPWG Members

Timely approval of S-52 and its Presentation Library will serve to provide clearer guidance to ECDIS OEMs, reduce "ECDIS anomalies," improve ECDIS type approval testing, enhance ECDIS functionality for mariners and create greater safety of navigation.
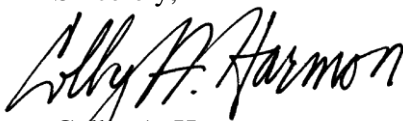
Note that the review is to be limited to identifying any errors within the existing changes. No new enhancements to S-52 or the Presentation Library will be considered at this time. Corrections will be incorporated into the documents as necessary without any further adjudication.

DIPWG Members are requested to:

- Download the new draft versions of S-52 Edition 6.1.0, its Presentation Library Edition 4.0.0, and the red-line references from the IHO website at www.iho.int → Standards & Publications → Download → Draft Publications for discussion (at the bottom of the page).
- Record any comments in the form at Annex B and forward them to the DIPWG chairman at colby.harmon@noaa.gov on or before **28 February 2014**.

Thank you for your support of ECDIS portrayal.

Sincerely,

Colby A. Harmon
DIPWG Chairman

Presentation Library Changes

A list of changes to the Presentation Library, Part I appears after the document's Foreword on page ii. A summary of the most important changes is provided below.

Language within the Presentation Library has been simplified and clarified, and many of the old diagrams and examples have been replaced to bring the document up-to-date. Detailed examples have been added to provide ECDIS developers with clear guidance for implementing the more complex parts of the ECDIS presentation. Look-up and colour tables have been removed from the Presentation Library, Part I and placed into separate files.

In instances where multiple options were specified to perform the same task, sometimes leading to ECDIS inconsistencies, the options have been limited. Redundancies and repeated copies of several tables within the specification have been eliminated, as have elements that have never been implemented, such as raster symbol definitions.

A number of changes have been made to reflect the requirements in the revised International Maritime Organization (IMO) performance standards for ECDIS, such as new sections being added for the detection and notification of navigational hazards, detection of areas for which special conditions exist and detection of the safety contour. These new sections now provide clear guidance on the S-57 objects and attributes that must initiate an alert and/or indication within ECDIS. This will reduce the number of extraneous alarms in ECDIS. The Presentation Library also now makes use the IMO specified viewing groups mandatory.

The complex Nassi-Shneiderman diagrams used to describe the Conditional Symbology Procedures (CSPs) have been converted to Unified Modeling Language (UML). The inconsistent use of some terms within the CSPs has also been eliminated.

The display of text has been added to selected features so that this information is available to the mariner without having to initiate a "pick-report." For example, anchorage areas and fairway names may now be shown directly on the ECDIS chart display.

Some new symbols have been added to the Presentation Library to identify objects with "date dependant" attributes and to indicate automatic updates. A summary of changes to the Addendum to Part I, now subtitled, "S-52 ENC Symbol Catalogue," appears after the Addendum's title page.

A more detailed summary of the changes to the Presentation Library, Part I appears after the document's Foreword on page ii.

S-52 Changes

Updating the main S-52 document was also required, because the colour calibration information in Annexes B and C contained errors and obsolete references to CRT technology. Annex B was deleted and Annex C was updated. S-52 makes some references to specific sections of the Preslib, which may have changed. These references are being validated and corrected as necessary under a separate, on-going effort.

Document comparisons

Redline versions of the documents are also available on the IHO website to facilitate identifying changes from the previous editions. There may be some minor changes, such as to headers and footers, that are not reflected in the redline versions.

Enter "S" for S-52 or "P" for PresLib in the Doc. Column.

Doc	Page	Paragraph	Recommended Change (Please provide text to be used to replace the error or resolve the issue)	Rationale