10th CSPCWG MEETING
21-24 January 2014. Wellington, New Zealand

Paper for Consideration by CSPCWG

Report to CSPCWG10 on DIPWG Activities

Submitted by:	Australia
Executive Summary:	Report on DIPWG Activities Since CSPCWG9.
Related Documents:	Minutes DIPWG5;
	HSSC5-05.9A – HDWG Report
Related Projects:	S-4/INT1 development

Introduction / Background

The IHO Digital Information Portrayal Working Group (DIPWG) is a technical Working Group of the IHO HSSC. Its primary objectives are to maintain IHO technical specifications for colours, symbols and display rules used to show SENC information on ECDIS in a safe and ergonomic manner. This is achieved through the maintenance of the IHO ECDIS Standard S-52 "Specifications for Chart Content and Display Aspects of ECDIS", including its appendices and annexes.

Since CSPCWG9, DIPWG has met once (DIPWG5), in conjunction with TSMAD26, at Silver Spring, USA – 10-14 June 2013. Minutes of the meeting may be found on the DIPWG page of the IHO web site. Additionally, there have been 3 meetings of an S-100 Portrayal Model Sub-Working Group (October 2012, and January and March 2013), and 3 meetings of an S-52 Presentation Library Sub-Working Group (June, July and August 2013). DIPWG work progressed by correspondence include the conclusion of the review of S-52 Presentation Library Conditional Symbology Procedures (CSP's) in order to simplify such procedures for S-101 portrayal; review of the draft Edition 4.0.0 of the S-52 Presentation Library; and discussion by a core group of DIPWG experts to finalise the preferred model for portrayal in S-100.

Analysis / Discussion

Documents published since CSPCWG9:
Chart Presentation Bulletin No. 10 – Portrayal of Virtual AIS Aids to Navigation.

In addition, the following documents were submitted to HSSC5 for approval to proceed to IHO Member State vote for adoption:
- S-52 – Specifications for Chart Content and Display Aspects of ECDIS, Edition 6.1.0.
- S-52 Appendix 2, Annex A – IHO ECDIS Presentation Library, Edition 4.0.0.

DIPWG5: The main focus of this meeting was the finalisation of a Portrayal Model and related documentation in S-100; and progressing the revision of the S-52 Presentation Library. The following is a summary of the activities of this meeting, with particular emphasis on activities that may be of relevance to CSPCWG:
- S-100 Portrayal Model: A summary of the work done by the S-100 Portrayal Model Sub-Working Group was provided, with the welcome news that an agreement had been reached as to the encoding language to be used for the Model (XSLT). This decision allowed the development of the model to move forward significantly, with only a few minor details to be addressed at DIPWG5. The main effort over the next 12 months will be the completion of associated documentation, including the Portrayal component of S-100 (Part 9) and the Portrayal component of the S-101 ENC Product Specification. In association with the completion of the S-100 Portrayal Model, a contract was awarded to CARIS in July 2013 to develop an S-100 Portrayal Catalogue Builder. The completion of the Portrayal Catalogue Builder is dependant on the finalisation of a prototype S-101 Feature Catalogue, in addition of the finalised Portrayal Model.
- New Edition of S-52 Presentation Library: A dedicated small team from DIPWG, constituting an S-52 Presentation Library Sub-Working Group, conducted a break-out

meeting during DIPWG5 to commence the finalisation of Edition 4.0.0 of the document. A further two meetings were held post-DIPWG5 to complete the review of the document and prepare for submission to HSSC5. The new Presentation Library removes obsolete "advice to developers" that dates from the earliest versions of S-52, eliminates redundant language and tables, clarifies ambiguous passages, provides more and clearer examples of how various elements of the specification are to be implemented, and limits the number of optional ways in which some critical ECDIS functions can be executed. A major exercise carried out during the review of the document was the replacement of the complex "Nassi-Schniederman" diagrams describing the ECDIS Conditional Symbology Procedures with UML diagrams, which will assist in facilitating the translation of these Procedures, if required, into S-101 Portrayal.

- DIPWG liaison with CSPCWG: Discussions on new/revised paper chart specifications, abbreviations and symbols implemented by CSPCWG in regard to portrayal in ECDIS were as follows:
    - New symbol for diving prohibited: No action required in ECDIS portrayal – is a function of the ECDIS Pick Report.
    - Discussions related to defining "major lights" at CSPCWG9 were reported. It was considered that no action was required of DIPWG, as decisions made previously by DIPWG were only intended to provide a "work-around" in ECDIS display, and were never intended as a specification for defining a major light.
    - Maximum authorised draught: There is no encoding option in S-57 that will allow for the portrayal of a symbol (or value) for maximum authorised draught in ECDIS. However, the discussion to date has been noted in regard to S-101 development.
    - Discontinuity between surveys: Noted for S-101 development.
    - Radio activated fog signals: There is no encoding option in S-57 that will allow for the portrayal of a symbol, indicating that a fog signal is radio activated, in ECDIS. However, the discussion to date has been noted in regard to S-101 development. Additionally noted the possibility of radio activated lights.
- Paper Chart and ECDIS Chart 1: The new Edition of US Chart 1 (Edition 12), containing ECDIS symbols, was published in April 2013. This is the first "INT1" to show both paper chart symbols side-by-side with the corresponding ECDIS (S-52) symbols. The new US Chart No. 1 can be downloaded for free from the NOAA website at http://www.nauticalcharts.noaa.gov/mcd/chartno1.htm and copies of the InDesign files and graphics used to create the document have been provided to each of the three INT1 Sub-Working Group members. The US can provide additional copies of the InDesign files and graphics to any country wishing to incorporate ECDIS symbology into their own chart 1. The DIPWG Chair has raised to HSSC5 the possibility of expanding the role of the CSPCWG INT1 Sub-Working Group, or forming a similar ECDIS Chart 1 Sub-Working Group, in order to continually improve and standardise the presentation of ECDIS symbology in an "INT1" format.

Next Meeting: It is intended that the next meeting of DIPWG (DIPWG6) be held in Australia in April 2014 in conjunction with TSMAD28.

Recommendations

Continued liaison between CSPCWG and DIPWG is a necessity in order to address emerging navigational requirements in a multi-product environment.

Justification and Impacts

No immediate impacts on CSPCWG projects arise from this report.

Action required of CSPCWG

CSPCWG is invited to:
    a. Note this report.
    b. Note issues within the report of interest to CSPCWG.