5th CSPCWG MEETING
Sydney, 18-21 November 2008

Paper for Consideration by CSPCWG

Report to CSPCWG5 on CSMWG Activities

Submitted by:	Australia (Jeff Wootton)
Executive Summary:	Report on CSMWG Activities Since CSPCWG4.
Related Documents:	Minutes CSMWG18
Related Projects:	M-4 Review, INT1

Introduction / Background

The IHO Colours and Symbols Maintenance Working Group (CSMWG) is a technical Working Group of the IHO CHRIS. 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 CSPCWG4, CSMWG has met once, in conjunction with TSMAD16, in Cape Town, South Africa on 07-09 May 2008.

The main focus of this meeting was to hold a combined meeting with TSMAD, the ongoing maintenance of the S-52 Standard and the impact of S-100 development on ECDIS portrayal. The following is a summary of the activities of the meeting, with particular emphasis on activities that may be of relevance to CSPCWG. Minutes of the meeting may be found on the CSMWG page of the IHO web site.

Analysis / Discussion

Combined CSMWG/TSMAD meeting and CSMWG18: This was the third combined meeting between the two Working Groups, the last meeting being held in conjunction with TSMAD14 and CSMWG17. The combined meetings are held in order to get together relevant subject matter experts from each Working Group to analyze, discuss and resolve issues that transcend ENC encoding and ECDIS portrayal. The combined meeting rolled almost seamlessly into the CSMWG18 meeting, and almost all those TSMAD members that attended the joint meeting stayed for the full CSMWG meeting. The following issues that may be of interest to CSPCWG were discussed:

- A new edition (4.3) of S-52 Appendix 2 – IHO Colour and Symbol Specifications for ECDIS, including Annex A – Presentation Library was published in January 2008 and issued to MS in March 2008.
- IHO Standard S-64 Edition 1.1, the IHO Test Data Sets for ECDIS, will be published in May/June 2008. This Standard contains the Test Data Sets, Test Data Sets Plots and an Instruction Manual.
- Transas presented a paper (not currently on the CSMWG web page, but I have a copy if anyone is interested) on the use of the bathymetric data model in the S-101 ENC Product Specification. This was essentially the generation of a bathymetric surface (using e.g. a TIN model) from high density/multibeam survey data to replace/overlay depth contours and depth areas in the ECDIS. This paper was received with some interest as this application would allow easier integration of "real time" tidal data, but further investigation and discussion is required.
- S-100/S-101 Portrayal: It was reported that ISO 19117 would be the base Standard on which S-100 portrayal would be based. This Standard is currently undergoing a revision and as such is unstable. A presentation by Pol Le Bihan (Geomod), who is contracted to the IHB to develop Portrayal Rules and Symbol Packages based on ISO 19117 for S-100, indicated that the major problem currently being faced was the incorporation of the Conditional Symbology Procedures (CSPs) into the model. This will require further investigation by CSMWG. The meeting endorsed the continuation of Pol's work.

- S-57 Object Classes not symbolising in ECDIS: This was the conclusion of the issue that was originally raised at CSMWG16 and discussed at TSMAD15. Decisions were taken to amend the S-52 Look-Up Table to symbolise some Object Classes but not others. The opinion was again expressed that if a HO considers it important enough to encode a feature, then they would expect it to be displayed. SANHO mentioned that they have a conspicuous coastal waterfall that is used for navigation, but the decision of the meeting was to not symbolise the point primitive WATFAL, suggesting that SANHO encode the feature as a line. An ENC Encoding Bulletin is to be compiled listing those features and their geometric primitives which will not be symbolised in ECDIS.
- S-101 Stakeholders User Requirements Workshop (*CSMWG18-05.6A*): The workshop was held in March 2008, and was seen to be an extremely productive exercise. The main issues addressed at the workshop related to CSMWG and tabled for discussion at the meeting were:
    - Display of tidal information: 7Cs gave a practical demonstration of how real time tidal information could be integrated in an ECDIS, utilising a Netherlands cell with a 1m depth contour interval. While the display changed with the tidal information, it was important to note that the underlying data (e.g. sounding values) remained unchanged. The safety depth contour in the display also remained unchanged. This may be presented at CHRIS20.
    - Use of the colour orange: It was considered that orange was overused.
    - Simplified Symbols: Users are used to INT1 type symbols, and the simplified symbol library is often difficult for the mariner to interpret. It was suggested that the technology in screen resolution and colour had advanced sufficiently that the simplified symbols may no longer be required and the INT1 type symbols could be coloured.
    - Development of the Standard Display: This was in the realm of "know your symbology" and is related to the previous point. It was suggested that there is a requirement to prepare an ECDIS symbol index for users. NOAA and NGA (US) are currently preparing a new version of their Chart 1, and will be incorporating ECDIS symbols in an additional column. This was expected to take around two years to complete, and could provide a template for future publication of the Official INT1's incorporating ECDIS symbols. The CSMWG Chair agreed to supply a desktop publisher version of the BSH INT1 to NOAA for investigations on incorporating ECDIS symbols. **CSPCWG to note.**
    - The Pick Report: More intuitive and easier access to pick reports is required on future ECDIS's.
    - User interface symbology: Related principally to the display palettes (day, day/dusk and night). Are they all still required? Further investigations are necessary.
    - S-100 ECDIS "Plug and Play" type upgrading in the ECDIS for elements like the Feature catalogue and Symbol Library.
- Contour labelling: Transas gave a demonstration on how depth contours consisting of many line geometry segments have multiple contour labels that can cause clutter on the ECDIS display. While it was suggested that this was an issue that could easily be addressed by software manufacturers, it was agreed that CSMWG would produce a Chart Presentation Bulletin (CPB) requiring contour labels to be evenly spaced on the ECDIS display in a generic way.
- Strategic Issues – IHO (Reorganisation of CHRIS): Discussion focussed mainly on where CSMWG sits in the new proposed HSSC structure. Both the CSMWG Chair and TSMAD Chair were of the opinion that a stronger relationship between CSMWG and TSMAD was more important than CSMWG and CSPCWG. In the proposed new HSSC structure, CSMWG and CSPCWG are in the Coordinating Sub-Committee on Symbology and Data Presentation Standards (SDPS). It was felt that this should not mean that the groups should merge, with the statement made that if this were to occur, "half the attendees at any meeting would not be interested for half the time". The meeting felt, given the focus on a common digital product and the great progress made at this meeting with TSMAD members present, that TSMAD and CSMWG should commit to joint meetings and joint agendas. Accordingly, it was agreed that the next CSMWG meeting would be held in conjunction with a TSMAD meeting. The CSMWG Chair proposed that CSMWG be re-named the Digital Information Portrayal Working Group (DIPWG), which was endorsed by the meeting. The results of these discussions will be forwarded to CHRIS20. **CSPCWG to note.**
- New CSMWG Chair: Colby Harmon (NOAA) was the only nominee for the CSMWG Chair position, which will be vacated after many years of dedicated work by Mathias Jonas, who is moving into the position of Vice-Chair of CHRIS. Mr Harmon was therefore endorsed by

CSMWG as the new Chair, with Mathias agreeing to continue in the role until CSMWG19 with a gradual handover of duties leading up to the meeting. Mathias will continue as a member of CSMWG for at least the next 2 years.

- Next meeting: Will be held in conjunction with TSMAD18 in Ottawa, Canada, hosted by CHS, in May 2009.

Conclusions

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

Recommendations

Further discussions by CSPCWG may be required on the proposal to incorporate S-52 symbols in INT1, and the role of CSMWG in relation to CSPCWG in the new IHO HSSC.

Justification and Impacts

No immediate impacts on CSPCWG projects arise from this report.

Action required of CSPCWG

The CSPCWG is invited to:
    a.   endorse this report.
    b.   note issues within the report of interest to CSPCWG.