

**11th CSPCWG/1st NCWG Meeting
Rostock, Germany, 27-30 April 2015**

**Paper for Consideration by CSPCWG/NCWG
Report to CSPCWG11 on DIPWG Activities**

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| Submitted by: | CSPCWG Chair |
| Executive Summary: | Report on DIPWG Activities Since CSPCWG10. |
| Related Documents: | 1. Minutes TSMAD28/DIPWG6; TSMAD29/DIPWG7; 2. HSSC6-05.3A – DIPWG Report |
| Related Projects: | S-4/INT1 Development and Maintenance |

Introduction / Background

The IHO Digital Information Portrayal Working Group (DIPWG) was a technical Working Group of the IHO HSSC. Its primary objectives were 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 CSPCWG10, DIPWG has met twice (DIPWG6 and DIPWG7), in conjunction with TSMAD28 in Sydney, Australia – 31 March-04 April 2014; and TSMAD29 in Ottawa, Canada – 02-06 February 2015. Minutes of these meetings may be found on the DIPWG page of the IHO web site.

The DIPWG7 meeting was the final meeting of the DIPWG, which has been substantively replaced by the S-100WG and the ENCWG as a result of the HSSC re-structure of its technical Working Groups. Further discussion regarding aspects of DIPWG work considered to be within the scope of the NCWG will be discussed at CSPCWG11/NCWG1.

Analysis / Discussion

Documents published since CSPCWG10 (IHO CL 81/2014 refers):

- 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.

Discussion Topics of the DIPWG of interest to CSPCWG/NCWG since CSPCWG10:

- S-100: The inclusion of the portrayal component of S-100 (S-100 Part 9) is a significant extension in S-100 Edition 2.0.0, which is currently out for IHO member State approval to publish (IHO CL 19/2015 refers). Discussion took place at TSMAD29/DIPWG7 to correct some errors that had been identified in S-100 Part 9, and it was agreed that a further Revision of S-100 (2.1.0) would be required and a new “red-line” draft of Part 9 will be prepared for discussion at S-100WG1.

An IHO contract with CARIS to create an S-100 Portrayal Catalogue Builder successfully delivered a working web-based application early in January 2014. Additional work is needed to accommodate changes to the portrayal model in S-100 Edition 2.0.0 and the S-101 Feature Catalogue.

ROK (KHOA) and US (NGA SPAWAR) have independently developed S-100 “simple viewers” to load and view S-100 based datasets, and these were discussed and (in the case of the KHOA version) demonstrated at the TSMAD29/DIPWG7 meeting. In addition to providing a capability to test portrayal of S-101 datasets, these viewers will also provide a capability to test the integration of other S-100 based products with the base (S-101) ENC data. It is intended that KHOA will initially use S-122 (Navigation Warning Product Specification – in development) datasets to test this integration.

- S-101: As part of the IHO contract with CARIS to create an S-100 Portrayal Catalogue Builder, symbol graphics for all existing S-52 point symbols were delivered. These include a “unification” of the simplified and traditional symbols for fixed and floating aids to navigation to an enhanced single symbol set for fixed and floating aids to navigation in S-101.

A Paper was presented to the TSMAD29/DIPWG7 meeting discussing symbols for Virtual AIS Aids to Navigation in an S-100 ECDIS. This is the topic of a separate Paper for CSPCWG11/NCWG1.

The DIPWG/S-101 Project Team continues to liaise with the DQWG to develop new portrayal for

bathymetric data quality indication in S-100 ECDIS (“CATZOC replacement”).

- **S-52:** A Revision (6.2.0) of S-52 and (4.1.0) of the Presentation Library is in preparation to address some errors that were identified by OEM’s after publication of S-52 Edition 6.1.0 and Presentation Library Edition 4.0.0. It is intended that these Revisions will be published prior to, and enter into force concurrent to, publication of the New Edition of IEC 61174 - Marine Navigation and Radiocommunication Equipment and Systems – Electronic Chart Display and Information Systems (ECDIS) – Operational Performance Requirements, Methods of Testing and Required Test Results. ECDIS display of textual information related to the nature of the seabed (seabed types) was raised at TSMAD29/DIPWG7, regarding use of full text or international abbreviations for seabed type. Australia has taken an action to prepare a paper on this for the next ENCWG meeting, and will be seeking feedback and approval from the NCWG on recommendations.
- **CGHR Outcomes:** The Correspondence Group on HSSC Restructure (CGHR) recommendations, as approved at HSSC6, saw the disbandment of the DIPWG. As a result, DIPWG7 was the final meeting of the Working Group. Two new Working Groups – the S-100WG and the ENCWG – have been established to substantively replace the TSMAD and the DIPWG. Elections for the Executive for these new Working Groups were held at TSMAD29/DIPWG7, and confirmation of commitment of Member States to the Working Groups as indicated in responses to IHO CL /2014 obtained (with amendments). The Executives of the new Working Groups are:
 - S-100WG: Chair – Julia Powell (US); Vice-Chair – Yong Baek (ROK); Secretary – Eivind Mong (Jeppesen Marine).
 - ENCWG: Chair Tom Mellor (UK); Vice-Chair – Vacant; Secretary – Tony Pharaoh (IHB).

It is anticipated that the NCWG will take on some aspects of the work formerly done by the DIPWG. This will be a separate topic for discussion in association with the NCWG Terms of Reference and Procedures at CSPCWG11/NCWG1.

Conclusions

The work done by the DIPWG (and its predecessor the C&SMWG) in developing, maintaining and improving the Specifications for Chart Content and Display Aspects of ECDIS has been considerable, and contributed greatly to improving the use and display of ENC for safe navigation. The ongoing development of S-100 and related Product Specifications ensure the requirement for this work to continue, and while the S-100WG and ENCWG will undertake the bulk of this work, there is also likely to be a significant role for the NCWG.

Recommendations

None (noting separate CSPCWG11/NCWG1 agenda items to address issues raised in this report).

Justification and Impacts

To quote from the DIPWG Report to HSSC6:

“DIPWG and its predecessor, the Colours and Symbols Maintenance Working Group (CSMWG) have done much to establish safe passage through the previously uncharted waters of portrayal for electronic chart display and information systems. To those early explorers who have gone before us, we have much to be thankful for.

We also have much to ask of those who will continue this important work, which must continue regardless of the manner in which HSSC organizes work groups in the future. The continued success of maintaining and improving the display of ENC and other data for safe navigation and for other purposes not yet imagined will depend on the enduring cooperation and collaboration of ECDIS manufacturers and related industry members, ECDIS users, national hydrographic offices and other IHO members, and other stakeholders.”

Action required of CSPCWG/NCWG

The CSPCWG is invited to:

- a. **Note** this report.
- b. **Note** issues within the report of interest to NCWG.