

**3rd NCWG MEETING**  
**ESRI HQ, Redlands, California, USA 16-19 May 2017**  
**Report on ENCWG Activities**

<b>Submitted by:</b>	ENCWG Chair
<b>Executive Summary:</b>	This paper reports on the past activities of the ENCWG that are relevant to the NCWG.
<b>Related Documents:</b>	Draft ENCWG 2 Minutes.
<b>Related Projects:</b>	S-4/INT1 Development and Maintenance

### Introduction / Background

The ENC Standards Maintenance Working Group (ENCWG) is a subsidiary of the Hydrographic Services and Standards Committee (HSCC). Its main objective is to maintain IHO standards which apply to ENC production and display. These include:

- S-52 - Specifications for Chart Content and Display Aspects of ECDIS (including its components).
- S-57 - IHO Transfer Standard for Digital Hydrographic Data (including its components);
- S-58 - Recommended ENC Validation Checks;
- S-62 - List of Data Producer Codes.
- S-63 - IHO Data Protection Scheme
- S-64 - IHO Test Data Sets for ECDIS.
- S-65 - ENCs: Production, Maintenance and Distribution Guidance.
- S-66 - Facts about Electronic Charts and Carriage Requirements.

The current ENCWG office bearers are:

- Chairman: Thomas MELLOR (UKHO)  
Vice-Chairman: Miko HOVI (Finland)  
Secretary: Anthony PHARAOH (IHO Sec.)

The WG currently has 84 members. Forty one members attended the 2nd ENCWG meeting that took place in Genoa, Italy from 20 to 22 March 2017.

### Analysis / Discussion

#### **S-52 - Specifications for Chart Content and Display Aspects of ECDIS edition 4.0.2**

Breakout session was convened to review a number of reported issues. Two new notes added to the Presentation Library document to clarify sections on light descriptions.

It was agreed to circulate another letter to CIRM and other OEMs on the IHO contacts list informing them the revised standard is ready for review and to send in any comments on the clarifications back to the IHO by 1 May – the new edition is planned for publication by the ENCWG on 1 June 17.

#### **S-64 IHO Test Data Sets in ECDIS edition 3.0.2**

A clarifying note was added to the introduction of S-64 regarding ECDIS screen shots

It was agreed to circulate another letter to CIRM and other OEMs on the IHO contacts list informing them the revised standard is ready for review to send in any comments on the clarifications back to the IHO by 1 May – the new edition is planned for publication by the ENCWG on 1 June 17.

<p><b>S-57 - IHO Transfer Standard for Digital Hydrographic Data</b></p> <p><b>UOC edition 4.1.0</b></p>	<p>New edition of the UOC finalized and sent to HSSC for approval out of committee</p> <p>New recommendation for HOs to stop producing ENC cells that overlap with the same compilation scale but in different Navigational Purposes usage bands.</p> <p>Other encoding clarifications where applied to seasonal objects to deal with leap years.</p>
<p><b>S-58 - Recommended ENC Validation Checks edition 6.0</b></p>	<p>During the implementation of S-58 edition 6 a number of OEMs identified issues with the edition of S-58 currently out for MS vote. Breakout group reviewed the comments and these will be submitted with the voting response from Denmark.</p> <p>IHO now have an obligation to produce S-58 test datasets, this work may have to been done under contract. TM noted that the test datasets should be confined to critical errors, noting that, to create the full set of errors is not available at this stage, but should be a long term goal. (It was estimated that there would be about 140 critical errors).</p>
<p><b>S-66 - Facts about Electronic Charts and Carriage Requirements</b></p>	<p>During the NE of S-66 the ENCWG did not use the draft document prepared by IC-ENC, therefore in the preparation of the final version comments were unfortunately missed. The IHB have agreed to consolidated all the comments into a final draft – to be completed for approval by the 1st Council meeting.</p>
<p><b>IHO check Dataset Issues</b></p>	<p>HSSC endorsed TM proposal to use ECDIS Chart 1 to check that ECDIS upgraded to the new S-52 Presentation Library edition 4.0 could display the new symbols without the need to issue a new Check Dataset. It was noted that improved S-64 tests would ensure ECDIS the systems are capable of correctly displaying all the ENC charted features. Issuing a new check dataset would send a negative message to the market that your ECDIS system still needed external checks. The meeting decided that after the 31st August 2017 the IHO check dataset for S-52 Preslib 3.4 will be removed from the IHO website and will no longer be distributed by VARs. The instructions for Mariners to use Chart 1 to check their systems are already available on the IHO website.</p>
<p><b>Updates to the IHO webpage ENCs, ECDIS and S-100</b></p>	<p>To enable the simple retrieval of 'Checking the IHO S-52 Presentation Library edition 4.0 in ECDIS' and other important business critical information by shipping companies and other organizations it has been necessary to reorganise the IHO webpage, ENCs, ECDIS and S-100. This was done by the IHB but has not been done well and it's still confusing where information is.</p> <p>It was agreed it will be necessary to produce text to advise port state inspectors (and others) on what will happen on the 31 August, when the check datasets will be removed and informing on the Chart 1 check that will apply to S-52 Edition 4.0.2</p>
<p><b>ENC Display Sub WG</b></p>	<p>France proposed a group should be setup to analyse how best to deal with excessive ECDIS screen clutter caused by ENCs. The group will analyse ECDIS running the new S-52 Presentation Library 4.0 to see how encoding practices maybe altered to improve the ENC display for Mariners. The group will report back their findings and recommendations back to the ENCWG meeting 3 in 2018</p>

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**Equivalent T&Ps for ENC**

This was a paper that had been submitted to HSSC8, which resulted in an action for the ENCWG and the NCWG to compile a guidance document providing advice on how to encode T&Ps in ENC.

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**Presentation of High Resolution Bathymetry**

Germany reported on the paper presented to HSSC8 and proposed that there should be a global standard for bathymetric ENCs. The 5Mb limit restricts the provision of this type of bathy in existing ENCs and there is a need for a new bENCs Product Specification that allows the data to be updated frequently. Another advantage is that bENC data can be switched on/off as a layer.

UK held the view that there was no need to produce a new IHO standard when high resolution bathy can be included in ENC now and we are producing commercially available ENC cells.

AU supported the UK and explained they were also using the current IHO standards S-57 to produce ENCs with High Resolution Bathy.

The group could not decide on the best way to proceed we were split on the decision to take the German proposal forward and produce an official IHO standard. The Chair will report back to HSSC that this is not a technical issue as the standards support the addition of high resolution data.

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**CATZOC value 6: zone of confidence U**

Mariners have reported the encoding objet M\_QUAL with a CATZOC value 6: zone of confidence U gives no information to be able to compute a meaningful Under Keel Clearance (UKC). This is forcing mariners is to adopt a worst case scenario and is resulting ports being unnecessarily out of bounds. Port State control officers are requiring evidence Navigating Officers have taken the value of CATZOC into account when planning routes, this obviously cannot be achieved if there is no information within the ENC. In many cases when the CATZOC value encoded within the ENC is U the corresponding paper chart source diagram from the same charting authority will carry more information.

The Chair proposed that all HOs must review their current ENC production processes and make changes where necessary to encode meaningful values of CATZOC.

The proposal got unanimous support especially from Germany and Denmark

The IHB will issue a CL advising MS on the importance of populating meaningful CATZOC.

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**Conclusions**

None.

**Recommendations**

Liaison between NCWG and ENCWG is a necessity in order to address emerging navigational requirements in a multi-product environment.

**Justification and Impacts**

No immediate impacts on NCWG projects arise from this report.

**Action required of NCWG**

The NCWG is invited to:

- a. **Note** this report.