**7th CSPCWG Meeting**
**23-26 November 2010, Simon's Town, South Africa**

**Paper for Consideration by CSPCWG**

**Colour Annotation on Paper Charts**

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| *Submitted by:* | Australia |
| *Executive Summary:* | Current S-4 Guidance at B-520.2 for the annotation of the colours orange and amber for lights on paper charts has the potential to cause inconsistency between nautical charting products. |
| *Related Documents:* | IHO S-4, clause B-450.2 |
| | IHO S-57, Appendix A; Chapter 2 – Attributes; Code 75 (COLOUR) |
| *Related Projects:* | None |

**Introduction / Background**

IHO S-4 – Regulations of the IHO for International (INT) Charts and Chart Specifications of the IHO – provides an internationally agreed product specification for both international and national navigational charts. This includes specifications for the international abbreviations to be used for colours of aids to navigation, including lights (B-450.2). All these colour abbreviations are included in the full list of international abbreviations at S-4 clause B-122.1, and therefore are also included in the list of national abbreviations (Section V) in INT1.

**Analysis / Discussion**

The current guidance for the international abbreviations for colour to be used on paper charts is as follows (S-4 – Edition 3.007 (December 2009), clause B-450.2):

**B-450.2** **The international abbreviations for colour are**:

| Colour | INT1 Abbreviation | INT1 Reference | |
|---|---|---|---|
| | | Light | Structure |
| White | W | **P11.1,** | **Q5** |
| Red | R | **P11.2,** | **Q3** |
| Green | G | **P11.3,** | **Q2** |
| Blue | Bu | **P11.4** | |
| Violet | Vi | **P11.5** | |
| Yellow | Y | **P11.6** | **Q3** |
| Orange | Or | **P11.7\*** | |
| Amber | Am | **P11.8\*** | |
| Black | B | | **Q2** |

\*Orange and amber lights may be charted as 'Y'.

Colour abbreviations must be in capital letters in all cases except for the second letter of two-letter abbreviations. These abbreviations must be used for the colours of lights and structures.

**Multicoloured structures.** Where the colours are in bands, the sequence of colour abbreviations must be from top to bottom. Where the colours are in stripes (vertical or diagonal) or the sequence of horizontal bands is not known, the darker colour must be given first.

For the application of colours to fixed and floating aids to navigation, see B-464.

This guidance includes the option (in the \* comment) to depict orange and amber lights using their correct international abbreviation, or by charting them as yellow (Y) lights. This comment was introduced in the

CSPCWG review of this part of S-4 during 2007-2008, and was supported by Australia at the time as this was the policy used for its paper charts. Historically, the reason behind this policy was to aid in the maintenance of hard copy paper chart repromat (use of wax and adhesive backed film), and for ease of manual correction of charts. With most paper chart portfolios now being maintained digitally, and changed printing and distribution mechanisms such as Print on Demand (POD), it may be considered that this policy is no longer relevant.

Recently, this method of depiction was also raised as an issue within AHO database processes, as source data indicating that a light is orange or amber is populated in our database as their actual colour, in order to support encoding in accordance with its "real world" entity for ENC, through use of the enumerate values 9 (amber) or 11 (orange) for the attribute COLOUR (S-57 Appendix A – Chapter 2; Code 75). It was identified that, as a result of the AHO policy to use yellow (Y) as the abbreviation for orange and amber lights on paper charts, there is potential for inconsistency between products. As a result of discussions at the AHO, the Australian Paper Chart Specifications have been amended to include a statement that orange or amber lights are to be depicted with their correct international abbreviation (Or and Am). Further, as the guidance in S-4 is considered to provide "an explanation of the general concepts and rationale behind the portrayal of features on charts, much of which is relevant to both electronic and paper charts" (S-4 – B-100.3), it was suggested that the inclusion of the * comment in B-450.2 should be removed from S-4, as it suggests depiction not representative of the real world situation. Also, due to the * comment, there is a specification in S-4 that provides two ways to depict the same situation, which is not in the interests of standardisation.

### Conclusions

As a result of discussions in the AHO, it has been determined that the * comment at S-4 – B-450.2 does not provide useful guidance to compilers (as the international abbreviations for orange and amber are valid portrayal); has resulted in two ways to portray the same real world feature; and may result in inconsistency between paper chart depiction and the corresponding encoding on ENC.

### Recommendations

It is recommended that the "*" be removed from the table entries for the international abbreviations for orange and amber at S-4 – B-450.2, and the associated * comment under the table also be removed.

### Justification and Impacts

- Possible inconsistencies between paper charts and corresponding ENCs, particularly in a database production environment.

- Two ways to depict the same real world feature, which is not in the interests of standardisation.

- Historical reasons why this method of depiction has been used may no longer be relevant given advances in chart maintenance, printing and distribution technologies.

### Action required of CSPCWG

The CSPCWG is invited to:
   a.   consider this paper; and
   b.   determine, on the merit of the Recommendation above, appropriate action.