

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

Paper for Consideration by CSPCWG
Sub-surface Operations

Submitted by:	UK (Chairman)
Executive Summary:	To discuss the usage context of nautical charts including whether and to what degree charts do or should support sub-surface operations.
Related Documents:	S-4
Related Projects:	None

Introduction / Background

CSPCWG's charting standards and specifications primarily address the content and presentation for standard nautical charts (SNC) in support of surface navigation by 'SOLAS vessels' and, for INT charts, the internationally-trading SOLAS vessel. Additional content is included in many charts to satisfy other user groups and, consequently, these users may have expectations that their needs are, and will be, catered for in the SNC.

Are these other expectations being met in the charts we produce? In particular, do we adequately address the needs of those engaged in sub-surface operations and, if so, to what extent?

The subject is raised for discussion in acknowledgement of:

- the ever increasing availability of data, resource stretch and the consequential judgements required on priorities for chart revision
- the ever increasing demand on the (paper) chart to satisfy a wider maritime user base (than solely the primary surface navigation user) and the capacity of the chart to include such information
- a possible future aspiration to deliver to each customer group charts that are designed to meet their particular and specific needs, rather than charts that attempt to satisfy all users.

It is noted that an associated subject was tentatively raised by our former Vice-chairman in 2004* but was not pursued at that time (higher priority work predominating).

Analysis / Discussion

Most charts contain information that is significantly deeper than is relevant for surface navigation in terms of being a potential hazard or obstruction. Why do we include such data in charts, along with the responsibility to assess and include new data that may change the chart picture? How relevant is this data to both the core user and other stakeholder groups?

S-4 has always included guidance on the representation of deeper depths and features, and they do provide geospatial context as well as potential direct significance for navigation in respect of safety (eg ocean 'vigias' as indicators of

uncertain depth, seamounts, reported depths from all sources) and protection (eg cables near anchorages). References include B-420, B-422c, B-425, B-429.2, B-620.3b.

UK has for some time included deep depths in its Notice to Mariners selection guidance criteria (formerly issued as a UKHO Annual NM and now contained in its 'Mariners Handbook' NP100 (9th edition, 2009, Chapter 4): '*changes in general charted depths significant to submarines, fishing vessels and other commercial operations (depths to about 800m)...*'. The new S-4 Part B section 600 (B-620.3b) on chart maintenance and NMs has endorsed this approach for guidance to IHO MS.

Recent CSPCWG work items relating to the review of wrecks criteria (eg use of actual depths rather than the subjective terms 'dangerous' and 'non-dangerous') and seafloor obstructions also have relevance.

Examples of actual or potential chart users who specifically operate in the sub-surface environment include: offshore energy industry (eg oil, gas, renewable wind / wave / tidal), submarine cable industry, fishing community, research community (eg sub-surface ODAS, submersibles, towing), military (eg submariners). Additionally, charts are commonly used as source or reference documents; examples include environmental planning, cited in legislation. Do these users understand the nature, content and selection inherent in the nautical chart to make appropriate and effective use of our charts?

Is chart content and maintenance always designed with these users in mind? In practice, is the chart presentation appropriate or an inevitable 'compromise'?

With the development of databases within HOs, production environments may more readily accommodate 'bespoke' charts that are designed to meet the needs of particular user groups rather than relying on a single chart attempting to suit all needs (with the risk of satisfying none?).

Conclusions

Noting the discussion above, is our existing chart specification fully adequate and appropriate or is any change necessary?

Recommendations

None

Justification and Impacts

To better define the 'product specification' of the standard nautical chart, its primary purpose and the usage for which it is appropriate and 'fit for purpose'; and that for which it is not.

Action required of CSPCWG

To discuss the issues identified in order to guide the officers and the WG in any potential future work.

To determine whether the sub-surface operator lies within the scope of the user community served by the standard nautical chart (and, if so, that their interests should be reflected in the chart's design and content through IHO Chart Specifications).

*From the report of CSPCWG1, item 7.72: **“Purpose of charts/minimum content” (AU)**
WG members were asked to consider whether a minimum content specification may be required as a product specification for deriving charts automatically from future databases. The WG agreed not to include this as a work item at present.