

**6TH MEETING OF THE HYDROGRAPHIC SERVICES AND STANDARDS COMMITTEE
Viña del Mar, Chile, 11-14 November 2014**

Paper for Consideration by HSSC

Relevance of information overlay services with respect to IHO standards

Submitted by:	IHB
Executive Summary:	This paper invites HSSC to consider including a new work item in the CSPCWG work plan on the relevance of information overlay services with respect to IHO Publication S-4.
Related Documents:	HSSC6-05.5A - <i>Report of CSPCWG to HSSC6</i> IRCC6-08B - <i>Relevance of information overlay services and their status in the global IHO ENC programme</i> Report of the 6 th Meeting of IRCC
Related Projects:	HSSC Work Programme Maintenance of IHO Publications and Services related to ENC and ECDIS.

Introduction

1. The Admiralty Vector Chart Service (AVCS) delivered by the UK Hydrographic Office (UKHO) complements its collection of Electronic Navigational Charts (ENCs) with the “Admiralty Information Overlay” (AIO) service. This service is described at <http://www.ukho.gov.uk/ProductsandServices/ElectronicCharts/Pages/AVCS.aspx> > Admiralty Information Overlay as follows:

“The Admiralty Information Overlay is a digital data set that is designed to be displayed over ENCs in ECDIS and other chart display systems to provide additional information to the navigator.

The Overlay contains all Admiralty Temporary & Preliminary Notices to Mariners (T&P NMs) and provides additional preliminary information that is specific to ENCs, such as reported navigational hazards that have been incorporated on paper charts but have not yet been included in ENCs.

The Overlay gives seafarers an easy way to view the information they need, in addition to the standard chart, to navigate safely and compliantly. The Overlay makes passage planning simpler and safer by clearly showing where important Temporary or Preliminary changes may impact a voyage. It also gives seafarers the same consistent picture of the maritime environment on their ECDIS as they have always had with the Admiralty paper chart.

The Overlay includes all Admiralty T&P NMs in force worldwide and additional information that relates specifically to ENCs, published as ENC Preliminary NMs (EP NMs).”

2. Following an exploratory assessment of the AIO service, France identified the risk that the benefits of information overlay services could sometimes and in some areas be offset by the potential issues they introduce, creating mistrust of navigators about official ENCs, their respective Producers and the IHO as a whole. As a result, France submitted a paper (IRCC6-08B) for consideration by IRCC and HSSC on “*the relevance and eventually the improvement of information overlay services to avoid any potential issues or uncertainties in terms of safety of navigation*”.

3. IRCC considered the issue at its 6th meeting and invited “*UK and France to address the AIO issue bilaterally and report back to IRCC7*”.

4. The Chair of HSSC referred the paper from France to the Chair of the Chart Standardization and Paper Chart Working Group (CSPCWG) for assessing any need for further consideration from a

standardization perspective and whether there is a need for CSPCWG to begin a specific work item on the matter. This paper reports on the outcome of the initial considerations of the issue.

Analysis/Discussion

5. The provision of information overlay services may negatively affect the credibility of the underlying ENC. ENC Producers may be unaware of the impact on their ENCs since there is no established reporting system about the overlay content back to the ENC Producer.

6. The underpinning guidance is covered by Part B-600 - *Chart Maintenance* of S-4. The maintenance section of S-65 is also applicable, since it refers back to S-4:

“The processes for updating the paper chart are described in Part B-600 of S-4. The general principles of these processes apply equally to paper and electronic charts. The processes for updating the paper chart will need to have its equivalent in any updating process for the ENC. (Stage 9 - step 1, page 21).”

7. Chart Producers should include all information considered to be necessary for safe navigation on their charts (be they paper or electronic). Given that the mechanism of Notices to Mariners (NM) and ENC Update is designed to allow for charts to be updated quickly and economically to include the latest navigationally significant information available to the Producer, there should be no requirement for an information overlay service provided by a third party where the ENC Producer provides such an update service, which includes the application of the equivalent of paper chart Temporary (T) and Preliminary (P) NMs.

8. While there is a clear definition in S-4 in regard to the term “chart” applying to both paper and electronic nautical products (see section B-103), there is no statement in S-4 that specifically states that the content of the paper chart and any equivalent ENC is to be consistent. The information contained on paper charts and ENCs is (or will be) increasingly diverging as greater feedback is supplied by mariners in terms of the differences between the way that ENCs and ECDIS are used as opposed to traditional paper chart navigation methods, and corresponding changes to ENC content and encoding specifications are developed to maximise ECDIS navigational functionality. There will also be increasing variations in regard to content due to the medium of presentation of charts, i.e. paper and electronic; the obvious restriction placed on the nautical cartographer in regard to the content that can be included clearly, consistently and legibly on the paper chart against the flexibility of ENC in terms of variable ECDIS display settings, viewing groups and judicious use of the SCAMIN attribute. Indeed, it seems that the logical progression in terms of production will be to derive paper charts from ENCs (and paper chart NMs, including (T) and (P), from, and concurrent to, ENC Updates).

Conclusion

9. Information overlay services impact the provision of services relevant to safe navigation and raise issues related to IHO standards.

Recommendations

10. Based on the analysis above, it is recommended that the consideration of standardization issues related with information overlay services should focus on:

- (i) Clearly stating that the information included in ENCs and on the corresponding paper charts must be consistent, while acknowledging the differences that may exist between the products in regard to content and the different way that the products are used by the mariner. This can be done in S-4, possibly at B-170 (currently unused).
- (ii) Strengthening the specifications regarding chart updating to include the requirement for the equivalent of paper chart (T) and (P) NMs to be included as part of the ENC Update service, in S-4 - B-600. In accordance with action HSSC5/02, ENC Producers should be further encouraged to include the equivalent of paper chart (T) and (P) NMs as part of their ENC Update service and advised that not doing so would be non-conformant with IHO specifications.

- (iii) Recommending that information overlay services must not be produced where the ENC Producer has included the equivalent of paper chart (T) and (P) NMs as part of their ENC Update service.

11. If the above recommendations are agreed, then the appropriate work items should be added to the work plan of the CSPCWG under task A “*Maintain and extend Publication S-4 - Chart Specifications of the IHO & Regulations of the IHO for INT Charts*”.

Justification and impacts

12. The consideration of this issue relates directly to one of the primary objectives of the IHO, namely “*The greatest possible uniformity in nautical charts and documents*”. It falls under the permanent task currently assigned to the CSPCWG to keep IHO Publication S-4 under continuous review.

13. It is proposed that this work item be handled as a medium priority item.

14. It is expected that this work item be completed by 2016 (HSSC-8).

Action required of HSSC

15. The HSSC is invited to:

- a. **Note** this report,
- b. **Consider** the recommendations in paragraphs **10** and **11**,
- c. **Take any other actions** considered necessary.