16th Meeting of the Hydrographic Services and Standards Committee

Update and way forward for Automated Paper Charts from ENCs in Canada

Agenda Item 5.4c

HSSC-16, Tokyo, Japan, 27 – 31 May 2024

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PRINCIPAL ACTIVITIES AND ACHIEVEMENTS

Hydrographic Offices (HOs) cannot undergo transformation if resources continue to be allocated to traditional paper chart production and maintenance. Automation derived from Electronic Navigational Charts (ENCs) and the implementation of unified, comprehensible symbology are viable solutions to enhance the efficiency of HOs and simplify the usage of charts for users.

Canadian Hydrographic Service (CHS) has reached a significant milestone by officially releasing its first automated paper chart on the east coast of Canada. This achievement was made possible by leveraging technology and existing standards.

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PROBLEMS OR OUTSTANDING ISSUES

As we move towards a digital future, data-centric Hydrographic Offices (HOs) need to limit their investments in paper chart products to better support the digital realm, with autonomous navigation being a prime example.

A crucial aspect is to establish chart specifications that cater to the requirements of both electronic and paper products. Unified SVG symbols, including catalogs and dictionaries, are a key factor in enabling software providers to efficiently create paper charts from Electronic Navigational Charts (ENCs). For users, these unified SVG symbols ensure accurate portrayal.

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FUTURE WORK PROGRAMME

A single production line with multiple outputs ensures the coherence of products for users. This approach can significantly reduce the latency of chart updates from the producer to the user.

Adoption of a unified IHO symbology will simplify chart interpretation, minimize confusion across products due to varying symbology, and ultimately enhance the safety of navigation.

The next step for the Canadian Hydrographic Service (CHS) is to process updates using the graphical Notice to Mariners (NTM) method. This would involve leveraging the work done by the National Geospatial-Intelligence Agency (NGA) of the USA over the past few years, which includes overlaying changes on chart objects. By adopting this approach, the process of chart correction from producer to user can be modernized and streamlined.

ACTIONS REQUESTED FROM HSSC

a. HSSC to note the Canadian progress on Automated paper charts from ENCs.

b. HSSC to continue support NCWG and its Baseline Symbology Project Team.

c. HSSC to put a high priority on the NCWG workplan item related to S-100/S-57/IHOS-4/IHO INT1 relational tables for symbols in SVG format.