**NIPWG9 xx-xx**

## Paper for Consideration by NIPWG9

## Update on S-123 and S-127 portrayal

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| ***Submitted by:*** | Canadian Coast Guard  |
| ***Executive Summary:*** | At HSSC 13, NIPWG offered to create a paper to describe the operational aspects of the future S-100 environment. This work will help tell the S-100 story and reduce the ambiguities of the intended use of each S-100 product within the S-100 environment. |
| ***Related Documents:*** | S-100 and S-1xx product specifications |
| ***Related Projects:*** | S-100 Architecture, S-100 Roadmap |

**Background**

With CL 31/2022, the IHO secretariate announced that most of the proposed amendments to the ECDIS Performance Standard (MSC.232) was approved by NCSR9 in June of 2022. Although some work remains, such as gaining approval at IMO-MSC and further proposed changes to the ECDIS Performance Standard as on the horizon, the message was clear. S-100 ECDIS is now a reality. Several of NIPWG’s product specifications are among those planned for step 2 in the S-100 implementation plan with expected operational versions of the product specifications planned for 2026 and beyond. However, all NIPWG product specifications lack portrayal and in light of S-100 Edition 5.0.0. 4a-5.5 S-100 compliancy categories, ECDIS require product specifications to have a compliance category of 4, which necessitate a portrayal catalogue.

In 2019, Canadian Coast Guard (CCG) started developing test data for S-123 and S-127. Teledyne-Caris and IIC Technologies have been contracted to do this work and S-123 and S-127 datasets providing full national coverage have been produced. However, without portrayal, it is not clear how to use this data, including on WMS services. In order to better understand how S-123 and S-127 data should be used CCG started working with it’s navigators to develop general ideas of the way this data should be utilized and portrayed in a navigation system. In early 2022, IIC Technologies was contracted to draft an initial set of portrayal that can be used for generating WMS services and provide a foundation for further exploration into the use and portrayal of S-123 and S-127 datasets in a navigation system.

**Discussion**

The package of symbols proposed by the work done by IIC Technologies under contract with CCG drew mainly on earlier work done by KHOA, with some additions where there were gaps and fine tuning. Also included in the work package are some proposals for improvements and points to consider as the work progress. The full technical report is available in Annex A to this paper.

Next step for CCG is to make use of this work in creating mock ups to simulate use in navigation system and to make a WMS of the Canadian S-123 and S-127 coverage to allow users to review and give feedback.

Mockups will follow the initial feedback received from CCG navigators to have full access to S-123 and S-127 data during route planning where route plans can be annotated with relevant information from either S-123 or S-127 to be recalled at specific way points or legs during route monitoring. The plan is to use these mock ups to generate feedback from CCG fleet navigators, pilots and domestic fleet navigators through public consultation in Canada. Lessons learned will be shared with NIPWG with the aim of assisting in the development of portrayal catalogues for the S-123 and S-127 product specifications.

**Action Required of NIPWG**

The NIPWG is asked to:

1. Note this paper
2. Discuss the recommendations of the IIC technical report
3. Invite NIPWG members to comment