

Paper for Consideration by HSSC9

Request for Financial Support for the S100 Portrayal Catalogue Builder and the S101 Portrayal Catalogue

Submitted by:	S100WG Chair
Executive Summary:	Proposal for financial support for the S-100 Portrayal Catalogue Builder and to build the S-101 Portrayal Catalogue
Related Documents:	S-100 Working Group Report to HSSC9
Related Projects:	S-100 and any S-100 based product specifications

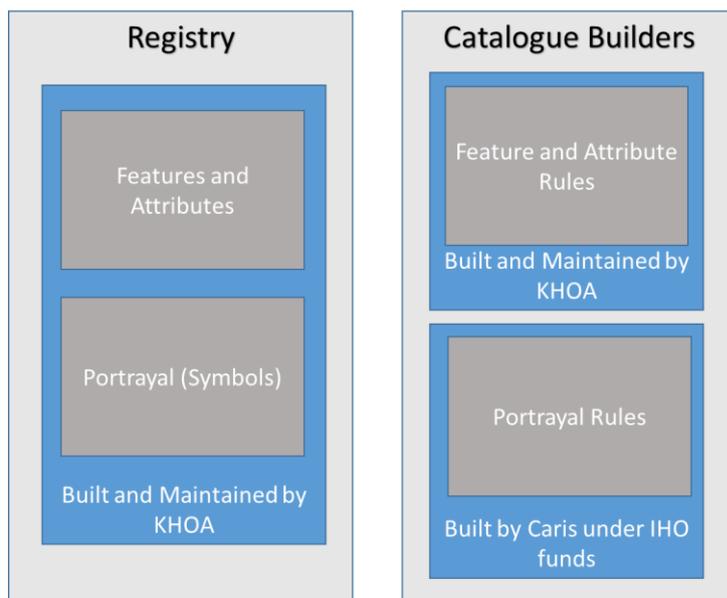
Introduction / Background

In 2014, the IHO Secretariat (then known as the IHB) let out a competitive contract to design and build the S-100 Portrayal Catalogue Builder. In 2015, the initial work and development was completed accepted by IHO’s DIPWG. However, because the PCB was dependent upon other parts of the S-100 infrastructure such as the S-100 GI Register (including the Portrayal Register) and the S-100 Feature Catalogue Builder, the S-100 PCB was never formally stood up and made available for use by product specification developers.

In addition, in 2016, the tables for the Portrayal Register were rebuilt and the PCB was never installed on the IHO Servers and connected to the new Register tables. At the same time, the newly developed Portrayal Register tables were extended to include some additional items and the entire Registry Infrastructure was moved to a set of servers hosted by KHOA. In 2017, KHOA has stood up the IHO S-100 Portrayal Catalogue Builder within their infrastructure but due to resource issues, the S-100WG and the S-101 Project Team has not been able to test the functionality and produce portrayal catalogues for product specifications under development.

Analysis/Discussion

The PCB is an integral part of the S-100 Infrastructure that allows product specification developers to associate features and attributes with specific symbols as a defined rule. The following diagram shows the major components of the S-100 infrastructure and who is currently maintaining the software.



While the PCB has technically been available since 2014, it is one of the last pieces that is used in the S-100 Infrastructure, so the S100 Working Group has been focusing its limited resources on rebuilding and building the other aspects of the S-100 infrastructure before turning its attention to the PCB. Currently the PCB has been connected to the S-100 infrastructure that has been built and maintained by KHOA, but because it has not been tested there are potential issues that will need to be resolved so that PS developers can create the necessary

portrayal catalogues. In addition, S-100 Edition 4.0.0 will include a new scripting language (Lua) to better handle the conditional symbology mechanisms that are necessary for S-101 and will require a modification to the PCB to output that format.

Due to the rebuilding of other aspects of the S-100 infrastructure, the S100WG has been unable to provide a functioning PCB for use by product specification developers. This lack of availability has mainly impacted the development of S-101, however, through inkind support from NOAA, Teledyne Caris, and SPAWAR there is a cobbled together set of rules in both XSLT and Lua that have been used by the S100 Test Bed to determine the path forward for S-100 and more specifically S-101 portrayal

Due to the complex nature of S-101, it has been difficult resourcing the actual building of the portrayal catalogue within the S-100 infrastructure. S-101 has several hundred rules that need to be established, which takes will take a certain amount of effort. While many of these rules are the same as in S-52, they need to be built using the new interface. In addition, new rules will need to be established for new features and attributes that have been defined in S-101. The S-101 has already done some prework on this effort and can provide a guidance document.

Recommendations

HSSC allot a portion of the IHO special projects or utilize the S-52 funds fund to support the following tasks.

Task 1: Software expertise to assist in troubleshooting any issues during the building of the initial S-101 portrayal catalogue.

Task 2: Implement the Lua output that will be implemented as part of S-100 Edition 4.0.0

The estimate for task 1 and 2 should cost about \$26,000

Task 3: Contract a resource to build the first iteration of the S-101 Portrayal Catalogue.

The estimate for task 3 should cost about \$7000, which includes some level of oversight from a technical expert who understands the ENC portrayal logic to quality control the work – but a data entry clerk could do the bulk of the work.

The TSSO could oversee Task 3, as they have a deep familiarity with both the S-101 Data Classification and Encoding Guide and the S-52 portrayal rules that will serve as a baseline for the initial S-101 portrayal rules.

Justification and Impacts

Progress on the finalization of S100 based product specifications is dependent upon a functioning portrayal catalogue builder. The PCB was built using funding provided by the IHO and its maintenance falls under its purvue. While some specifications can move forward without a portrayal catalogue, other specifications need a portrayal catalogue to realize the plug and play mechanism that S-100 provides. In order to progress the development of S-101 and other portrayal dependent specifications, it is necessary to provide adequate resources.

Action Required of HSSC9

The HSSC 9 invited to:

- a. endorse the proposal
- b. agree issue out task orders to fund S-100 Portrayal Catalogue Builder updates and the building of the S-101 Portrayal Catalogue (Estimated Cost: \$33,000)
- c. agree to ask the IHO Secretariat to have the TSSO assist in resourcing this effort.