

**4th IHO-HSSC Meeting
Taunton, UK, 25-28 September 2012**

Paper for Consideration by HSSC

S-101 Test Plan Funding

Submitted by:	TSMAD
Executive Summary:	IHO TR 2/2007 outlines the IHO standards development lifecycle process. In order to complete this process for S-101 there is a requirement for testing to be conducted prior to S-101 being voted on by the IHO Member States. In order to complete this process this paper is requesting for HSSC approval to let out a contract for up to \$30,000.00 to develop the S-101 test cases that will be used during the test beds.
Related Documents:	N/A
Related Projects:	S-101 Development and Approval

Introduction / Background

S-101 is a major work item under the Hydrographic Services and Standards Committee. While work has progressed on the development of the standard, it has been a completely voluntary activity on the parts of the Member States and expert contributors. However, the development process has come to a juncture where contract support is needed to progress S-101 in order for it to become an accepted IHO standard and to fulfil the requirements of TR 2/2007.

Analysis/Discussion

One of the requirements of TR 2/2007 – Principles and Procedures for making changes to IHO Technical Standards and Specifications is that there must be a testing phase; therefore the first step in accomplishing this phase is developing a test plan for S-101. In addition, this plan would be the model for future product specification's test requirements, therefore reducing costs in the longer term. For example, general tests that are required to test the functionality of feature and portrayal catalogues would be common to future products.

While TSMAD has the technical expertise to draft an initial test plan, it does not have the same expertise to draft formal test cases in order to conduct an S-101 test bed. Formal test cases include both a positive test and a negative test for each requirement that is to be tested. In addition, it is a time consuming process if done on a part-time basis.

In order to complete the S-101 test plan the following activities must be accomplished:

1. Create a S-101 Requirements Document – using the S-101 product specification
2. Create a positive test case for each requirement
3. Create a negative test case for each requirement

Conclusions

TSMAD prepared an independent cost estimate regarding the completion of the above activities and estimates that it should take up to \$30,000.00 and three months to complete.

Recommendations

Noting that developing test cases takes a certain amount of technical expertise, TSMAD is recommending that this activity be funded with an IHO contract and if the funding is approved, TSMAD will develop and approve the Statement of Requirements as part of its meeting in January.

In order to fund this contract, up to \$30,000.00 is requested to complete the following tasks:

Task 1: Pull the requirements from the draft S-101 Product Specification

Task 2: Create both a positive and negative test case per each requirement

The following deliverables would be:

1. S-101 Requirements
2. S-101 Test Cases
3. S-101 Requirements Traceability Matrix

It should also be noted that the recipient of this contract must be a subject matter expert in S-101 and have experience writing both requirements and test cases.

Justification and Impacts

The development of S-101 has been progressing and it is nearing the point where it will need to undergo thorough testing prior to becoming an official IHO standard. TSMAD does not have the resources or experience to develop a proper test plan and test cases that can be used in an S-101 test bed, and therefore requires the support of an IHO contract to develop the S-101 Test Cases and Test Plan.

In utilizing a contract, TSMAD will be able to reach out to industry to get the correct technical expertise needed to create a test plan and test cases to conform to TR 02/2007.

Action Required of HSSC

The HSSC is invited to:

- a. agree to letting out an IHO contract for the sum of up to \$30,000.00 to create the S-101 following deliverables:
 1. S-101 Requirements
 2. S-101 Test Cases