

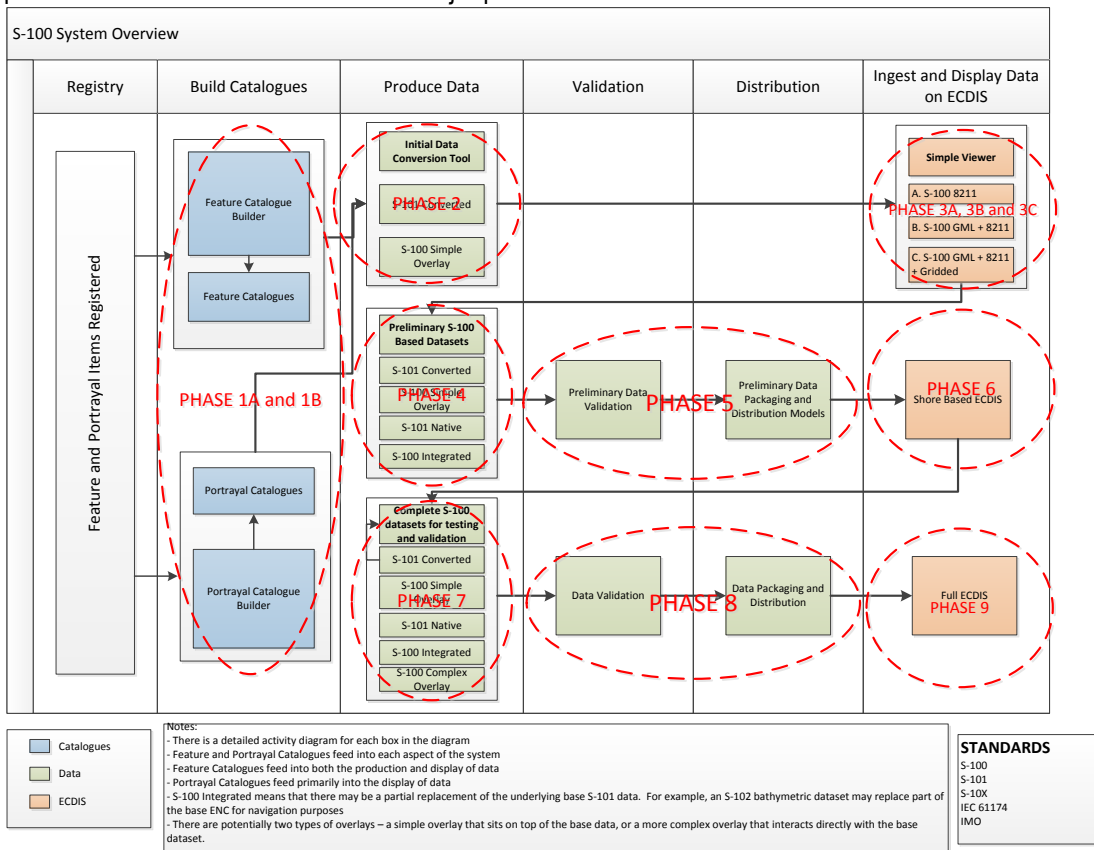
Paper for Consideration by S100WG TSM

S-100 Test Framework

<b>Submitted by:</b>	S-100 WG Chair
<b>Executive Summary:</b>	This paper summarizes the status of the S-100 Test Framework and Test Bed
<b>Related Documents:</b>	S-100 Test Framework and associated Test Cases
<b>Related Projects:</b>	S-100 and associated product specifications

**Introduction / Background**

In 2013 the initial S-100 Test Framework was drafted to support the testing of S-100 based product specifications that are under development. Due to the scope and size of the S-100 test bed it was decided that the entire process would be broken out into nine major phases.



Every year the S100 Working Group holds a Test Strategy meeting to review the S-100 Test Bed Framework and to provide a status on each of the test bed activities that are being undertaken by the various member states and other stakeholders.

**Analysis/Discussion**

The S-100 Test Framework represents the documentation aspect of the S-100 test bed. The framework attempts to document the following processes for each of the nine phases:

- a) Stakeholder Requirements Definition Process;
- b) Requirements Analysis Process;
- c) Architectural Design Process;
- d) Implementation Process;
- e) Integration Process;
- f) Verification Process;
- g) Transition Process;
- h) Validation Process;
- i) Operation Process;
- j) Maintenance Process;

The following table outlines the documentation status of the S-100 test framework:

Phase	Description	Requirements Scoped	Test Cases	Comment
1A	Feature Catalogue Builder	Yes	Yes	
1B	Portrayal Catalogue Builder	Yes	Yes	
2	Initial Data Conversion Tool	Yes	No	It was decided that there didn't need to be formal test cases for this phase
3A	Simple Chart Viewer (S-100 8211)	Yes	Yes	
3B	Simple Chart Viewer (S-100 8211 + S-100 GML)	Yes	No	
3C	Simple Chart Viewer (S-100 8211 + GML + Gridded Data)	Yes	No	
4	Preliminary S-100 Based Test Datasets	Yes	N/A	Test cases and test datasets will be developed for each product specification.
5A	Preliminary Data Validation	Yes	-	At TSM3 it was decided that at a high level that each Product Specification must have a set of validation checks.
5B	Preliminary Data Packaging and Distribution Models	Yes	-	
6	Shore Based ECDIS	Yes	-	See Transas Paper for the definition of Shore based ECDIS.
7	Test Datasets for Full Production and ECDIS Validation	No	-	
8	Data Validation and Distribution	No	-	
9	Full ECDIS	No	-	

In addition, to the actual framework document there are supporting documents for test cases (if applicable) for each phase. Product specifications that are being developed under S-100 should maintain a separate set of test cases and test datasets in order to test the functionality of the products within the S-100 framework.

#### S-100 Test Bed Status

While the S-100 Framework outlines the various components of the S-100 Test Bed the real test bed is the actual infrastructure that is being built by the IHO, Member States and Various Stakeholders. It is this infrastructure that will be used to test various product specifications to ensure that they follow the tenants of 2/2007. This will ensure that the product specifications are no longer in a developmental stage and can be released for use by the general public. The following table shows the status of various infrastructure pieces of the S-100 Test Bed:

Phase	Description	Built	Comment
1A	Feature Catalogue Builder	Yes	Built by the Republic of Korea Available for wider use mid-summer

Phase	Description	Built	Comment
1B	Portrayal Catalogue Builder	Yes	Built by Caris with funds from the IHO. Has not undergone full testing. Available for wider use mid-summer
2	Initial Data Conversion Tool	Yes	Built by ESRI with funds from NOAA/ESRI. Available for wide use
3A	Simple Chart Viewer (S-100 8211)	Yes	Two under development <ul style="list-style-type: none"> <li>• Republic of Korea</li> <li>• SPAWAR</li> </ul>
3B	Simple Chart Viewer (S-100 8211 + S-100 GML)	No	
3C	Simple Chart Viewer (S-100 8211 + GML + Gridded Data)	No	
4	Preliminary S-100 Based Test Datasets	Yes	Built under funding provided via a Korea/NOAA partnership. Data has been released via Basecamp
5A	Preliminary Data Validation	-	
5B	Preliminary Data Packaging and Distribution Models	-	
6	Shore Based ECDIS	-	
7	Test Datasets for Full Production and ECDIS Validation	-	
8	Data Validation and Distribution	-	
9	Full ECDIS	-	

## Conclusions

The S-100 Test Framework has been updated to include initial scoping for Data Validation and Packaging (Phase 5A and 5B). In addition, a separate paper has been prepared for the definition of what a shore based ECDIS should encompass.

## Action Required of S100 Working Group

The S100WG is invited to:

- a. note the updates to the S-100 Test Framework
- b. note the progress on the S-100 Test Bed
- c. continue to provide input into the S-100 Test Bed