

## Paper for Consideration by S-100WG4

### S-101 Project Team Report

<b>Submitted by:</b>	S-101 Project Team Chair
<b>Executive Summary:</b>	This paper provides a proposed path toward S-101 versions 1.1 and 2.0.0.
<b>Related Documents:</b>	None.
<b>Related Projects:</b>	S-100

#### Introduction / Background

This paper serves as an update to the S-100 Working Group on the publication of the S-101 v1.0.0 and to provides a proposed path and timelines toward S-101 versions 1.1 and 2.0.0.

#### Analysis/Discussion

The S-101 PT's continued development of the S-101 Electronic Navigation Chart Specification has greatly benefited from the HSSC's newly approved modular approach that is used in agile software development. By permitting the 1<sup>st</sup> edition of the S-101 specification to not reflect a fully stabilized and operational edition, this reduced the requirements needed to reach the first edition without having to wait for either full resolutions of all components and proposals or for a HSSC approval until its May meeting nearly half way into the next year. The S-101 PT had met in Monaco in June 2018 to systematically review, discuss, and resolve 154 comments and editorial observations for the S-101 Main Document and an additional 103 comments and editorial observations for the S-101 Data Content and Encoding Guide. This particular meeting was highly productive due to the vast amount of experience and talent present to include Chairs and/or Vice Chairs from the S-100WG, NCWG, NIPWG, ENCWG, and the DQWG; representatives of 11 national Hydrographic Offices; and key representatives from IGOs, NGIOs and industry. It was this particular combination of experience, talent, and working group representation that permitted numerous side bar discussions to help resolve and approve key technical issues as well as note future action items required for S-101 future versions deemed not necessary for S-101 v1.0.0 publication. Additionally, given 17 out of 24 representatives at the S-101PT meeting were also from the ENCWG, a proposal was developed for consideration by the S-100WG and HSSC to align the future ENCWG and S-101PT meetings back to back to maximize attendance to both venues as well as gain efficiencies for travel costs for all participating Hydrographic Offices and industry.

#### S-101 Edition 1.0.0 – The Electronic Navigation Chart Specification

S-101 Edition 1.0.0 was successfully published on time in December 2018 in tandem with the S-100 Edition 4.0.0 given the dependencies needed from the S-100 Edition 4.0.0 infrastructure were required for S-101 Edition 1.0.0. The S-101 Edition 1.0.0 was completed to a point in which industry leads can begin initial implementation of the specification to provide feedback to the Project Team on required updates and changes not foreseen during development. The S-101 Edition 1.0.0 components completed were the main S-101 document, the Data Classification and Encoding Guide document, the Feature Catalogue, and the Encoding Format. S-101 Edition 1.0.0 components that were partially completed were the Portrayal Catalogue and the Validation Checks. The S-101 Edition 1.0.0 components for Encryption, Alerts and Indications, and the Full Test Data Sets for Type Approval were not yet completed yet determined not necessary for initial implementation testing by S-101 PT industry representatives. The following table outlines the reported progress as well as proposed progression of S-101 that leads to a final operational standard:

## S-101

Components	Edition 1.0.0 (2018)	Edition 2.0.0 (2020)	Edition 3.0.0 (2022)
Main Documentation	✓	✓	✓
Feature Catalogue	✓	✓	✓
Portrayal Catalogue	Partial	✓	✓
Validation	Partial	✓	✓
Data Classification and Encoding Guide	✓	✓	✓
Encoding Format	✓	✓	✓
Encryption		✓	✓
Alerts and Indications		✓	✓
Full Test Data Sets for Type approval		Partial	✓
<b>Notes</b>	Portrayal will be limited to S-52 rules translated to LUA	Edition 2.0.0 refines all the additional rules	<b>Operational Edition</b>

### S-101 Edition 1.1.0

The plan for an interim S-101 Edition 1.1.0 is based on remaining action items deemed resolvable within the next calendar year as well as any feedback from initial industry implementation efforts. Currently this amounts to 6 comments and editorial observations for the S-101 Main Document and another 14 comments and editorial observations for the S-101 Data Content and Encoding Guide. The S-101 Feature and Portrayal Catalogues that were only partially completed in Edition 1.0.0 plan to be refined and are expected to be completed in Spring 2019. Additionally, any new proposals deemed resolvable within the calendar year will also be attempted. The planned timeframe for Edition 1.1.0 is December 2019.

### S-101 Edition 2.0.0

The plan for publication S-101 Edition 2.0.0 is based on remaining action items deemed more complex and require a longer timeframe for solution. Currently this amounts to 8 comments and editorial observations for the S-101 Main Document and another 12 comments and editorial observations for the S-101 Data Content and Encoding Guide. Unresolved or new feedback from initial industry implementation efforts will continue to be reviewed and solved as well as any new proposals not deemed essential for Edition 2.0.0. The S-101 components for Encryption and Alerts and Indications are planned to be fully developed. The S-101 Full Test Data Sets for Type Approval are planned to be partially completed. The planned publication timeframe for Edition 2.0.0 is December 2020.

### **Actions Required of S-100WG**

The S-100WG is invited to:

- a. advise the S-101PT of S-100 proposals that may affect the S-101 Electronic Navigation Chart Specification development.
- b. note the contents of this report.