

## Paper for Consideration by S-100WG

### Report of the S-101PT

<b>Submitted by:</b>	S-101PT (Chair)
<b>Executive Summary:</b>	Report of the outcome of the 4 <sup>th</sup> meeting of the S-10PT Meeting, 13-14 June 2019 toward a publication of the S-101 ENC Ed 2.0.0 by December 2022.
<b>Related Documents:</b>	None
<b>Related Projects:</b>	S-100

#### Meetings Held During Reporting Period

Last meeting: 13-14 June 2019, Monaco.

Next meeting: 10-12 June 2020, Wellington, New Zealand

#### Work Program

Since the publication of the S-101 ENC Ed 1.0.0 in December 2018, the S-101PT has shifted focus on the development of the remaining product specification components. These components include: Portrayal Catalogue, Validation, Encryption, Alerts and Indications, and Full Test Data Sets for Type Approval. The work program deliverable dates for these components are targeted for an intermittent publication of Edition 1.1.0 by December 2020 and the final operational Edition 2.0.0 by December 2022. Additionally, there is an effort to develop new portrayal for new features and feature types developed in S-101 beyond the content listed in S-57.

#### Progress on S-101 ENC Specification

Portrayal Catalogue: The Portrayal Catalogue Builder (PCB) is under development of the Korea Hydrographic and Oceanographic Agency (KHOA). Substantial work has been done in to the PCB and was still partially completed as of the S-101PT meeting in June.

Validation: Validation checks are being developed under the leadership of the Danish Hydrographic Office. Nearly 420 validation checks have been developed thus far and additional development is still in progress. Coordination with IHO Secretariat has been initiated to investigate methods to conduct the validation check tests online.

Encryption: The S-63PT Chair is supporting the development of encryption development within S-100 and thus the S-101. Currently within the S-100, there is a new section which specifies most of the S-63 encryption items. According to the S-63PT Chair, the IHO decided to continue development of an IHO data protection scheme within the scope of S-100. To move forward in incorporating an encryption component to the S-101, a test bed of new components using this IHO data protection scheme needs to be developed then properly acknowledgement and documentation can then be listed within the S-101 product specification. The S-63PT Chair intends to monitor this as the S-101 continues to develop since the publication of Ed 1.0.0. While there are provisions already in place within the S-100 to account for signatures and encryption within the catalogue files, these will require testing, particularly in the case of multiple product specifications being bundled together. Additionally, it was reported that PRIMAR is conducting prototyping of the S-100 part and have extended the efforts to include multiple product types. PRIMAR should provide comments on this current part of S-100 wherein the S-63PT Chair intends to finalize at the S-100WG5 meeting. Further proposals, discussion, and a breakout session are expected to be conducted at the next S-101PT meeting in June 2020.

Alerts and Indications: Naval Information Warfare Center (NIWC) from the United States is taking the lead on the Alerts and Indications development. At the moment, the S-101PT is waiting on a final S-100 Alerts & Indication (S-100AI) catalog model that would be applicable for application to the S-101 Product Specification. Based on feedback

from TSM6, the initial encompassing S-100AI model was somewhat simplified and presented to TSM7 as restricted to the alerts associated with dataset features only. S-101PT is awaiting the approval of the simplified model presented to TSM7 and carried forward for vote at S-100WG5. Upon adoption of a formal S-100AI model as part of S-100, NIWC will then update the S-101 Portrayal Catalog by adding alert instructions to portrayal rules as applicable for: safety contour, ProhAre, and Navigational Hazards.

Full Test Data Sets for Type Approval: [S101PT01 5.2] Documented the initial development concept of S-101 test datasets as produced by KHOA in January 2016. Discussions with IHO representatives at S-101PT4, June 2019 indicated that S-101 Test Datasets should be based on prior KHOA work and further expansion of S-64 Edition 3 (Port of Micklefirth) as needed to support the current S-101 Product Specification. Further direction/guidance on this IHO initiative is required. S-101PT Chair to request IHO provide such guidance at S-101PT Meeting in June 2020.

New Portrayal: S-101 has requirements for new features and significantly remodelled features that have no correlating S-52 equivalent. The S-101PT created a Portrayal SubGroup, with assistance from Jeff Wootton, to consolidate the master list of all missing portrayal. The NCWG2 agreed to assist S101PT Portrayal SubGroup in validating the portrayal requirements that require symbols then develop proposal for the new portrayal. The NCWG is proceeding through a series of steps to include preliminary analysis, portrayal design recommendations, and final review. Based on the NCWG Chair's inputs, the S-101PT should be receiving the recommendations for the missing symbols in the end of April or early May in time for S-101PT review by the June 2020 meeting.

#### **Items of Note**

S-101PT Terms of Reference (TOR) have been developed under the leadership of the S-100WG Chair. A vote to approve the TORs will be conducted at the start of the S-101PT Meeting in June 2020. Additionally, an election for a new S-101PT Chair will be conducted at that same meeting. Due to current work requirements, the current S-101PT Chair is unavailable for considered for nomination. The S-101PT is seeking nominations before the June 2020 meeting.

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

The S-100WG is invited to:

- a. note this report.
- b. continue to drive final solutions affecting S-101 ENC Component development.