S-125 outline

At ARM9 IHO- NIPWG (Ref ARM9-10.6) welcomed the IALA offer in drafting of S-125 as a dataset based on S-201 and requested that S-125 should provide navigationally significant information additional to the data currently available in S-101.

This paper provides an outline of how WG2 proposes to develop S-125 inline with the instructions from NIPWG.

S-201 is a standard for exchanging all information related to any AtoN including metadata like maintenance schedules, equipment types, like battery and bulb types and be the means of communicating such information within an AtoN organization or between AtoN organization and its main partners like hydrographic offices. S-125 meanwhile, would be a derivative of S-201 as the public facing information for use in ECDIS/ECS. In other words, S-125 would be the digital equivalent of the extended list of lights in order to meet IMO SOLAS V requirements of having list of lights onboard. S-125 will include the attributes necessary to digitally populate discrepancies, proposed changes, Advance Notice of Change and Temporary changes.

In order to support the above vision S-125 will be developed using S-100 Edition 4, but may utilize later versions should these become available during the development phase. S-125 compliant datasets will contain the AtoN information within the dataset area of coverage and delta changes to these datasets will contain the change information.

A S-125 service must be able to more rapidly issue any change information than what is expected in an S-101 ENC service. This is required in order to provide the navigationally significant information additional to the data currently available in S-101.

Portrayal of AtoN information in an S-125 compliant dataset will be governed by a portrayal catalogue. This will be a required component of S-125 in order to meet the sufficient S-100 compatibility level that allows for use in ECDIS. The development of a portrayal catalogue also allows IALA to specify the portrayal that it wish for AtoN information. It is important to remember that since ECDIS is a target user system, all portrayal specifications should still follow relevant IMO guidelines, such as Circ.243.Rev2.

S-125 product specification development will explore functionality within GML, including upcoming enhancements that better permit delta change functionality, as the means of packaging relevant data into datasets for ingestion into ECDIS/ECS.

It may be necessary to enhance the S-100 framework standard to support these envisioned goals which will necessitate writing and submitting change proposals to S-100WG.

AtoN information must be of highest possible quality to be considered useful in ECDIS/ECS. Some AtoN information currently in ENC have been altered from the source information to better fit with related features such as coastline using cartographic principles. Providing for such alterations would be unlikely in a S-125 service, and the focus should therefore be on providing the most accurate positional and descriptive information possible. S-125 will need sufficient instructions to highlight the need to focus on data quality.

S-125 will need an implementation guide that should act as a living document that captures lessons learned and provides best practice for implementation and operation of an S-125 service. In order to keep such a guide relevant and up to date regularly, it may be beneficial to keep such guidance outside of the S-125 document bundle and thus reduce the risk of having to update the other S-125 documents with version changes of the implementation guide.

Since S-125 is intended for ECDIS, it is required that S-125 consider any impact on S-98, which is the Interoperability Catalogue Specification for ECDIS. This standard will govern how the various product layers will interact within an ECDIS and it is therefore important that the intentions with S-125 be communicated to the IHO. Within IHO, S-98 is developed and maintained by S-100WG.

There will be a need to develop an operational service specification (according to the final version of ARM11-9.7.1), and service specification/ service technical design (G1128).