Paper for Consideration by NIPWG

Response to NIPWG proposal to amend S-101 data model definitions

Submitted by:	S-101PT
Executive Summary:	This is an update to the NIPWG proposal for harmonisation of the S-101 model with S-127. The initial NIPWG proposal amends the certain definitions of features and attributes and attributes' values.
Related Documents:	S-101 DCEG (version 1.0.0 December 2018)
Related Projects:	S-101; S-127

Introduction / Background

NIPWG's S-127 (Marine traffic Management) is using parts of the S-101 data model. During an intensive review process the need for amendments of certain definitions was detected. Definition changes to Radio Calling-In Point (RDOCAL), Radar Range (RADRNG), Pilotage District, Pilot Boarding Place (PILBOP), as well the addition of more category of military practice area (CATMPA) types to Military Practice Area (MIPARE) were submitted for consideration by the S-101PT4. The proposal was not reviewed and discussed within the S-101PT4 meeting. The proposal was disseminated via email for review and comments were received from Australia, Denmark, Finland, Germany, Italy, and United States as well as key governance from the IHO Secretariat.

Analysis/Discussion

The effort to harmonize definitions and data model components between specific product specifications, in particular the S-101 (ENC) and the S-127 (Marine Traffic Management), is highly advantageous to harmonize the same data content amongst all product specifications that need to utilize and portray the same data, to simplify interoperability, and to enhance the reliability of IHO Product Specifications by avoiding confusion.

At present, the effort of this harmonization occurs between Working Groups and/or Project Teams direct engagement to resolve key data model components between two different product specifications. While this effort has proven productive thus far, challenges and difficulties can develop incrementally as the number of product specifications that need harmonizing increases. The recent NIPWG proposal attempts to harmonize between the S-101 and the S-127. However, development of the S-401 (Inland ENC), S-1xx (Marine Services), S-1xx (Harbor Infrastructure), and S-500 series (Additional Military Layers) will also include synchronisation and coordination between these new product specs with products specs that have already forgone harmonization such as the current S-101 and S-127 effort. This makes future coordination more difficult since the use cases continues to increase. Such growing efforts over time highlight that the current process to harmonize data model components becomes increasingly difficult as the number of product specs that use common data elements. Multiple cross-coordination efforts is not the most effective process to resolve this issue over time.

Conclusions

These proposals should not be made in regard to what is included in individual S-100 based Product Specifications. The place where these proposals should be made is to the IHO GI Registry, from which they should be evaluated by the full Domain Control Body (DCB) representing all stakeholders (i.e. all S-100 based PS developers/maintainers). Utilizing the DCB simplifies where the data model components are initially resolved in which all working groups and project teams can pull the harmonized data content into each product specs. While the Domain Control Body has been identified, it is not currently being utilized.

Recommendations

All Project Team Leads and Working Group Chairs endorse the formalization and utilization of the Domain Control Body to the HSSC for harmonizing all data model components to the IHO GI Registry for use in all S-100 based Product Specifications. Initial NIPWG proposals and S-101PT comments can be included as input for consideration by the Domain Control Body.

Justification and Impacts
A benefit in harmonizing definitions and data model components initially through the Domain Control Body, less effort and time is expended in having to coordinate the same effort across multiple product specifications. Additionally, this also helps to eliminate any redundancies and replications of objects or definitions within the IHO GI Registry which has already occurred and requires correction.

Increased human resourcing of Domain Control Body (DCB) members would be required to establish a proper DCB review process to take place.

The establishment of a DCB process is recommended to be of high priority in order for current product specification development to continue to progress.

Action Required of NIPWG
The NIPWG is invited to:

a. note this report.
b. consider coordination with all Working Groups and Project Teams to submit a proposal to HSSC on a formal implementation of the Domain Control Body to harmonize all data model components with the IHO GI Registry.