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A guideline for establishing feature and symbol standard management system for national HOs

Submitted by:	Republic of Korea (ROK)
Executive Summary:	There is a need to develop a simplified feature and symbol management system for other types of hydrographic products and services in addition to paper nautical charts and ENCs. More specifically, there would be benefit in establishing a standardized system to facilitate interoperability and to standardize of various types spatial information. This includes 'customized' ENCs as well as various thematic maps. This paper recommends a Guideline be established for feature and symbol standard management system at the national HO level.
Related Documents:	IHO S-100 and S-99
Related Projects:	A ROK project for establishing a national system producing hydrographic products and services based on S-99 and S-100.

Introduction / Background

1.	A number of national HOs now publish not only traditional products (e.g., paper nautical charts and ENCs) for maritime activities, but 'customized' ENC-related datasets including Port ENC, Inland ENC, AML and thematic maps associated with various types coastal zone management activities (e.g., fishing, recreational boating, port guidance, and marine environmental protection).

2.	As most hydrographic and stakeholder organizations transition from file-based production systems to database system approach, there is a need for standard management system to produce various types of products and services from a comprehensive hydrographic database source.

3.	Recently, the IHO S-100 standard framework has been designated as the basis for establishing a Common Maritime Data Structure (CMDS) in support of IMO's e-Navigation initiative. For instance, S-100 will become the basis for the structure and organization of AtoN metadata standard under development by IALA. It is expected S-100 will be the basis for standardizing other forms of maritime and marine information both on a national and international level (e.g., marine protected areas).

Analysis/Discussion/Conclusions

4.	IHO S-99 and S-100 describe a Registry and associated Registers which can be used to define a system for features and symbols for use in a wide variety of applications. Collectively, they also describe the overall process that can be used to develop new product specifications.

5.	The S-100 standard is very comprehensive, contains wide range of contents, and intended be used to produce a wide range of products and services. However, the specifications and descriptions are rather complicated and difficult understand as to how they can be used to produce other types of hydrographic and e-Navigation related products and services.

6.	Although IHO has been operating IHO Registry as the basis of a new international standard for providing traditional hydrographic products and services, there are other product specifications which are also required internally by a national HOs.

7.	There is a need to develop a simplified feature and symbol management system at a national HO level based on a standardized approach. More specifically, there is benefit in establishing a process to create catalogues of feature types for previously un-catalogued products.

8.   ROK is conducting a research project to establish feature/symbol standard management system to standardize thematic maps and customized ENCs as a part of implementation of S-100 related standards. The expected outcome is a feature/symbol standard management system that can be used not only by the ROK, but other national HOs as well. An important outcome will be the development of a Guideline for establishing a feature and symbol standard.

Recommendations

9.   It is recommended that TSMAD:

     a.   Assess the need for (or benefit of) developing a Guideline to support the establishment of a feature/symbol standard management system based on the S-100 and S-99 standards, that can be used by national HOs for other types of hydrographic products/services.

     b.   Advise on what should be included in the Guideline when used to establish a feature/symbol standard management system at the national HO level.

Justification and Impacts

10.   The proposed Guideline will help ensure that a consistent approach is followed by national HOs and other organizations to implement a S-100 based feature/symbol management system.

10.   The proposed Guideline should help to facilitate the development and use of other types of marine information based on S-99 and S-100.

Action Required of TSMAD

TSMAD is invited to:

     a.   Consider the actions recommended in paragraph 9.

     b.   Confirm that this ROK project initiative will help further TSMAD activities related to the broader use of S-99 and S-100 related standards.