ENCWG8-7.1 Info

Paper for Consideration by ENCWG

Proposal on Developing Standard for ENCs Online Update Service

Submitted by:	China
Executive summary:	This proposal aims to propose the development of an online update service standard to optimize the ENCs update service.
Related documents:	100WG4-6.5 Proposal to create a new ENC distribution protocol

Background

1. At present, ENCs are increasingly widely used in the navigation. Compared to traditional paper charts, ENCs have advantages such as quick updates, rich information, and integration with other systems, making them popular and widely used by mariners. With the development of technology, the data accuracy and coverage of ENCs have been constantly improved, playing a positive role in improving navigation safety and efficiency.

2. However, there are still some issues with ENCs update service:

- The update services provided by different data servers and the update applications of different ECDIS equipment manufacturers are different. Some ECDIS devices require manual downloading of update packages and copying them to a USB drive before inserting ECDIS devices for updates. There are also cases where ENCs data updates are directly performed through CDs/DVDs provided by data servers. Some ECDIS devices can obtain online data update services through internet or other specialized communication methods for data updates, and the online update service interfaces of different data servers are also inconsistent. This also leads to the complexity of updating ENCs data, and ECDIS devices need to be compatible with multiple update methods, which increases the maintenance cost and operational difficulty of the ECDIS system.
- Due to the different frequency and mechanism of data update provided by different data servers, there are some problems in the timeliness and consistency of ENCs data. ENCs data in some areas may have been updated to the latest, while data in others may still be lagging behind. At the same time, the inconsistent timeliness of different data updates may also affect the formulation and implementation of navigation plans.
- There is no unified service standard for online update of ENCs. Each ENC data server has developed its own online update service interface, which lacks unified guiding principles. As a result, there are differences in the data transmission format, interface specification, data security and other aspects of the ENCs update data service interface,

which limits the interoperability and sharing of ENCs data between different regions and countries.

3. At the 4th meeting of the S-100WG and the 4th meeting of the ENCWG held in 2019, China MSA proposed relevant proposals on this topic. However, considering that the S-100 series of standards were in the development process at that time, no further work plan was formed on this topic.

Discussion

4. Timely update of ENC data is a key factor to ensure the safety and efficiency of navigation. The establishment of a unified ENCs online update service standard is helpful to solve the series of problems existing in ENCs online update service. We think that the service standard for online update of ENCs should contain at least the following:

- Clarify the methods and technical requirements for online update using the Internet or satellite communication, including provisions on the security and stability of data transmission.
- Clarify the format, protocol and frequency of data transmission to ensure smooth data exchange and update between different ECDIS devices. In addition, measures for handling errors and exceptions during the update process will be specified.
- Standardize the content, structure and update cycle of ENCs data. Ensure the accuracy, timeliness and comprehensiveness of ENCs data to meet the needs of navigation.
- Clarify the copyright and licensing of ENCs data, ensure the lawful use of ENCs data, and prevent unauthorized dissemination and use of data.

Conclusion

5. It is of great significance to establish an unified ENCs online update service standard for promoting the digital transformation of the maritime industry and improving the safety and efficiency of navigation. By means of communication such as internet or satellite communication, the online update of ENCs data to ECDIS equipment will greatly simplify the process and cycle of ENCs data update and improve the real-time and consistency of data. It is recommended to establish standardized interfaces and standardize ENCs data and licenses which will help reduce equipment compatibility issues, promote the legitimate use of ENCs data, and provide a more uniform and efficient service to various stakeholders in the global maritime industry.

Action requested by ENCWG

6. The ENCWG is requested to:

a: Note the information provided in this document；

b：Discuss the feasibility of developing the service standard for online update of ENCs.