

**16th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE  
IHO-IRCC16  
Santa Cruz Island - Galapagos, Ecuador, 12-14 June 2024**

**Support to the WENDWG14/32 recommendation related to a new distribution model of the S-100 Phase I products and ENDS and decisions proposals.**

<b>Submitted by:</b>	France
<b>Executive Summary:</b>	France supports the idea of the development of a new distribution model for the S-100 Phase I products and makes proposals for further IRCC decisions and actions about the framework of a new distribution model.
<b>Related Documents:</b>	WENDWG14 List of Decisions and Actions, version v1.0, 4 March 2024
<b>Related Projects:</b>	Roadmap for the S-100 Implementation Decade (2020-2030)

## 1. Introduction / Background

At its last meeting (Norfolk, Virginia, USA, 20 - 22 February 2024), the WENDWG took the following decision WENDWG 14/32 related to the distribution of the Phase I S-100 products and the Electronic Navigational Data Service (ENDS):

*“Following fruitful discussions, based on Australia experience and Chartworld presentation, the WENDWG agreed to recommend to the IRCC, that the S-100 Roadmap should highlight that the S-100 strategic approach to support and attract end-users for the IHO is not to complete the full S-101 coverage first, then consider the other products, ...*

*... but to engage the IHO into the development of a new distribution model<sup>1</sup>, including cybersecurity and integrity measures and ensuring that end-users can easily access and get all S-100 Phase I products and ENDS in confidence along a given route.*

*<sup>1</sup>such as a “one-stop-shop for all S-100 data services along a given route” (Source: Chartworld).”*

## 2. Analysis/Discussion/ Recommendations

2.1 France agrees with the approach aimed at providing S-100 product coverage beyond the S-101 ENC's as soon as the first S-100 ECDIS is available. For its part, in addition to the S-101 ENC's, it will make available S-124 navigational warnings over the charting areas under France responsibility and NAVAREAI and, where it makes sense with regard to practice and usage, S-102 Bathymetric Surface, S-104 Water Level Information for Surface Navigation and S-111 Surface Currents.

2.2 France supports the importance of easy and secured access of S-100 products of controlled origin. In this regard it wants to stress in particular the importance of the IHO Data Protection Scheme (S-100 Part 15) to secure data integrity, to safeguard national copyright in data, to protect the mariner from falsified products, and to ensure traceability (refer to the IHO WEND-100 Principles Resolution 1/2021). The signature from the data producer must be retained all the way to the end user. This means the SENC delivery, currently being used for S-57 ENC's, cannot continue for S-100. It points out that the responsibility of Member States signatories of the SOLAS Convention includes the dissemination of nautical information and products. It therefore supports the relevance and importance for the IHO to recommend the ways and means of distribution.

2.3 The IMO resolution MSC.530(106) **PERFORMANCE STANDARDS FOR ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)** introduces the ENDS:

*"3.3 Electronic navigational data service (ENDS) means a special-purpose database compiled from nautical chart and nautical publication data, standardized as to content, structure and format, issued for use with ECDIS by or on the authority of a government, authorized hydrographic office or other relevant government institution, and conforming to IHO standards; and, which is designed to meet the requirement of marine navigation and the nautical charts and nautical publications carriage requirements in SOLAS regulations V/19 and V/27. The navigational base layer of ENDS is the electronic navigational chart (ENC)."*

The recommendation proposed by the WENDWG refers to S-100 products and ENDS at the same level. S-100 products are the subject of product specifications and publication S-98 Data Product Interoperability in S-100 Navigation Systems (including ECDIS). France wonders what ENDS represents: a set of S-100 products or a product in its own right (as a database compiled from S-100 product data).

France requests that the understanding of the ENDS be clarified and not to mention ENDS in the S-100 roadmap without this clarification.

2.4 Due to their temporal variability some layers, e.g. S-104 and S-111 products, require high frequency update that imply a different dissemination method from the existing ones for the ENCs. As bathymetry updates may be frequent for port access, the dissemination of S-102 products may also be considered as well for setting up the new dissemination process that will be required in addition to traditional ones. Nonetheless, because for of their demonstrated robust role in the worldwide distribution of products on behalf of HOs, France considers that RENCs still remain key assets for the distribution of S-100 and ENDS products.

2.5 At its meeting in May 2024, the IMO Maritime Safety Committee will most likely approve the IEC 63173-2 Maritime navigation and radiocommunication equipment and systems - Data interfaces - Part 2: Secure communication between ship and shore (SECOM). As a consequence S-100 ECDIS will have to be SECOM compatible. The future work on the new distribution model should therefore include the SECOM standard.

### **3. Conclusion**

Due to the evolution in update frequency requirement for some products, the consideration by HOs of the development of a new distribution model is relevant.

Essential properties of the new distribution model will be to ensure easy, secure and reliable access to S-100 products of controlled origin. The development should take into account the requirements of the SOLAS Convention and other IMO requirements, in particular related to the WEND-100 Principles of the IHO and the protection schemes against the cyber threats and for the integrity of the products.

### **4. Action Required of IRCC**

The IRCC is invited to:

- a. endorse the need, following the recommendation WENDWG14/32, to develop a new distribution model for S-100 products, in line with the HOs responsibility for the dissemination of nautical products to mariners under SOLAS convention;
- b. agree that a clarification on the understanding of the ENDS be made before any mention of the ENDS in the S-100 roadmap;

- c. agree, that dissemination of the S-100 products should build on RENCs, given their effective robust role on behalf of the HOs in the dissemination of existing hydrographic and nautical products;
- d. agree that the IEC SECOM standard be taken into account in the future development of a new distribution model of S-100 products;
- e. Agree that the IHO Data Protection Scheme (S-100 Part 15) must be used to secure data integrity and retain the data producer signature all the way to the end user.