



Support to the WENDWG recommendation related to a new distribution model of the S-100 Phase I products and ENDS and decisions proposals

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S-100 products availability

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“... 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, 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.”

France supports 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, France will make available S-124 navigational warnings over the French waters and NAVAREAll and, **where it makes sense**, S-102 Bathymetric Surface, S-104 Water Level Information for Surface Navigation and S-111 Surface Currents.



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Distribution of S-100 products

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“... to engage the IHO into the **development of a new distribution model**, 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.”

Due to their **temporal variability** layers, like S-104 and S-111 products, require high frequency update that imply a **different dissemination method**.

Because of their **demonstrated robust role in the worldwide distribution** of products on behalf of HOs, **RENCs are key assets** for the distribution of S-100.



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Secure distribution with integrity

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“... to engage the IHO into the development of a new distribution model, **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...”

The **IHO Data Protection Scheme (S-100 Part 15)** is aimed precisely to secure data integrity, to safeguard copyright in data, to protect the mariner from falsified products and to ensure traceability.

The signature of the data producer must be retained **all the way** to the end user. As a consequence the SENC delivery, currently being used for S-57 ENC, **cannot continue for S-100**.

In May 2024, the IMO Maritime Safety Committee approved 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**.



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What is ENDS?

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“... ensuring that end-users can easily access and get all S-100 Phase I products and ENDS in confidence along a given route...”

The resolution MSC.530(106) adopted on 7 November 2022:

"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)."

ENDS to be clarified. **It cannot be** the compilation of data extracted from S-100 products. Each S-100 product forms **an inviolable whole**. ENDS should be understood as **a package of S-100 products**.



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Conclusion - Proposals

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France invites the IRCC to:

- endorse the need, following the recommendation WENDWG14/32, to develop a new distribution model for S-100 products, in line with the HO's responsibility for the dissemination of nautical products to mariners under SOLAS convention
- agree that a clarification on the understanding of the ENDS be made before any mention of the ENDS in the S-100 roadmap
- agree, that dissemination of the S-100 products should build on RENCs, given their effective robust role on behalf of the HO's in the dissemination of existing hydrographic and nautical products
- agree that the IEC SECOM standard be taken into account in the future development of a new distribution model of S-100 products
- 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