

**11<sup>TH</sup> WEND COMMITTEE MEETING**  
**Tokyo, 2-5 September 2008**

**U.S. POSITION ON REVISED WEND PRINCIPLES—WEND 11/07A**

*The US agrees that in the interest of safety of navigation, and with the impending 2012 deadline for adequate ENC coverage to meet the SOLAS ECDIS carriage mandate, there is a critical need for more direct and immediate action to address the deficiencies of the current worldwide ENC situation. To that end, the US supports the revised WEND Principles and feels strongly that it is in the collective interest of all Member States to collaborate in finding solutions to the ENC deficiencies. However, we feel that some of the language of the revised Principles goes beyond the technical and consultative purview of the IHO and needs to be modified and softened in a way that will be more acceptable to Member States while still emphasizing the current urgent state of affairs. We have some specific recommended text changes that we feel will strengthen and clarify these principles.*

*The terms in the document are not always clear, such as “quality” which appears to focus on the end product (ENC) only, vs. the quality of the underlying data. The Principles should acknowledge the linkage between the end products and data quality. The need for continuous improvement in the data must be emphasized if HOs are going to have and keep the mariners’ confidence in charting products.*

*The substantial changes being recommended by the TG will have the greatest impact on those Member States who are less likely to attend the WEND Committee meeting. Therefore, once the WEND comes to consensus on the revised Principles, the US suggests that the IHB submit the new Principles to the full membership in a WEND letter and strongly encourage all Regional Hydrographic Commissions to include discussion of these Principles in their next meeting. If these Principles are to be accepted and executed, they must have buy-in from all Member States. Also, RHC consideration will provide the opportunity for any Member States who find these revised principles objectionable to offer alternative actions and solutions. Considering the urgency and importance of addressing the issues related to ENC coverage and quality, Member States should not reject what is being proposed without offering other suggestions.*

*Also, the US feels that the WEND TG, or its successor under the new structure, should be open to any Member State who is interested in participating. And the US would like to be among the first to state that we would like to be a permanent member of the core task group.*

## **Annex A to WEND 11/07A**

### **Draft Revised WEND Principles**

The WEND is the totality of ENCs under a common IHO framework. Its aim is to ensure a worldwide consistent level of high-quality, updated ENCs through integrated services that supports chart carriage requirements of SOLAS Chapter V, and the requirements of the IMO Performance Standards for ECDIS. The framework is defined by the WEND Principles.

The elements of WEND are:

- The responsibilities of Coastal States to meet the obligations of SOLAS V/9,
- The reference standards and their implementation,
- Capacity Building and cooperation,
- Integrated services

Only data produced under this framework may be referred to as “WEND compliant”.

#### **1. Responsibilities of Coastal States**

1.1 SOLAS Chapter V, Regulation 9, requires Contracting Governments to coordinate their activities and to ensure that hydrographic data are available for waters under their national jurisdiction in a suitable manner in order to satisfy the needs of safe navigation.

Note:

1. A mandatory carriage requirement for ECDIS means a consequential obligation on Coastal States to ensure the provision of ENCs.

1.2 Coastal States may satisfy the obligations in clause 1.1 by either:

- a. Producing the necessary ENC coverage, or
- b. Agreeing with other States to produce the necessary ENC coverage on their behalf.

Notes:

- 1 If the Coastal State is the issuing authority (in terms of SOLAS V 2.2) then responsibility for the ENCs lies with them regardless of whether the production and maintenance is undertaken with the assistance of commercial contractors or other Member State HO.
- 2 Where agreement is given to another Member State to produce and issue ENCs on behalf of a Coastal State the producing / issuing Member State will carry the responsibility for the ENC.
- 3 States providing source data to another State for the compilation of ENCs are responsible for advising that producer State of update information in a timely manner.
- 4 Member States should take into consideration the complexity and resource requirements of the ENC production and maintenance task in relation to their own capabilities when deciding how to best meet the requirements of clause 1.1
- 5 Subject to appropriate agreement, it is acceptable for a Member State to produce ENCs as an interim measure to fill gaps in existing Coastal States coverage to promote contiguous coverage. Such ENCs should be withdrawn when adequate coverage is made available by the

Coastal State.

- 1.3 Coastal States should work together under the umbrella of the IHO and in particular with RHCs to establish responsibilities for providing contiguous, non-overlapping ENC coverage in all areas including international waters.

Notes:

1. The INT chart system may be a useful basis for designing the ENC schema.
2. In international waters, the INT chart producer nation shall be assumed to be the producer of the corresponding ENC. Where the offshore limits of waters under national jurisdiction have not yet been established, clause 1.4 should apply.
3. In areas where the paper INT charts overlap, neighbouring producer nations should agree a common limit of ENC production in the overlapping areas. Cartographic boundaries should be as simple as possible; for example: a succession of straight segments and turning points corresponding to such things as meridians, parallels, or chart limits. Where different producer nations are responsible for INT coverage of the same area at different scales, those nations should agree on a suitable set of boundaries so as to provide the user with the most coherent service possible.
4. In areas of national jurisdiction for which there is no recognized ENC producer nation, the Regional Hydrographic Commission (or similar body), **in consultation with the affected Coastal State**, should determine the ENC producer nation **and facilitate a bilateral agreement to this effect clearly stating rights, responsibilities, and financial arrangements**. ENCs produced under such arrangements should be offered for transfer to the Coastal State in the event that the Coastal State subsequently develops the capacity to maintain the ENCs. Such **transfer arrangements** should respect the moral rights of the Coastal State and the commercial rights of the producer nation.
5. The S57 standard requires that there is no overlap of ENC data within usage bands. ECDIS systems will operate unpredictably in areas where overlapping ENC data is present; for this reason overlapping ENC data is not acceptable in end-user services. Where overlapping coverage exists the producing States should recognize their responsibility **and take the necessary steps to resolve the situation**. In situations where boundary disputes and overlapping data cannot be resolved through negotiation, the ENC producer(s) can anticipate that an end user service provider may need to take action itself to eliminate the overlap or discontinue services until the issue is satisfactorily addressed. Any such action to eliminate overlap should be communicated in advance to the affected ENC producer(s) and be based on guidelines that emphasize navigation safety, such as the following: **for any consequences resulting from this situation and may expect that organisations providing end-user services to take action to remove areas of overlap**.
  1. Scale of the data compiled in the ENC
  2. Currency of data in the ENC – i.e. most recent surveys, shoalest soundings, wrecks, rocks, and obstructions
  3. Avoidance of dividing navigationally significant features between producers. For example, Traffic Separation Schemes should be handled by one producer or the other.
- NOTE: Using guidelines such as the above would avoid the appearance of bias by the IHO or the ENC end user service provider. It also reinforces the principle that navigation safety is the highest concern.**
6. Exceptionally a Member State may create additional ENCs to facilitate unified coverage where such production is undertaken specifically to address issues inhibiting provision of ENC coverage in accordance with the long term aims of the WEND Principles. A Member State undertaking such production should have valid reasons for their actions and, **should lodge these**

~~with IHB beforehand, should have made every effort to negotiate with and come to some agreement with the State that has jurisdiction over the area in question.~~

- 1.4 For cartographic convenience ENC production boundaries other than established national boundaries may be agreed within a technical arrangement. These limits shall not be construed as having any significance or status regarding political or other jurisdictional boundaries.
- 1.5 When the production limits are the official limits for national jurisdiction waters, commercial rights ~~shall belong to~~ shall be negotiated and agreed to by both the relevant State and the ENC ~~producing country~~ producer.
- 1.6 When the production limits are cartographic boundaries as opposed to national boundaries, the commercial rights shall normally belong to the ENC producing country but ~~may possibly be encumbered by the such a decision should include agreement concerning payment of royalties~~ to the relevant State through ~~some~~ technical arrangement (see clause 1.3).
- 1.7 Any State producing and authorizing an ENC is responsible for its validation in terms of content, conformance to standards and consistency across cell boundaries.

Notes:

- 1 In order to ensure uniform quality and consistency of the WEND, Member States should cooperate in accordance with clause 2.2.
  - 2 Member States should recognize their potential exposure to legal liability for ENCs.
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- 1.8 To ensure that the WEND database is maintained to the highest quality standard IHO Member States that identify an error or any other deficiency in an issued ENC, or that receive information indicating such a deficiency, must bring this to the attention of the ENC producer so that the problem can be resolved at the earliest opportunity. ~~Member States~~ **The ENC producer** should act to ensure that appropriate actions are taken so that the safety of navigation is not compromised.
- NOTE: 1.8 needs clarification—does this last sentence refer to any or all Member States in general, or just to the ENC Producer?***
- 1.9 In producing ENCs, States are to take due account of the rights of the owners of source data and if paper chart coverage has been published by another Member State, the rights of that State.
- NOTE: 1.9 needs clarification—what are some examples?***
- 1.10 IHO Member States should cooperate to ensure that consistent, high quality and up-to-date ENCs are available to meet the needs of the mariner.

## Reference Standards and Implementation

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|     | 2.1 To meet SOLAS requirements ENCs <u>must</u> <u>should</u> conform to all relevant IHO and IMO standards.   |
| 2.2 | States should harmonise their ENCs through the use of RENC <sup>1</sup> s, the work of Regional Hydrographic Commissions and also through multilateral and bilateral arrangements. |

Notes:

- 1 Harmonization means the uniform implementation of S57 and other applicable standards, according to common IHO implementation rules as described in S-58, S-65 and the S-57 Encoding Bulletins.

- 2 Member States are encouraged to distribute their ENCs through a RENC in order to share in common experience and reduce expenditure, and to ensure the greatest possible standardization, consistency, reliability and availability of ENCs.
  - 3 Member States not wishing to join a RENC should make appropriate arrangements to ensure that their ENCs meet WEND requirements for consistency and quality and are widely distributed.
- | 2.3 The updating of ~~an~~ ENC content should ~~be timely in relation to at least match~~ the updating service ~~frequency for of~~ the corresponding paper charts in order to meet SOLAS V/9 obligations. ENC updates should at a minimum be validated and made available through the same supply chain as ENCs.

***NOTE: What is the fundamental issue to be addressed by 2.3? Is it that some countries are updating paper charts and not ENCs? If not, this statement does not lead to uniformity across IHO. There currently is a wide variance in paper chart updating across IHO, weekly, biweekly and monthly as is authorized in the IHO TRs. In some countries the mariners insist on getting ENC updates as soon as possible and do not want to wait for the paper versions.***

- 2.4 To best satisfy the obligations under SOLAS V/9 all elements of the WEND should be underpinned by certified Quality Management Systems.

Notes:

1. Typically, the Quality Management Standard will be ISO9001:2000.

<sup>1</sup>RENCs are organizational entities where IHO members have established cooperation amongst each other to guarantee a world-wide consistent level of high quality data, and for bringing about coordinated services with official ENCs and updates to them.

### **3. Capacity Building and Cooperation**

- 3.1 Whenever possible, Member States should provide, upon request, training and advice to States that require it in order to develop their ability to comply with obligations stated in clause 1.1.

Notes:

- 1 Assistance may cover aspects such as development of an ENC production capability, ENC quality and the role of RENCs in ENC validation and distribution.
- 2 It is essential that Coastal States have established cartographic capability and infrastructure prior to undertaking ENC production and maintenance tasks themselves so as to ensure that the ENCs within the WEND database meet the high quality standards necessary to fulfil SOLAS requirements.

| <sup>43.2</sup>IHO Member States should consider ENC related projects as high priority capacity building initiatives

### **Integrated services<sup>2</sup>**

- 4.1 Coastal States should ensure that their ENCs form part of the WEND so that they are available to users through the widest range of integrated services.

Notes:

- 1 Producer States are responsible for the content and format of their ENCs up to the point that they are delivered to a RENC and/or data server; they are not responsible for the continued integrity of

the ENCs through subsequent distribution channels. If required, it will be for the RENC and/or data server to be able to demonstrate that the ENCs have not been corrupted between receipt from the producing State and inclusion within, and delivery of, an integrated service.

2 RENCs should cooperate to ensure that ENCs are harmonised to the same quality standards thereby facilitating integrated services.

4.2 When an encryption mechanism is employed to protect the ENC product this should be achieved by using S63 (see IHO TR A3.12).

Notes:

1 S-63 is used for ENC distribution to end users, to ensure data integrity, to safeguard national copyright in ENC data, to protect the mariner from falsified products, and to ensure traceability.

2 Member States only need to consider the use of S-63 if they intend to deliver an end user service. Data Servers (ie. service providers) and equipment manufacturers are responsible for implementing S-63 and form part of the ‘S-63 trusted circle’ (ie. are entrusted to protect the ENCs and the encryption process).

4.3 An Member State end user service provider undertaking the integration of national ENC datasets into a wider service is responsible for any changes resulting from that integration.

4.4 Member States are encouraged to consider [methods for improving distribution and updating of ENC, e.g. the](#) distribution of ENCs in SENC format in accordance with IHO TR A3.11.

<sup>2</sup> Integrated services are a variety of end-user services where each service is selling all its ENC data, regardless of source, to the end user within a single service proposition embracing format, data protection scheme and updating mechanism packaged in a single exchange set.