



4, Quai Antoine 1er  
B.P.445 - MC 98011 MONACO Cedex  
PRINCIPAUTE DE MONACO

IHB File No. S3/8151/CHRIS

1 February 2002

**CHRIS Letter No. 1/2002**

**To:** All CHRIS Members

**FOLLOWING-UP ACTIONS FROM CHRIS/13**

Dear Sir,

This is to address several issues that result from the 13<sup>th</sup> CHRIS Meeting, Athens, September 2002.

1. ENC Security Scheme. It was agreed, at CHRIS/13, that a small, expert Advisory Group, led by PRIMAR would develop an IHO ENC data protection kernel modelled on the PRIMAR Security Scheme and investigate the implications for the IHB becoming the Security Scheme Administrator and assuming responsibility for the maintenance of the above kernel. PRIMAR was to report back to the IHB with a recommended course of action. The IHB would then circulate the recommendations and seek endorsement and further action as appropriate.

The PRIMAR report has now been received and is attached for your consideration. It is proposed that a Group of Experts, as listed in Appendix 2 of the report, conduct a study to develop an IHO ENC Security Standard, following the details in Section 2. A schedule of work is also included on page 7, with completion of the work expected by the end of 2002.

You are therefore requested to review this report and to provide your comments to the IHB **before 28 February 2002**. Failure to respond by that date will be interpreted as an endorsement of the proposal. The Group will then commence working by electronic correspondence, through the Open ECDIS Forum.

The IHB intends to again organise this year the "Industry Days", i.e. an interface meeting involving HOs, ECDIS manufacturers, software developers, type-approval agencies, regulatory authorities, and any other institutions with ECDIS/ENC-related activities. The dates of 25-26 June 2002 are proposed. In order to enhance the value of this event, it is hoped that the Industry Days can be held in conjunction with meetings of other interested working groups and contacts are being established on the matter with the IHO-IEC Harmonizing Group on MIOs (HGMIO) and the IEC TC80/WG7. It is proposed that a short meeting of the Security Scheme Experts Group, e.g. half-day, be held at the IHB immediately before the Industry Days, with a view to assessing the situation at that time.

The IHB is grateful to PRIMAR (Robert Sandvik) for providing the attached report.

2. IHO-IEC Harmonization Group on Marine Information Objects (HGMIO). Terms of Reference for HGMIO were agreed at CHRIS/13. However the Chairman of the Colours and Symbols

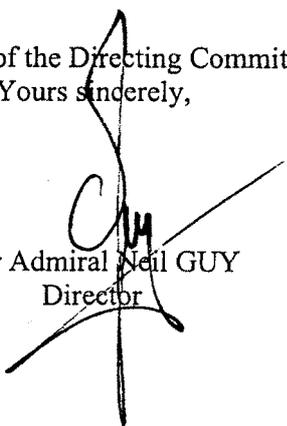
Maintenance Working Group (C&SMWG), Dr Mathias Jonas, Germany, subsequently questioned some of these TORs which, he said, were conflicting with C&SMWG's responsibilities. The TORs for HGMIO were therefore re-considered at the inaugural meeting of HGMIO, 15-16 January 2002, U. of Durham, N.H., USA, in the light of Dr Jonas' comments, and a revised version was developed, a copy of which is attached.

You are requested to consider these revised TORs for the HGMIO and to send your comments to the IHB **before 28 February 2002**. Failure to respond by that date will be interpreted as an endorsement of the attached TORs.

3. Amendments to the WEND Principles (French Proposal). France presented a proposal for changes to the WEND Principles regarding the production of ENC's (CHRIS/13/4B). Although this is a WEND issue, it was felt that the views of the Meeting on this proposal would be helpful to France before the matter be referred to WEND. It was agreed that CHRIS/13 participants would comment on the French proposal after the Meeting, via the IHB, and that France would be invited to prepare a revised proposal taking into account the comments received. This has now been completed and a new proposal for additional rules to the WEND Principles, received from France (through Letter No 110 SHOM/EG/NP, in French), is attached for your information. The proposal itself is in Annex I to SHOM's Letter. The matter will now be referred to the WEND Committee for further action. The IHB is grateful to all those who provided comments on CHRIS/13/4B.

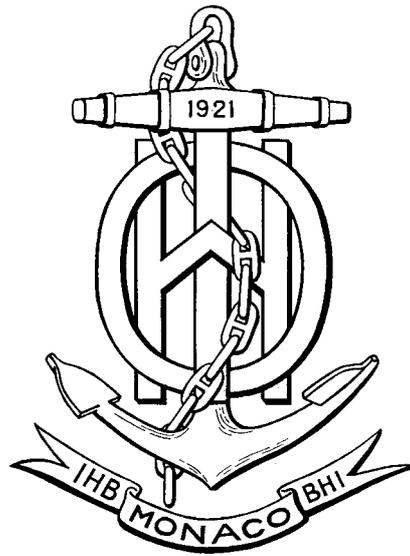
The delay in disseminating the Minutes of CHRIS/13, due to a heavy workload at the IHB, is regretted. These minutes will soon be completed and distributed for comments.

On behalf of the Directing Committee  
Yours sincerely,



Rear Admiral Neil GUY  
Director

Encls: 3 Annexes



# Plan to Develop IHO Security Standard



Version 1.0

**Table of Content**

**1 INTRODUCTION ..... 3**

1.1 REFERENCES ..... 3

**2 SCOPE OF WORK ..... 3**

2.1 WORK OBJECTIVE..... 3

2.2 WORKING PROCEDURES AND PARTICIPANTS ..... 3

2.3 SPECIFIC COMMENTS TO WORK ITEMS ..... 4

2.3.1 *Review and agree Terms of Reference for AG (ID=1)* ..... 4

2.3.2 *Review experiences and feedback (ID=9)* ..... 4

2.3.3 *Define Security Document Structure (ID=15)*..... 5

2.3.4 *Prepare and review IHO Security Standard (ID=20)* ..... 5

2.3.5 *Prepare auxiliary security tools (ID=37)*..... 5

**3 ACRONYMS..... 5**

**APPENDIX 1: IHO DATA PROTECTION SCHEME ADVISORY GROUP 8**

**APPENDIX 2: ADVISORY GROUP CONTACT DETAILS ..... 9**

### Introduction

The objective of the *IHO Data Protection Scheme Advisory Group* (DPSAG) is to initially prepare a plan to develop a recommended IHO Security Standard according to the Work Directive in appendix 1. If the plan is approved by IHB and Member States, the DPSAG will be responsible for preparing the security documentation and adequate supporting tools including a data protection kernel with procedures to transfer and operate the scheme under authority from IHB.

The official minutes from the 13<sup>th</sup> CHRIS meeting is unavailable at the time of writing and the current work directive discussed at the meeting is enclosed as appendix 1. Note that the Advisory Group is asked to report back to the CHRIS (via the IHB) by 10 January 2002.

### References

- [1] Primar Security Documentation
- [2] IHO Data Protection Scheme Advisory Group - Work Directive, Appendix 1
- [3] The Canadian Experience Implementing the PRIMAR Security System, Greg Levonian & Michael J. Casey, CHRIS/13/8F

### Scope of Work

The HOs decided at its 13<sup>th</sup> meeting to develop an IHO recommended single ENC security scheme to be used by all HOs interested in applying protection to their ENCs. Since the IHO scheme is to be based on the Primar Security Scheme, Primar has been requested to lead and coordinate this development.

Without the official minutes from the meeting at the time of writing, I have tried to include views and opinions represented by some of the Member States present at the meeting.

### Work Objective

- Develop IHO Security Scheme documentation modelled on the Primar Security Scheme with special emphasis on a single and global model
- Identify and define operational procedures required between the actors of the scheme to ensure a consistent operation of a single and global scheme
- Develop supporting security information identified as needed by the Advisory Group, e.g. ENC data protection kernel, security test data
- Develop procedures to enable IHB to subsequently assume responsibility for all the IHO Security Scheme documentation including supporting data protection kernel, test data and any other supporting information
- Identify any constraining implications or effects on IMO or any other related regulations

### Working Procedures and Participants

The Advisory Group will be led by ECC AS, the joint venture partner with UKHO in Primar. The intention is to keep the

Advisory Group small in size and invite representatives from IHO Member States and industry who can contribute relevant expertise and experience to the activities.

The plan is sent to a few Hydrographic Offices and ECS/ECDIS industry requesting their commitment to participate in the Advisory Group and if they have specific terms and conditions for their contribution. A complete list of participants and their contact details will be made available when we have received final commitments.

It is expected that all participants carry their own costs, but some funding might be sought from IHB for those making a great contribution in quantity to the Advisory Group's work.

It is expected that all work, discussions and information exchanges can be achieved using dedicated Internet discussion groups, e-mail and phone calls. To reduce the costs, we will try to avoid a situation where we have to call for meetings.

It is expected that the members can perform its work in general consensus. Majority voting over proposals will be avoided.

It is also expected that the Advisory Group will come to an end when its work has been completed and handed over to IHB. It is expected that one of the IHO Technical Working Groups or in association with a few of the Members of the Advisory Group will be requested by IHB to maintain the documentation in the future.

#### **Specific comments to work items**

Below is a more comprehensive description of the content or deliverables for some of the activities in the current plan.

#### **Review and agree Terms of Reference for AG (ID=1)**

An important activity to ensure all members has a common and identical interpretation of the Terms of Reference for the Advisory Group. Any differences must be resolved before work will continue, and if necessary determined with IHB.

A list of all deliverables and the tentative plan will be reviewed and agreed with the members.

An updated report about the revised progress plan will be sent to the Chairman of the IHO CHRIS to inform about status.

#### **Review experiences and feedback (ID=9)**

We will try to collect feedback from manufacturers about their experiences with the Primar Security Scheme, implications of changing the standard and suggestions for improvements.

Current documentation will also be reviewed as basis to identify changes, improvements and missing information.

A list of requirements for changes will be defined and used as

basis for writing the IHO Security Documentation.

**Define Security Document Structure (ID=15)**

Agree Security Document structure and conform to applicable IHO document standards, and agree list of responsibilities for completion.

**Prepare and review IHO Security Standard (ID=20)**

The main content of this activity will be to prepare a complete IHO Security Standard based on identified changes to current Primar Security Standard. This will include proofreading of the text and attached examples.

An important aspect of these activities will be to:

- Review the implications and applicable procedures on IHB to operate as a Scheme Administrator and maintain the documentation in the future.
- Identify any constraining implications or effects on IMO, IEC or any other related regulations.
- Ensure any possible copyright issues are resolved

An important delivery of this activity will be a procedural handbook for the Scheme Administrator to ensure a proper operation and exchange of key security information.

Current plan will be to distribute a complete documentation in due time before the next IHO CHRIS meeting scheduled for August 2002.

**Prepare auxiliary security tools (ID=37)**

After the Security Standard is officially adopted by IHO, the Advisory Group will request the identified stakeholders of additional security tools and expertise to request their participation in the development of auxiliary security tools.

This activity will deliberately not start until the standard is approved to avoid making costly changes to tools supporting a draft standard.

**Acronyms**

CHRIS      IHO Committee on Hydrographic Requirements for Information Systems with responsibility to monitor the requirements of mariners associated with development and use of electronic information systems that may require data provided by national hydrographic offices, and identify the matters

that may affect the activities and products of these offices.

DPSAG Data Protection Scheme Advisory Group. An Advisory Group under IHO CHRIS with specific responsibility to develop an IHO recommended Security Scheme.

IHB International Hydrographic Bureau

IHO International Hydrographic Organization is an intergovernmental consultative and technical organization established to support the safety in navigation and the protection of the marine environment.

WD Work Directive for the security Advisory Group

Plan to Develop IHO Security Standard

ID	Task Name	Duration	Start	Finish	February		March		April		May		June		July		August		September		October		November		Dec			
					E	B	M	E	B	M	E	B	M	E	B	M	E	B	M	E	B	M	E	B	M	E	B	
1	<b>Review and agree TOR for AG</b>	<b>22 d</b>	<b>01.02.02</b>	<b>01.03.02</b>																								
2	Review IHO CHRIS decisions	3 d	01.02.02	05.02.02																								
3	Discuss & agree AG objective	10 d	05.02.02	19.02.02																								
4	Discuss & agree AG constraints	10 d	05.02.02	19.02.02																								
5	Agree deliverables	3 d	19.02.02	21.02.02																								
6	Review and amend tentative plan	3 d	22.02.02	26.02.02																								
7	Prepare & review progress report IHO CHRIS	3 d	26.02.02	01.03.02																								
8																												
9	<b>Review experiences and feedback</b>	<b>50 d</b>	<b>12.02.02</b>	<b>18.04.02</b>																								
10	Collect security feedback from users	20 d	12.02.02	11.03.02																								
11	Review Primar security scheme/documentation	20 d	12.02.02	11.03.02																								
12	Review feedback and proposals	20 d	11.03.02	04.04.02																								
13	Identify requirement changes	10 d	05.04.02	18.04.02																								
14																												
15	<b>IHO Security Document Structure</b>	<b>13 d</b>	<b>22.03.02</b>	<b>09.04.02</b>																								
16	Discuss and agree document structure	10 d	22.03.02	04.04.02																								
17	Discuss and agree document content	10 d	22.03.02	04.04.02																								
18	Assign document responsibilities	3 d	05.04.02	09.04.02																								
19																												
20	<b>Prepare and review IHO Security Standard</b>	<b>80 d</b>	<b>05.04.02</b>	<b>18.07.02</b>																								
21	Prepare and review Security chapters	60 d	05.04.02	24.06.02																								
22	Review IHO responsibilities and procedures	60 d	05.04.02	24.06.02																								
23	Review implications on IMO/other regulations	60 d	05.04.02	24.06.02																								
24	Review examples	10 d	24.06.02	05.07.02																								
25	Prepare a complete draft Security document	10 d	05.07.02	18.07.02																								
26	Submit draft to IHO CHRIS for approval	0 d	18.07.02	18.07.02																								
27																												
28	<b>IHO CHRIS Approval of Security standard</b>	<b>22 d</b>	<b>19.07.02</b>	<b>16.08.02</b>																								
29	Circulation and review by CHRIS members	22 d	19.07.02	16.08.02																								
30	14th IHO CHRIS Meeting?	3 d	13.08.02	15.08.02																								
31																												
32	<b>Prepare final version Security standard</b>	<b>15 d</b>	<b>16.08.02</b>	<b>05.09.02</b>																								
33	Review feedback from CHRIS meeting	5 d	16.08.02	23.08.02																								
34	Prepare final document version	10 d	23.08.02	05.09.02																								
35	Issue final Security standard to IHB	0 d	05.09.02	05.09.02																								
36																												
37	<b>Prepare auxiliary security tools</b>	<b>65 d</b>	<b>05.09.02</b>	<b>29.11.02</b>																								
38	Prepare and test security software library	65 d	05.09.02	29.11.02																								
39	Prepara and test security test data	65 d	05.09.02	29.11.02																								
40	Issue auxiliary Security tools to IHB	0 d	29.11.02	29.11.02																								

## **Appendix 1: IHO Data Protection Scheme Advisory Group**

**13<sup>th</sup> CHRIS MEETING**  
**17-19 September 2001, Athens, Greece**

### **IHO DATA PROTECTION SCHEME ADVISORY GROUP**

#### **Work Directive (Draft v1)**

##### **Introduction**

1. As a result of discussions at CHRIS13 and proposals in paper CHRIS13/8.C rev1, CHRIS 13:
  - a. reconfirmed that:
    - (1) ENC data protection is optional for M/S, and
    - (2) a single IHO ENC data protection method is preferred.
  - b. supported the concept of an IHO ENC data protection kernel based on the Primar Security Scheme.
2. In order to implement an IHO ENC data protection kernel CHRIS13 agreed that a small, expert advisory group should be invited to:
  - a. develop a plan that will:
    - (1) enable the immediate and speedy development of an IHO ENC data protection kernel and supporting documentation modelled on the Primar Security Scheme, and
    - (2) enable the IHO to assume responsibility for any necessary supporting documentation.
  - b. investigate the implications to the IHB of:
    - (1) subsequently assuming responsibility for the kernel, and
    - (2) becoming the Security Scheme Administrator.
  - c. identify any constraining implications or effects on IMO or any other related regulations.
3. The Advisory Group will be led by PRIMAR, assisted by Canada and any other M/S or other parties who can contribute relevant expertise and experience to the tasks.
4. The Advisory Group are asked to report back to the CHRIS (via the IHB) by 15 November 2001 with a recommended course of action, including:
  - a. advice on the matters at 2.b and 2.c,
  - b. the identification of any cost impacts and proposed sources of funding, c. an estimate of the timescale required to achieve the aim.
5. The IHB will circulate the recommendations of the Advisory Group and seek endorsement and further action as appropriate.

## Appendix 2: Advisory Group Contact Details

<b>Name</b>	<b>Company</b>	<b>Address</b>	<b>Phone</b>	<b>Fax</b>	<b>E-mail</b>
Mr Robert Sandvik	Primar	POB 32 N-4001 Stavanger Norway	+47 51 93 95 03	+47 51 93 95 01	<a href="mailto:robert.sandvik@primar.org">robert.sandvik@primar.org</a>
Mr Peter Scott	ECC AS	POB 32 N-4001 Stavanger Norway	+47 51 93 95 07	+47 51 93 95 01	<a href="mailto:peter.scott@ecc.as">peter.scott@ecc.as</a>
Mr Mike Casey	Canadian Hydrographic Service	615 Booth St. Ottawa, ON K1A 0E6 Canada	+1 (613) 995-4666	+1(613) 996-9053	<a href="mailto:caseym@dfo-mpo.gc.ca">caseym@dfo-mpo.gc.ca</a>
Mr Greg Levonian	Canadian Hydrographic Service	615 Booth St. Ottawa, ON K1A 0E6 Canada	+1 (613) 996-2018	+1(613) 996-9053	<a href="mailto:levoniang@dfo-mpo.gc.ca">levoniang@dfo-mpo.gc.ca</a>
Mr Raj Alla	IIC Technologies Private Limited	6-3-250/2, Road No. 1 Banjara Hills Hyderabad - 500 034 INDIA	+91-40-335 4806	+91-40-335 6349	<a href="mailto:rajalla@iictechnologies.com">rajalla@iictechnologies.com</a>
Mr. Masato Kumada	Japan Radio Company Limited	1-1, Shimorenjaku 5-chome, Mitaka-shi, Tokyo 181-8510 Japan	+81-422-45-9881	+81-422-45-9922	<a href="mailto:j06573.kumada@ml.jrc.co.jp">j06573.kumada@ml.jrc.co.jp</a>
Mr Martin Taylor	Kelvin Hughes	New North Road, Hainault Ilford Essex IG 2UR United Kingdom	+44 208 500 1020	+44 208 559 8524	<a href="mailto:martin.s.taylor@kelvinhughes.co.uk">martin.s.taylor@kelvinhughes.co.uk</a>
Mr Michel Huet (alternate : Mr Anthony Pharaoh)	IHB	4, quai Antoine 1 <sup>er</sup> MC 98011 - Monaco Cedex Principality of Monaco	+377 93 10 81 04 (MH) +377 93 10 81 08 (AP)	+377 93 10 81 40 "	<a href="mailto:pac@ihb.mc">pac@ihb.mc</a> (MH) <a href="mailto:pad@ihb.mc">pad@ihb.mc</a> (AP)



--- Revised Draft (January 2002)---

**TERMS OF REFERENCE**

**for**

**IHO-IEC Harmonisation Group on Marine Information Objects (HGMIO)**

**1. Objective**

To harmonise the activities of the International Electrotechnical Commission (IEC) and International Hydrographic Organisation (IHO) related to Marine Information Objects (MIOs).

Definition:

MIOs consist of supplementary information to be used with an Electronic Chart Display and Information System (ECDIS) that are not Electronic Navigational Chart (ENC) objects or specified navigational elements or parameters. Supplementary means non-mandatory information that is in addition to those required by existing ECDIS-related standards and specifications. MIOs may be either chart- or operational-related, and often include a vertical or time dimension.

Some examples of MIOs include: Ice Information; Tides/Water Levels; Current Flow; Oceanographic; Meteorological; Marine Mammals; and Environmental Protection.

**2. Authority**

The IMO Performance Standards for ECDIS specify for:

a) Chart-related information:

- (i) the Electronic Navigational Chart (ENC) contains “*all the chart information necessary for safe navigation, and may contain supplementary information in addition to that contained in the paper chart (e.g., sailing directions) which may be considered necessary for safe navigation*” (Section 2.2).
- (ii) *The chart information to be used in ECDIS conforms to IHO S-57 standards* (Section 4.1).
- (iii) *IHO recommended colours and symbols (S-52) should be used to represent System ENC information* (Section 8.1).

b) Navigation-related information:

- (i) *Radar information or other navigational information may be added to the ECDIS display. However, it should not degrade the SENC information, and should be clearly distinguishable from the SENC information* (Section 6.1).
- (ii) *The colours and symbols other than those mentioned in 8.1 should be used to describe the navigational elements and parameters listed in Appendix 3 and published by IEC Publication 61174* (Section 8.2)

c) HGMIO reports to:

- (i) IHO Committee on Hydrographic Requirements for Information Systems (CHRIS).
- (ii) IEC Technical Committee No. 80 - Maritime Navigation and Radiocommunications Equipment and Systems (TC80)

- d) HGMIO maintains a functional working relationship with:
  - (i) IHO CHRIS/Transfer Standard Maintenance and Applications Development Activity Working Group (TSMAD)
  - (ii) IHO CHRIS/Colours and Symbols Maintenance WG (C&SMWG)
  - (iii) IEC TC80/Working Group 7 (ECDIS)
  - (iv) IEC TC80/Working Group 13 (Navigation Display)

### **3. Procedures**

The HGMIO should:

- a) Harmonize the activities of IHO and IEC related to the provision and display of supplemental chart- and navigation-related information on ECDIS.
- b) Conduct technical exchange on MIOs with type-approval authorities, ECDIS manufacturers and ECDIS user community.
- c) Liaise with other organizations, committees and working groups involved in ECDIS-related matters. This may include:
  - IMO/IHO Harmonization Group on ECDIS (HGE)
  - International Association of Lighthouse Authorities (IALA)
  - World Meteorological Organization (WMO)
  - North Atlantic Treaty Organization (NATO)
  - IHO Tidal Committee
- d) For IHO CHRIS:
  - 1) recommend new IHO S-57 objects to be added to Object Catalogue
  - 2) recommend new colours and symbols to be included in S-52 Appendix 2 (Colours and Symbols Specifications).
- e) For IEC TC80, recommend new navigation-related symbols to be incorporated into IEC 61174, Annex E or other IEC navigation related standards as appropriate.

### **4. Composition and chairmanship**

- a) HGMIO should be comprised of members or participants of standing IHO and IEC committees or working groups. The Chairman may also invite subject matter experts to participate as required.
- b) HGMIO should be chaired by an individual who is an active participant in both IHO CHRIS and IEC TC80.

### **5. Guiding Principles**

Overall, the role of HGMIO is to facilitate the development and implementation of Marine information Objects. To this end there are a number of guiding principles:

- a) The primary focus of developing specifications related to the use Marine Information Objects (MIOs) on ECDIS should be to supplement the minimum chart- and navigation-related information required for safety of navigation.
- b) The HGMIO should monitor other ECDIS-related developments and performance standards that may involve the display of additional navigation-related information. This would include IMO Performance Standards for other navigation systems, such as Automatic Identification Systems (AIS), VTS-related information proposed by IALA, and Displays for the Presentation of Navigation-Related Information by IEC.

- c) The HGMIO should monitor what is occurring related to ECDIS type-approval. This should include such matters as current exceptions granted and future regulations (e.g., carriage requirements).
  - d) Recommendations for MIOs should not be finalized without first conducting comprehensive testing and evaluation, validation by ECDIS manufacturers, and at-sea trials with mariners.
-



**MINISTÈRE DE LA DÉFENSE  
MARINE NATIONALE**

Paris, le 15 janvier 2002  
**N° 110 SHOM/EG/NP**  
NMR SITRAC : 54



SERVICE HYDROGRAPHIQUE ET  
Océanographique de la Marine

Bureau études générales

Dossier suivi par  
ICA Michel Le Gouic  
☎ : 01 44 38 41 54  
☎ PNIA : 829 933 75 24 154  
Fax : 01 40 65 99 98

Comité de direction  
du bureau hydrographique international  
BP 445  
MC 98011 MONACO Cédex  
Principauté de Monaco

Objet : Proposition des règles additionnelles aux principes de la WEND.

Référence(s) : XIIème réunion du comité CHRIS.

P. jointe(s) : 3 annexes.

Messieurs,

Les commentaires reçus de l'Australie, du Danemark, de l'Espagne, de la Finlande et de la Suède sur la proposition faite par la France de règles complémentaires aux principes de la WEND, ont été analysés. Ces commentaires sont résumés en annexes 2 et 3. Ils ont permis d'établir la version révisée des règles additionnelles présentée en annexe 1 et que j'ai l'honneur de vous soumettre.

L'Australie aurait souhaité intégrer les règles nouvelles dans les principes mêmes de la WEND. Il a semblé préférable de conserver la notion de règles complémentaires, qui pourront être plus rapidement adoptées, et qui pourront, après avoir été validées par l'usage, être éventuellement intégrées dans une version révisée des principes de la WEND.

.../...

---

Destinataire : BHI

Q:\asecretariat\eg2002\100\110\_wend.doc



SHOM 3 avenue Octave Gréard PARIS 7<sup>ème</sup> - PARIS BP5 00307  
ARMEES

Le Danemark aurait souhaité étendre le domaine d'application des règles complémentaires à certaines zones d'intérêt particulier des pays (extension de plateau continental, zones de pêche) : il a semblé préférable de continuer à s'appuyer sur la Convention des Nations Unies sur le Droit de la Mer et traiter d'eaux placées sous souveraineté nationale (ce qui exclut par exemple les extensions de plateau continental qui ne concernent que les fonds marins).

La nécessité de traiter spécifiquement les petites échelles est admise, mais il apparaît difficile de définir de façon rigide une échelle pivot pour le changement de règles. La règle 9 a donc été complétée par un commentaire indiquant le caractère indicatif de l'échelle limite retenue.

L'Australie craint une éventuelle mauvaise utilisation des cartes à petite échelle par des agrandissements trop importants : le risque est réel mais le résorber relève davantage de la formation des navigateurs que de la cartographie marine.

Enfin les parties traitant d'aspects financiers ont été réduites, la résolution technique A3.4 fournissant un cadre général satisfaisant pour leur prise en compte.

Veillez agréer, Messieurs, l'assurance de ma haute considération.

L'ingénieur en chef de l'armement Michel Le Gouic  
chef du bureau études générales

## Proposition révisée de règles additionnelles aux principes de la WEND

### Preamble

The setting-up of ENC's coverage in the different regions of the world requires a sharing of production responsibilities between the countries.

On this point, the WEND committee (Goa 1998) recommends, among other things :

1. a) *A Member State has responsibility for the preparation and provision of digital data and its subsequent updating for waters of national jurisdiction.*
1. d) *Responsibilities for providing digital data outside areas of national jurisdiction should be established.*
1. e) *The INT chart system is a useful basis for areal selection.*
2. e) *Neighbouring Member States are encouraged to cooperate in boundary areas.*
- h) *The development of overlapping data sets from different sources should be avoided if possible.*

Therefore, it is recommended that the countries share out the ENC's production according to the limits of their waters of national jurisdiction. The INT schemes can help in identifying the ENC's coverage that are to be carried out.

These recommendations aim at the attribution to a single country of the production of all the ENC's whatever their scales in a given geographical area. This principle is strongly supported by France for the large and medium scales ENC's (scale > 1 : 2 000 000 - see OHI M4 publication).

This principle permits :

- not to multiply the cartographic limits between the countries according to the ENC's scales and thus to clarify the responsibilities.
- to give the countries a more complete control of the nautical information management and of their means of provision (charts, ENC's and associated documents (Sailing Directions, ...)).
- to make the ENC's production areas meet with the basic responsibilities areas for the management of nautical information, hydrography and cartography.

On this last point, it must be underlined that the S-57 standard allows to avoid the paper chart constraints which force to attribute to a single country the complete cartographic responsibility of a rectangular area imposed by the paper chart format.

The principle of the attribution to a single country of the production of all the large and medium scales ENC's in a geographical area implies to propose some rules, especially to define the geographical areas of responsibility. An additional rule will also be proposed for the small scales ENC's.

In the following text, we call « ENC producing country » a country which is responsible for the production of ENC data sets and their associated updates. The term « waters of national jurisdiction » includes both the territorial sea and the EEZ. The term « International waters » represent the part of the ocean out of the « waters of national jurisdiction ».

### Proposed Rules

#### Rule N° 1 :

A single ENC producing country exists in a given area.

**Rule N° 2 :**

A country is normally the ENC producing country for waters within its national jurisdiction. Responsibility for the production of ENC can be delegated by the nation concerned to another country, which then becomes the producing country in the considered area.

**Rule N° 3 :**

When the limits of waters of national jurisdiction of two neighbouring countries are not established, producing countries will define an ENC production limit within a technical arrangement. This limit will be purely cartographic.

**Rule N° 4 :**

In the international waters, the ENC producing country is the country producer of the INT chart. When the offshore limits of the national jurisdiction waters are not established, rule n° 3 is applied. If necessary, the neighbouring producing countries in view of the present rule will set up an arrangement to define the common limit of ENC production in the paper INT charts overlapping area.

**Rule N° 5 :**

Rules N° 2 and N° 4 should be applied normally. If for particular reasons, the neighbouring producing countries may wish to define a purely cartographic ENC production limit although a limit of national jurisdiction already exists, and provided a technical arrangement has been concluded between producing countries, this cartographic limit becomes the ENC production limit between the neighbouring producing countries. Without any specific arrangement, Rules N° 2 and N° 4 are applied.

**Rule N° 6 :**

The purely cartographic limits have no influence on the possible establishment of a maritime boundary in the considered area.

*Comment : The cartographic limits should be as simple as possible. eg : succession of straight segments (in loxodromy) which may correspond to a meridian or a parallel, charts limits, ENC cells limits.*

**Rule N° 7 :**

When the production limits are the official limits for national jurisdiction waters, the commercial rights belong to the ENC producing country.

**Rule N° 8 :**

When the production limits are purely cartographic limits, the commercial rights belong to the ENC producing country but may possibly be accompanied with the payment of royalties to the other producing country.

**Rule 9 :**

At small scale (typically scale lesser than 1 : 2 000 000 : see also comment b), the ENC producing country is the country producer of the INT chart. Rules 1 to 8 do not applied. However, the neighbouring producing countries in view of the present rule will set up an arrangement to define the common limit of ENC production in the paper INT charts overlapping area.

*Comment :*

- a- *It is generally recommended that the commercial rights for the ENCs at these scale belong to the ENC producing country (no royalties retrocession).*
- b- *The limit scale of this rule may be greater in the case when, in a given area and at the compilation scale, the surfaces of the national jurisdiction waters are too small to avoid an important parcelling out between several producing countries, and only if all of these countries agree on that scale.*

Résumé des commentaires fournis par

I ) Rules for the large and medium scales ENC's (Scale>1 : 2 000 000).

---

**Rule N° 1 :**

**A single ENC producing country exists in a given area.**

---

**Commentaires**

**Danemark :** Rule no 1: "In a given area a single ENC producing country shall be selected."

**Australie :** voir annexe 3

---

**Rule N° 2 :**

**A country is normally the ENC producing country for waters within its national jurisdiction.**

**Responsibility for the production of ENC can be delegated to another country which then becomes the producing country in the considered area.**

---

**Commentaires**

**Suède :** Proposes on the second line after "...of ENC can be delegated" to insert "by the nation concerned"

**Danemark :** Proposes « A country is the ENC producing country for waters within its territorial sea and maritime zone. Responsibility for the production of an ENC covering a specific area can be delegated to another country, which then becomes the producing country of the considered area.

*Comment. The maritime zone may include a fishery zone, a continental shelf zone, an exclusive economic zone and a contiguous zone.*

**Australie :** voir annexe 3

---

**Rule N° 3 :**

**When the limits of waters of national jurisdiction of two neighbouring countries are not established, producing countries will define an ENC production limit within a technical arrangement. This limit will be purely cartographic.**

---

**Commentaires**

**Suède :** Propose that the last sentence . "This limit..." should be written in italic.

**Danemark :** « When the maritime boundaries of the territorial sea and the maritime zone between two neighboring countries are not established, these ...."»

**Australie :** voir annexe 3

---

**Rule N° 4 :**

**In the international waters, the ENC producing country is the country producer of the INT chart. When the offshore limits of the national jurisdiction waters are not established, rule n° 3 is applied. Possibly, the neighbouring producing countries in view of the present rule will set up an arrangement to define the common limit of ENC production in the paper charts overlapping area.**

---

### Commentaires

**Danemark :** In the international waters (outside the maritime zones), the ENC producing country is the country producer of the INT chart. When the offshore limits of the maritime zones are not established, rule no 3 is applied.

Comment. The neighbouring producing countries may in view of the present rule set up an arrangement to define the common limit of ENC production in the paper charts overlapping area.

**Australie :** voir annexe 3

---

#### Rule N° 5 :

**Rule N° 2 must be applied in priority. However, for particular reasons, one of the producing countries may wish to define a purely cartographic ENC production limit although a limit of national jurisdiction already exists. Provided an agreement is reached with the other producing country, this cartographic limit becomes the ENC production limit between the two producing countries. Without any specific arrangement, Rule N° 2 is applied.**

---

### Commentaires

**Espagne :** Rule N° 2 ~~must~~ *should* be applied ~~in priority~~ *normally*. However, for particular reasons, ~~one~~ ~~of~~ the producing countries may wish to define a purely cartographic ENC production limit although a limit of national jurisdiction already exists. Provided a technical arrangement is concluded ~~with the other country~~ *between the countries*, ...

**Danemark :** Rule no 2 must be applied in priority. If, for particular reasons one of the producing countries may wish to define a cartographic ENC production limit, although a boundary between the maritime zone exists, and provided a technical arrangement has been concluded with the other country, this limit becomes the ENC production limit between the two countries. Without any specific arrangement, rule no 2 is applied.

**Australie :** voir annexe 3

---

#### Rule N° 6 :

**The purely cartographic limits have no influence on the possible establishment of a maritime boundary in the considered area.**

**The cartographic limits should be as simple as possible. eg : succession of straight segments (in loxodromy) which may correspond to a meridian or a parallel, charts limits, ENC cells limits.**

---

### Commentaires

**Danemark :** The cartographic limits have no influence on a possible establishment of a maritime boundary in the considered area.

Comment. The cartographic limits shall be as simple as possible, e.g. succession of straight segments, which may correspond to a meridian or a parallel, chart limits or ENC cells limits.

**Australie :** voir annexe 3

---

#### Rule N° 7 :

**When the production limits are the official limits for national jurisdiction waters, the commercial rights belong to the ENC producing country.**

---

### Commentaires

**Danemark :** When the production limits are the official maritime boundary between two countries, the commercial rights belong to the ENC producing country.

**Australie :** voir annexe 3

---

#### Rule N° 8 :

**When the production limits are purely cartographic limits, the commercial rights belong to the ENC**

---

producing country but may be accompanied with the payment of royalties to the other producing country. These royalties are negotiated by the two countries and are the subject of an arrangement based on the rules usually applied for the paper nautical documents.

---

#### Commentaires

**Espagne :** ... usually applied for the paper nautical documents. *Could be arranged also a no-royalties retrocession.*

**Danemark :** When the production limits are cartographic limits, the commercial rights belong to the ENC producing country, but may be accompanied by payment of royalties to the other country.

Comment. These royalties are negotiated by the two countries and are the subject of an arrangement based on the rules usually applied for the paper nautical documents.

**Australie :** voir annexe 3

La règle est simplifiée pour ne pas donner trop d'importance aux royalties

---

## II) Rules for the small scales ENC's (Scale<=1 : 2 000 000).

### Rule N° 9

The ENC producing country is the country producer of the INT chart. However, the neighbouring producing countries in view of the present rule will set up an arrangement to define the common limit of ENC production in the paper charts overlapping area. *Moreover, it is generally recommended that the commercial rights for the ENC's at these scales belong to the ENC producing country (no royalties retrocession).*

The last sentence of this rule, which aims at simplifying the administrative management of the distribution still has to undergo an evaluation of the financial stakes. This evaluation could be lead, for instance, by the RENC-NE Marketing group. Besides, this evaluation may only be relevant for some sort of distribution (case of SOLAS ships stocking up from a RENC) and not for other (direct arrangement between a ENC's producing country and a private distributor). The sentence is written in italic to underline its exploratory character.

---

#### Commentaires

**Espagne :** ~~Rules for the small scales ENC's (Scale<=1:2000000).~~

### Rule N°9

~~At small scales, If, at the compilation scale, the surface of the national jurisdiction waters is usually too small to avoid an important parcelling near the coastal areas. The above rules do not apply. Here is the proposed rule: , then the ENC producing country is the country...~~

I think that it would be better to avoid all direct reference to scales, so we can list the 9 rules in a sequence.

**Suède :** Rules for the small scales ENC's is supported even when taking in consideration what Australia said during the CHRIS Meeting. It is necessary to have such rules to get the coverage of the more or less open seas. We hope that good seamanship will prevent the use of "overzoomed" ENC's.

**Danemark :** Rules for small scale ENC's (scale <= 1:2 000 000)

The ENC producing country is the country producer of the INT chart.

Comment. The neighbouring producing countries may in view of the present rule set up an arrangement to define the common limit of ENC production in the paper charts overlapping area.

It is generally recommended that the commercial rights for the ENC's at these scales belong to the ENC producing country (no royalties retrocession).

**Australie :** voir annexe 3

---

## ANNEXE III A LA LETTRE N° 110 SHOM/EG/NP DU 15 JANVIER 2002

Commentaires australiens

1. Australia has considered paper CHRIS13/4B submitted by France and offers the following comments.
2. France's proposal to provide better guidance for ENC production boundaries is very similar in intention to that proposed to the WEND Committee by Australia earlier this year. Unfortunately Australia's proposal was rejected almost unanimously by the Committee as being unnecessary.
3. Australia wishes to see guidelines that encourage M/S to coordinate worldwide ENC coverage. In particular, we are concerned to avoid the uncontrolled production of ENC's that cover environmentally sensitive or navigationally difficult national waters being sourced primarily from small-scale INT paper charts. Australia is not convinced that if such ENCs are produced, then the "overscale" warning in ECDIS is a sufficient safeguard or warning to the mariner in this regard.
4. We anticipate that unless M/S have a role in coordinating the production of "small scale" ENC coverage of their waters, then in the absence of published "large scale" ENCs, such "small scale ENCs will in fact be used by mariners. This is not in the interests of maritime or environmental safety. In Australia it is particularly relevant in the area of the Great Barrier Reef, where complete ENC coverage at an appropriate "large-scale" is some time away. There will be similar examples in many parts of the world where ENC production is slow, such as Africa, the South West Pacific, and the north American continent.
5. It therefore remains Australia's view that further guidance on ENC production boundaries would be useful. Accordingly, Australia supports France's objectives.
6. However, Australia considers that it would be better to incorporate any additional guidelines in the WEND principles themselves, rather than by establishing a supplementary set of "rules". This will avoid duplication and potential conflict or ambiguity. We note for example, that France Rule 1 is already covered by WEND Principle 2.9. Similarly, the first part of France Rule 2 is covered by WEND Principle 1.1.
7. Australia considers that further guidance on reimbursement and financial arrangements will only lead to confusion and controversy. Sufficient guidance is already provided by WEND Principles 7.1. and 7.2 together with IHO Technical Resolution A.3.4.
8. We agree it is worth stressing that any production boundaries that may be agreed between M/S should have NO effect on national boundaries (see France Rule 5). It is our view that such a statement would be best included in the WEND Principles as part of a revised Clause 1.5.
9. In view of the above statements, we have taken our original proposal to WEND/6 and incorporated the relevant parts of your proposed "rules".

The combined result is included at Annex in the hope that it may assist you in developing your proposal further.  
R.E. WARD

Annex:

**SUGGESTED AMENDMENT TO WEND PRINCIPLES**  
– by **Australia**  
**SPECIAL COMMITTEE ON WORLDWIDE ELECTRONIC NAVIGATIONAL**  
**CHART DATA BASE (WEND)**

**1. OWNERSHIP AND RESPONSIBILITY**

- 1.1 A Member State has responsibility for the preparation and provision of digital data and its subsequent updating for waters of national jurisdiction.
- 1.2 The Member State responsible for originating the data should validate it.
- 1.3 A Member State responsible for any subsequent integration of a country's data into a regional, or larger, data base is responsible for validating the results of that integration.
- 1.4 Responsibilities for providing digital data outside areas of national jurisdiction should be established.
- 1.5 *The INT chart system is a useful basis for areal selection. In order to avoid duplication of ENC coverage, delimitation of Member States' ENC production boundaries should be guided by the following:*
  1. *ENC production boundaries should be determined through bilateral negotiations between relevant Member States.*
  2. *The WEND principles should be used as a primary reference in any negotiations.*
  3. *ENC production boundaries may vary with different ENC usage codes.*
  4. *Proper account should be taken of source data ownership and copyright.*

*1. The boundaries of a Member State's existing national paper chart scheme should be taken as an initial basis for ENC production boundary negotiations.*

*2. For 1:3,500,000 or smaller scale INT paper charts, the producer nation shall be considered the owner or manager of the INT chart for the purposes of negotiations. The use of information from larger scale INT charts (>1:3,500,000 scale) should be agreed between relevant M/S on a bilateral basis.*

*5. ENC's covering international waterways may be maintained cooperatively.*

*6. Member States may provide ENC coverage for another Member State's waters by mutual agreement.*

*7. Production boundaries should be as simple as possible, for example using meridians and parallels, or established paper chart limits.*

*8. Any production boundaries that may be agreed between M/S shall be for cartographic purposes only and shall have NO influence on national boundaries, baselines or territorial claims.*

*9. Agreed ENC production boundaries should be reported to the IHB.*

1.6 Legal liability must be recognized by participants.

1.7 A register of agreed ENC production boundaries for each ENC Usage Code shall be maintained by the IHB.

## **2. COOPERATION AND COORDINATION**

2.1 In the interests .....

## **COPIES**

Copie(s) extérieure(s): EPSHOM

Copie(s) intérieure(s): Archives 1 et 2 - 7064