

IHB File No. S3/8151/CHRIS

16 May 2002

**CHRIS Letter No. 3/2002**

**To:** All CHRIS Members

**Subject:** 14<sup>th</sup> CHRIS Meeting, Shanghai, China, 15-17 August 2002

**Ref:** 1) CHRIS Letter 1/2002, dated 1<sup>st</sup> February 2002  
2) CHRIS Letter 2/2002, dated 6<sup>th</sup> May 2002

Dear Sir or Madam,

CHRIS Letter 2/2002 advised CHRIS Members that the IHB had requested the China MSA if it would be suitable to amend the dates of the 14<sup>th</sup> CHRIS Meeting to 15-17 August 2002 to facilitate the change in Directors at the IHB at the end of August. The new dates have now been confirmed by MSA and the 14<sup>th</sup> CHRIS Meeting will therefore take place in **Shanghai, China, on 15-17 August 2002**. Practical information in relation to the Meeting, e.g. on hotel reservations or meeting participants at Shanghai Airport, will soon be provided on a special web page that MSA is going to set up. The IHB is grateful to the MSA for their efforts and assistance.

Annex J of the draft Minutes of CHRIS/13 (Attachment I to CHRIS Letter 2/2002) listed the actions resulting from that meeting. The current status of these actions appears in Annex A. While most of them were for the IHB and have already been completed, some actions are still outstanding. These will be attended to as soon as possible.

A draft agenda for CHRIS/14 is attached as Annex B. You are kindly requested to review the agenda and to provide your comments **not later than 30 June 2002**. Chairmen of WGs and those Members who intend submitting supporting documentation for particular agenda items, are requested to provide the IHB ([pac@ihb.mc](mailto:pac@ihb.mc)) with their reports/papers **before 15 July 2002** (one month before the Meeting). In order to facilitate this process, expected documents for each agenda item and names of authors are tentatively provided. Brief update reports on National ENC production and development from HOs' representatives to CHRIS would also be appreciated (in relation to IHB CL 31/2001).

One of the actions resulting from CHRIS/13 was that a proposal be submitted to the 16<sup>th</sup> IH Conference, so as to make the IHO Chart Standardization Committee (CSC) a working group of CHRIS. This was done by CSC, with the support of CHRIS, and the Conference adopted the proposal. Draft Terms of Reference for the new

CHRIS/ Chart Standardization and Paper Chart WG (CSPCWG) have been prepared by the CSC Secretariat. They are provided in Annex C for your consideration. Resulting changes to CHRIS ToR have also been proposed by the CSC Secretariat, as in Annex D. Comments on both Annexes C and D are requested **before 30 June 2002**. Revised ToR will then be prepared in view of their consideration by CHRIS/14.

CHRIS Letter 1/2002 reported on follow-up actions taken as a result of CHRIS/13 decisions in relation to ENC Security Scheme, IHO-IEC Harmonization Group on Marine Information Objects (HGMIO) and Amendments to the WEND Principles (French Proposal). The current status on these three particular topics is as follows:

- ENC Security Scheme. Comments were expressed by Canada, Chile, Greece, Norway and UK and a new version of the “Plan to develop an IHO Security Standard” was prepared, accordingly, by PRIMAR (Mr Robert SANDVIK). This plan is attached as Annex F. A CHRIS “Data Protection Scheme Advisory Group” (DPSAG) has now been formed and its composition is at Appendix 2 of Annex E. It includes IHO and Industry representatives. DSAG members have planned to meet in Stavanger, Norway, on 21-23 May, then again on 26 June at the IHB.
- IHO-IEC Harmonization Group on Marine Information Objects (HGMIO). Comments on the draft ToR for HGMIO were expressed by UK. Consequently, the Chairman of HGMIO (Dr Lee ALEXANDER) prepared slightly revised ToR, which are attached as Annex E, for your information. As there were no objections following CHRIS Letter 1/2002, the attached ToR are considered as having been adopted by CHRIS.
- Amendments to the WEND Principles (French Proposal). The French proposal to amend the WEND Principles regarding the production of ENCs has been forwarded to WEND Members by WEND Letter 1/2002.

On behalf of the Directing Committee  
Yours sincerely,

  
Rear Admiral Neil GUY  
Director

Encls: Six (6) Annexes

**ACTIONS LIST FROM CHRIS/13**  
(Status as of May 2002)

ITEM	THEME	ACTION(S)	STATUS
4.	WEND Principles	<ul style="list-style-type: none"> <li>• <b>CHRIS/13 participants</b> to send their comments to the IHB by end September 2001.</li> <li>• <b>IHB</b> to provide France with all comments received.</li> <li>• <b>France</b> to revise their proposal and send it to the IHB.</li> <li>• <b>IHB</b> to send the revised French proposal to WEND Members.</li> </ul>	<ul style="list-style-type: none"> <li>• Done</li> <li>• Done</li> <li>• Done</li> <li>• Done (WEND Letter 1/2002)</li> </ul>
6.	ECS	<ul style="list-style-type: none"> <li>• <b>IHB</b> to inform by CL Member States on ECS Developments.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHB CL 49/2001)</li> </ul>
7.	SENC Delivery	<ul style="list-style-type: none"> <li>• <b>IHB</b> to issue a CL to ask MS to vote on the proposed changes to S-52 and new TR A 3.11.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHB CLs 50/2001, 60/2001 and 11/2002 – IHC/16 Decision)</li> </ul>
8.	ENC Security Scheme	<ul style="list-style-type: none"> <li>• <b>PRIMAR</b>, as Leader of the Advisory Group, to report back to the IHB by end of 2001 with a recommended course of action.</li> <li>• <b>IHB</b> to circulate the recommendations and seek endorsement and further action as appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Done</li> <li>• Done (CHRIS Letter 1/2002)</li> </ul>
9.	IHO Test Data Sets for IEC 61174	<ul style="list-style-type: none"> <li>• <b>UK</b> to complete the IHO Test Data Sets for ENC and RNC (HCRF format).</li> <li>• <b>USA-NOAA</b> to complete the IHO Test Data Set for RNC (BSB format).</li> <li>• <b>IHB</b> to advertise the IHO Test Data Sets on the IHO Website, when they are ready, and to produce S-52 Appendix 4.</li> </ul>	<ul style="list-style-type: none"> <li>• Done</li> <li>• Done</li> <li>• Done (IHO Website) - S-52 Ap.4 in progress</li> </ul>
12.	OEF	<ul style="list-style-type: none"> <li>• <b>CHRIS WGs' Chairmen</b> to make use of the OEF as far as possible, by establishing relevant discussion groups to progress their work and nominating appropriate leaders.</li> <li>• <b>IHB</b> to contact the CSC Chairman, with a view to possibly establishing a CSC discussion forum on the OEF.</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• In progress</li> </ul>
13.	Marine Industry Workshops	<ul style="list-style-type: none"> <li>• <b>IHB</b> to finalize and distribute the Proceedings of the 2001 Marine Industry Workshop.</li> <li>• <b>IHB</b> to advise of the dates for the 2002 Workshop.</li> </ul>	<ul style="list-style-type: none"> <li>• In progress</li> <li>• Done (IHB CL 13/2002)</li> </ul>

14.1	TSMAD	<ul style="list-style-type: none"> <li>• <b>CHRIS WG's Chairmen</b> to refer to the agreed Principles and Procedures, as in Annex H, when updating IHO Standards.</li> <li>• <b>IHB</b> to circulate the Proposal to other IHO Committees and WG's.</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> <li>• In progress</li> </ul>
14.2	C&SMWG	<ul style="list-style-type: none"> <li>• <b>IHB</b> to encourage MS to directly support C&amp;SMWG, particularly by providing office bearers.</li> <li>• <b>IHB</b> to investigate all the options open to the IHO to fund the work of the C&amp;SMWG.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHC/16 Decision)</li> <li>• In progress</li> </ul>
14.4	SNPWG	<ul style="list-style-type: none"> <li>• <b>IHB</b> to seek MS approval of the proposed amendments to TRs.</li> <li>• <b>IHB</b> to invite MS to consider participation in the SNPWG and nominate appropriate representatives who are able to contribute to NP3 issues.</li> <li>• <b>IHB</b> to request existing SNPWG members to confirm their continuing participation in the WG.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHC/16 Decision)</li> <li>• Done (IHB CL 49/2001)</li> <li>• In progress</li> </ul>
15.1	CSC	<ul style="list-style-type: none"> <li>• <b>CSC</b> to make a proposal to the 16<sup>th</sup> IHC, for CSC to become a WG of CHRIS.</li> <li>• <b>CSC</b> to prepare ToR for the new WG, for consideration by both CSC and CHRIS.</li> <li>• <b>IHB</b> to prepare revised ToR for CHRIS, for consideration by CHRIS, then MS.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHC/16 Decision)</li> <li>• Done (CHRIS Letter 3/2002)</li> <li>• Done (CHRIS Letter 3/2002)</li> </ul>
16.6	Inland ECDIS	<ul style="list-style-type: none"> <li>• <b>IHB</b> to inform Member States, by CL, on Inland ECDIS Developments.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHB CL 49/2001)</li> </ul>
17	RNC	<ul style="list-style-type: none"> <li>• <b>IHB</b> to remove the item "Raster Data Development" from the agendas of future CHRIS Meetings.</li> </ul>	<ul style="list-style-type: none"> <li>• Done</li> </ul>
18	MIO	<ul style="list-style-type: none"> <li>• <b>IHB</b> to ask for nomination to HGMIO by CL.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHB CL 49/2001)</li> </ul>
20.3	SOLAS V	<ul style="list-style-type: none"> <li>• <b>IHB</b> to draw MS' attention, by CL, on the implications of the revised SOLAS V Convention coming into force in July 2002.</li> </ul>	<ul style="list-style-type: none"> <li>• Done (IHB CL 49/2001)</li> </ul>

14<sup>th</sup> CHRIS Meeting, Shanghai, China, 15-17 August 2002

DRAFT AGENDA (May 2002)

1. Opening and Administrative Arrangements  
*Docs: CHRIS/14/1A List of Documents (IHB)*  
*CHRIS/14/1B List of participants (IHB)*  
*CHRIS/14/1C Membership of CHRIS and related WGs (IHB)*  
*CHRIS/14/1D CHRIS Membership (IHB)*
2. Approval of Agenda  
*Doc: CHRIS/14/2A Agenda (IHB)*
3. Matters arising from Minutes of 12<sup>th</sup> CHRIS Meeting  
*Docs: CHRIS/14/3A Minutes of CHRIS/13 (IHB)*  
*CHRIS/14/3B Status of Actions List from CHRIS/13 (IHB)*  
*CHRIS/14/3C Terms of Reference for CHRIS Committee and related Working Groups (IHB)*
4. Report on the “WEND Study”  
*Doc: CHRIS/14/4A Report on the “WEND Study” (IHB and Portugal)*
5. Report on MSC 74 and NAV 48  
*Doc: CHRIS/14/5A Report on MSC74 and NAV48 (IHB)*
6. Reports by CHRIS Working Groups
  - 6.1 Transfer Standard Maintenance and Application Development (TSMAD)  
*Doc: CHRIS/14/6.1A Report on TSMAD Activities (C. Drinkwater)*
  - 6.2 Colour and Symbol Maintenance (C&SMWG)  
*Doc: CHRIS/14/6.2A Report on C&SMWG Activities (M. Jonas)*
  - 6.3 Technology Assessment (TAWG)  
*Doc: CHRIS/14/6.3A Report on TAWG Activities (M. Casey)*
  - 6.4 Standardization of Nautical Publications (SNPWG)  
*Doc: CHRIS/14/6.4A Report on SNPWG Activities (IHB)*
  - 6.5 Chart Standardization and Paper Chart (CSPCWG)  
*Doc: CHRIS/14/6.5A Report on CSPCWG Activities (P. Cox)*
7. ENC Security Scheme  
*Docs: CHRIS/14/7A Report on Activities of the CHRIS Data Protection Scheme Advisory Group (DPSAG) (R. Sandvik)*
8. Liaison with Industry  
*Doc: CHRIS/14/8A Report on the June 2002 Marine Industry Workshop (IHB)*
9. Status of IEC 61174 and IEC 62288  
*Docs: CHRIS/14/9A Report on IHO ENC and RNC Test Data Sets (IHB)*  
*CHRIS/14/9B Report on IEC/TC80/WG 7 Activities in relation to CHRIS (D. Mades)*  
*CHRIS/14/9C Report on IEC/TC80/WG13 Activities in relation to CHRIS (L. Alexander)*

10. Vector Data Development
  - 10.1 RENCs
 

Docs: *CHRIS/14/10.1A* *PRIMAR Stavanger Report to CHRIS (R. Sandvik)*  
*CHRIS/14/10.1B* *ICE Report to CHRIS (P. Wainwright)*  
*CHRIS/14/10.1C* *MBS Virtual RENC Report to CHRIS (R. La Pira)*
  - 10.2 ENC Development
 

Doc: *CHRIS/14/10.2A* *Report on ENC Development (IHB)*
  - 10.3 DNC Development
 

Doc: *CHRIS/14/10.3A* *Report on DNC Development at US-NIMA (C. Andreasen)*
  - 10.4 Inland ECDIS
 

Docs: *CHRIS/14/10.4A* *Report on Inland ECDIS Development in Europe (M. Jonas)*  
*CHRIS/14/10.4B* *Report on Inland ECDIS Development in North America (L. Alexander)*
11. Marine Information Objects (MOI)
 

Docs: *CHRIS/14/11A* *Report on HGMIO Activities (L. Alexander)*
12. Projects of interest to CHRIS (e.g. SHARED or CGMECIP)
 

Docs: *CHRIS/14/12A* *Report on the SHARED Project in Southeast Asia (Singapore)*  
*CHRIS/14/12B* *Report on the CGMECIP Project in the Caribbean Area (L. Alexander)*
13. Conferences of interest to CHRIS
 

Docs: *CHRIS/14/13A* *Report on GEOMATICA 2002, Cuba, Feb. 2002 (IHB)*  
*CHRIS/14/13B* *Report on CIRM Conference, Italy, May 2002 (IHB)*  
*CHRIS/14/13C* *Report on MEH Conference, Indonesia, May 2002 (IHB)*
14. Open ECDIS Forum
 

Doc: *CHRIS/14/14A* *Report on OEF Activities (L. Alexander)*
15. Liaison with other Groups
  - 15.1 ISO/TC211 (Geographic Information/Geomatics)
 

Doc: *CHRIS/14/15.1A* *Report on TC211 Activities in relation to CHRIS (T. Pharaoh)*
  - 15.2 ICA Commission on Spatial Data Standards
 

Doc: *CHRIS/14/15.2A* *Report on Activities of ICA Spatial Standards Commission (M. Huet)*
  - 15.3 Other groups, e.g. IMO, IALA
 

Doc: *CHRIS/14/15.3A* *Relations with International Organizations (IHB)*
16. ECS Developments
 

Docs: *CHRIS/14/16A* *Draft ECS Data Standard – ISO 19379 (M. Rogoff)*  
*CHRIS/14/16B* *Draft ECS Equipment Standard – RTCM (F. Ganjon)*
17. Status of IHO Publications on ECDIS
 

Doc: *CHRIS/14/17A* *IHO Publications on ECDIS (M. Huet)*
18. Any Other Business
 

Docs: *CHRIS/14/18A* *Electronic Commerce for Nautical Charts (D. Enabnit)*  
*CHRIS/14/18B* *Print on Demand (D. Enabnit)*
19. Date and Location of Next Meeting

## CHART STANDARDIZATION AND PAPER CHART WORKING GROUP (CSPCWG)

### Preliminary Remarks by Dr Peter Cox, Chairman of CSC

The following Draft Terms of Reference for the new Chart Standardization and Paper Chart Working Group of CHRIS have been developed by the CSC Secretariat. It has not been possible to discuss the specific details of this draft with CSC members owing to other, more pressing, CSC work. The draft is provided simply to indicate the scope envisaged for the new Working Group.

The draft Terms of Reference are based on the existing CSC Terms of Reference, developed by the CSC, circulated to IHO Member States for comment by IHO Circular Letter 15/1997, and announced as adopted by IHO Circular Letter 14/1998. That revision was to reflect Decision No 1 of XV<sup>th</sup> IHC.

The CHRIS Committee will need to decide whether the new Working Group should provide advice directly to the IHB or through the CHRIS Chairman.

The style and detailed content of the draft Terms of Reference can be adjusted to reflect the outcome of all relevant discussions at XVI<sup>th</sup> IHC. They currently reflect the style of the existing CSC Terms of Reference [IHO CL 57/1997] rather than that of the Terms of Reference of CHRIS and its Working Groups as discussed at 13<sup>th</sup> CHRIS.

### DRAFT TERMS OF REFERENCE FOR CSPCWG

#### Membership:

Membership of the Chart Standardization and Paper Chart Working Group (CSPCWG) is open to all Member States wishing to be represented, by request to the Directing Committee of the International Hydrographic Bureau (IHB). Normally there should be one representative from each Member State. The Chairman will monitor membership to ensure that each regional hydrographic commission is represented on the CSPCWG. He will inform the Directing Committee of the IHB if, at any time, a regional commission is not represented.

#### Organization:

1. A Chairman and Vice-Chairman of the CSPCWG will be appointed from participant Member States of the CSPCWG. They will be determined by the CSPCWG, from amongst its members, by election conducted by the CSPCWG Chairman.
2. The previous Chairman and Vice-Chairman will discuss and decide between themselves the organization of the work entailed in these posts.
3. A Secretary will be appointed from within the organization of the Chairman of the CSPCWG to ensure the smooth running of business, and to administer consultation and collation of members' views. The Secretary will not be a member of the Working Group.
4. The CSPCWG conducts its business mainly by correspondence but holding meetings at least every two years.

\* Length of tenure of Chairmanship and Vice-Chairmanship is governed by TR T1.1.

#### Objectives:

The CSPCWG, and the publications for which it is responsible, provides a core of expertise on the basic concepts of charting. Whatever physical form the chart or publications may take, the fundamental concepts and elements of marine cartography remain the same.

**Tasks:**

Specifically, the IHO Chart Standardization and Paper Chart Working Group (CSPCWG) shall:

**Chart Specifications of the IHO**

M-4 Part B provides an internationally-agreed product specification for both national and international (INT) charts at medium- and large-scale. The role of M-4 Part B is twofold, in that it provides:

- a. an explanation of the general concepts and rationale behind the portrayal of features on charts, much of which is relevant to both digital [ie electronic] and analogue [ie paper] charts.
- b. specific guidance for paper charts, including the use of text and symbology.

Specific guidance for digital (vector) charts is provided by S-52 and S-57; specific guidance for digital (raster) charts is provided by S-61. All make full use of the background material contained in M-4 and include cross references where appropriate. Duplication of information is thus (rightly) avoided.

1. Keep under continuous review in all respects the “Chart Specifications of the IHO”, in order to advise the IHB on their updating, including future design and format.

\* Maintain INT 1, INT 2, INT 3 and their relations to Annex D of S-57 Appendix B.1.

2. Advise the IHB on suggestions, put forward by Member States, to update the “Chart Specifications of the IHO”, with the goal of achieving the maximum possible adherence by Member States to the Specifications.

**Regulations of the IHO for International (INT) Charts**

3. Keep under continuous review in all respects the “Regulations of the IHO for International (INT) Charts” in order to advise the IHB on their updating.

4. Advise the IHB on suggestions, put forward by Member States, to update the “Regulations of the IHO for International (INT) Charts”.

**International (INT) Chart Scheming**

5. Advise the IHB, as appropriate, in the setting-up of regional hydrographic commissions or working groups in order to accelerate the production of large- and medium-scale international (INT) charts.

6. Offer advice on chart schemes and cartographic work of such commissions or groups, in order to ensure homogeneity and so that these commissions might take advantage of its experience.

Note: With regard to 5 and 6, the role of the CSPCWG vis-a-vis the regional commissions and groups is purely of a consultative nature.

**Guidelines for Regional Coordinators of International (INT) Chart Schemes**

7. Keep under continuous review the “Guidelines for Regional Coordinators of International (INT) Chart Schemes” in order to advise the IHB on their updating.

\* Complete the inclusion of the Guidance in M-11 in accordance with IHO Work Programme.

**Liaison with other IHO bodies**

8. Maintain close liaison with other CHRIS Working Groups and other international and IHO bodies, as appropriate.

**Reports of activities**

9. Report progress to meetings of CHRIS and its Working Groups, and to Member States through the CHRIS report in the Annual Report of the IHB, and by means of a report to each ordinary session of the IH Conference.



**COMMITTEE ON HYDROGRAPHIC REQUIREMENTS FOR INFORMATION SYSTEMS  
(CHRIS)**

**Proposed Revised Terms of Reference**

*(As a result of IHC/16 Decision to make CSC a WG of CHRIS – Changes, in blue, suggested by CSC Secretariat)*

Considering the need to promote and coordinate the development of official digital products and services to meet the requirements of mariners, the International Hydrographic Organization establishes a Committee on Hydrographic Requirements for Information Systems (CHRIS) with the following Terms of Reference and Rules of Procedure:

**2. Terms of Reference**

- 2.1 To monitor the requirements of mariners associated with development and use of paper hydrographic products and 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.
- 2.2 To study and propose methods and minimum standards for the development and provision of official digital hydrographic data, nautical products and other related services.
- 1.3 To prepare and maintain publications to describe and promote the Committee's recommended methods and standards adopted by the International Hydrographic Organization, and advise national hydrographic offices about implementation procedures as required by those offices.
- 1.4 To consider alternative procedures for the timely production of standards, for example using external expertise when necessary.
- 1.5 To establish and maintain contact with other relevant IHO bodies, such as the Committee on WEND, the Legal Advisory Committee, the IHO WG on Copyright, etc.
- 1.6 To liaise with other relevant international organizations.

**2. Rules of Procedure**

- 2.1 The Committee is composed of Representatives of Member States and a representative of the International Hydrographic Bureau.
- 2.2 Member State Representatives, or the Committee as a whole, may invite Observers to Committee Meetings.
- 2.3 Meetings shall be held at least once a year. The venue and date will be announced at least three months in advance.
- 2.4 The Committee Members will elect the Chairman of the Committee at its first meeting following each International Hydrographic Conference.
- 2.5 The Committee will progress its work primarily through Working Groups, each of which will address specific tasks. Working Groups will operate by correspondence to the maximum extent practicable.
- 2.6 Recommendations of the Committee will be submitted to the IHO Member States for adoption through the Directing Committee.

**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 currently, 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 navigation-related.

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

**2. Authority**

2.1 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)

2.2 HGMIO is a subsidiary of two committees:

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

### 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) Maintain a functional working relationship with:
  - (i) IHO CHRIS/Transfer Standard Maintenance and Applications Development WG (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)
- d) 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) When instructed by IHO CHRIS, recommend appropriate changes or additions to:
  - 1) IHO S-57
  - 2) IHO S-52, Appendix 2
- e) When instructed by IEC TC80, recommend new navigation-related symbols to be incorporated into:
  - 1) IEC 61174, Annex E (Navigational Symbols for ECDIS)
  - 2) IEC 62288 (Presentation of Navigation-related Information)

### 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.

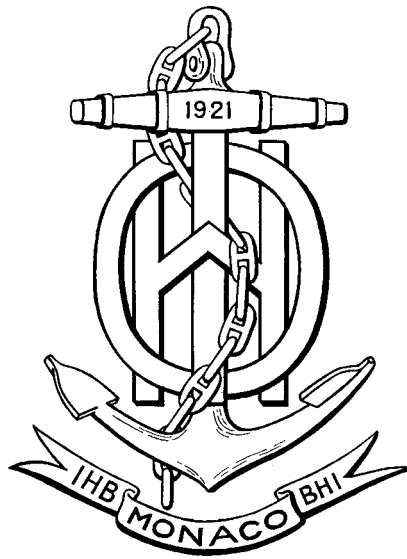
### 5. Guiding Principles

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.
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# Plan to Develop IHO Security Standard



Version 1.2

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## **1 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.

### **1.1 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

### **1.2 Change Control**

#### **1.2.1 Changes from version 1.0 to 1.1**

1. Added chapter 1.2 to maintain change history
2. Added Mr Chris Howlett to list of participants in Appendix 2

#### **1.2.2 Changes from version 1.1 to 1.2**

1. Updated list of participants

## **2. 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.

### **2.1 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

### **2.2 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.

### **2.3 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.

#### **2.3.1 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.

#### **2.3.2 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 fro changes will be defines and used as basis for writing the IHO Security Documentation.

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

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

#### **2.3.4 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.

### **2.3.5 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.

## **3. 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>	22 d	01.02.02	01.03.02																								
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>	50 d	12.02.02	18.04.02																								
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>	13 d	22.03.02	09.04.02																								
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>	80 d	05.04.02	18.07.02																								
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>	22 d	19.07.02	16.08.02																								
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>	15 d	16.08.02	05.09.02																								
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>	65 d	05.09.02	29.11.02																								
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**

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