

**9th CHRIS MEETING
IHB, Monaco, 12-14 November 1997**

**TERMS OF REFERENCE FOR CHRIS COMMITTEE
and Related Working Groups**

I. COMMITTEE ON HYDROGRAPHIC REQUIREMENTS FOR INFORMATION SYSTEMS (CHRIS)

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 :

1. Terms of Reference

1.1 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.

1.2 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.

II. TRANSFER STANDARD MAINTENANCE AND APPLICATIONS DEVELOPMENT W.G. (TSMAD)

1. Objective

- a) To maintain, develop and extend the IHO transfer standard for digital hydrographic data (Special Publication S-57), including development and maintenance of relevant application profiles;
- b) To monitor the development of other related international standards.

2. Authority

The Working Group is a subsidiary of CHRIS and its membership and decisions are subject to CHRIS approval.

3. Procedures

- a) The WG should:
 - (i) maintain S-57 by preparing and promulgating maintenance documents containing clarifications, corrections and extensions when required;
 - (ii) review relevant international standards and specifications and advise CHRIS accordingly;
 - (iii) consider new topics as instructed by CHRIS and advise CHRIS accordingly and/or draft the relevant extension documents;
 - (iv) draft new editions of S-57 as instructed by CHRIS.
- b) The WG should work by correspondence, group meetings, workshops or symposia. Permanent or temporary sub-working groups may be created by the WG to undertake detailed work on specific topics such as: S-57 maintenance, product specification, tidal information, survey information, etc.. The WG should meet at least once a year.
- c) The WG should liaise with other CHRIS WG's and other IHO and international bodies as appropriate and as instructed by CHRIS.

4. Composition and chairmanship

- a) Membership is limited to IHO Member States. Other participants may be invited to meetings by the Chairman or members of the WG. Members are to inform the WG Secretary or Chairman, in advance, of their intention to attend WG meetings, and of any participants that they have invited.
- b) The WG should be chaired by an IHO representative.

III. COLOURS AND SYMBOLS MAINTENANCE W.G. (C&SMWG)

1. Objective

To maintain IHO specifications for colours, symbols and display rules used to show SENC information on ECDIS in a safe and ergonomic manner.

2. Authority

This WG is a subsidiary of the Committee on Hydrographic Requirements for Information Systems (CHRIS). Its membership and decisions are subject to CHRIS approval.

3. Procedures

- a) The WG should:
 - (i) Maintain Appendix 2 of IHO Special Publication S-52 and its accompanying Presentation Library, by preparing and promulgating maintenance documents when required.
 - (ii) Monitor the operational performance and development of IHO specifications, progress in display technology, and human perception analysis.
 - (iii) Coordinate technical exchange between C&SMWG, type-approval authorities, ECDIS manufacturers and ECDIS user community.
 - (iv) Consider new topics and other applications affecting electronic chart display, and/or draft the relevant extension documents.
 - (v) Propose new topics and other applications for consideration by CHRIS.
 - (vi) Draft new editions of S-52 Appendix 2 as instructed by CHRIS.
 - (vii) Provide and maintain a framework for display of SENC information that is feasible and practicable within available technology.
 - (viii) Provide guidance to ECDIS manufacturers in terms of C&S presentation.
 - (ix) Identify basic scientific fundamentals related to colours and symbolization.
- b) The WG should work by correspondence, group meetings, workshops or symposia. The WG should meet at least once every two years.
- c) The WG should liaise and harmonize with other ECDIS-related bodies as appropriate

(e.g., TSMAD, IEC, IMO/IHO HGE, IALA, WMO, IACS, NATO, etc.).

d) The WG should identify a work programme for each year, including expected time frame.

4. Composition and chairmanship

a) Membership is open to IHO Member States. External experts, e.g. from the Industry, Academia, or ECDIS user groups, should be invited by the Chairman, members of the WG, or the IHB. Attendees are to inform the WG Secretary or Chairman of their intention to attend, and of any participants they have invited.

b) The WG should be chaired by an IHO representative.

5. Guiding Principles

a) The primary focus of the C&S specification should be on matters pertaining to safety of navigation (e.g., SENC display in Route Monitoring mode).

b) There is a distinction between immediate amendments and long-term revisions. Immediate amendments should be limited to safety-related matters.

c) The WG should consider what is happening related to ECDIS type-approval. This should include such matters as current exceptions granted and future regulations (e.g., carriage requirements).

d) New specifications should not be adopted without first conducting comprehensive testing and validation by manufacturers, and at-sea trials with mariners.

IV. TECHNOLOGY ASSESSMENT W.G. (TAWG)

1. Objective

To assess the potential of present and developing information technology with respect to applications within the scope of CHRIS, and advise CHRIS accordingly.

2. Authority

This Working Group is a subsidiary of CHRIS and its membership and decisions are subject to CHRIS approval.

3. Procedures

a) The WG should establish time-limited project groups (PGs) on specific subjects or topics agreed upon by CHRIS;

b) Membership of the PGs should be composed of experts from HOs, industry, and other qualified bodies, as appropriate;

c) The WG and PGs will work by meetings, symposia, workshops and correspondence. No funds from the IHB will be used without prior specific approval by Member States;

d) The WG and PGs will liaise with other IHO WGs as appropriate;

- e) The WG will provide advice to CHRIS through project reports.

4. Composition and Chairmanship

- a) Membership is normally limited to IHO Member States. Other participants may be invited to meetings by the Chairman or members of the WG. Attendees are to inform the WG Secretary or Chairman, in advance, of their intention to attend WG meetings.
- b) The WG should be chaired by an IHO representative.
- c) Project leadership should be held by an IHO representative of the WG;
- d) The WG chair shall:
 - provide overall supervision and coordination of PGs;
 - monitor progress of projects;

V. STANDARDISATION OF NAUTICAL PUBLICATIONS W.G. (SNPWG)

1. Objective

To develop guidelines for the preparation of nautical publications, primarily in a digital format compatible with ECDIS and secondly in paper and digital formats, as stand-alone publications.

2. Definition

Nautical Publication. An authorised product, to be used in conjunction with a chart, and which contains nautical information supplementing that shown on the chart. Nautical publications include but are not limited to, Sailing Directions, Lists of Lights, Tide Tables and Lists of Radio Signals. They can be made available in a paper or a digital format.

3. Authority

This Working Group (WG) is a subsidiary of the Committee on Hydrographic Requirements for Information Systems (CHRIS) and its membership and decisions are subject to CHRIS approval.

4. Procedures

- a) The WG should:
 - (i) Review the requirements of international shipping for nautical paper and digital publications.
 - (ii) Review existing publications intended for international shipping.
 - (iii) Review the existing IHO technical resolutions, guidelines, specifications and standards which relate to nautical publications, initially focusing on Sailing Directions.

- (iv) Investigate restructuring the format and content of nautical publications in order to optimize their reproduction in digital and paper formats, and to facilitate their integration with information systems such as ECDIS. Initial focus should be given to Sailing Directions, to define: 1) the minimum content of digital Sailing Directions compatible with ECDIS, and 2) the minimum common content of both digital and paper Sailing Directions, as stand alone documents.
 - (v) Draft guidance document(s) and/or revised technical resolutions, as instructed by CHRIS.
 - (vi) Investigate the production of specifications for International (INT) nautical publications (e.g. Sailing Directions, List of Lights and Radio Signals).
- b) The WG should work primarily by correspondence. The WG should attempt to meet at least once every two years, normally in connection with another convenient IHO forum.
- c) The WG should liaise with other CHRIS WG's and other IHO and international bodies as appropriate and as instructed by CHRIS.

5. Composition and chairmanship

- a) Membership is normally limited to IHO Member States. External experts, e.g. from the Industry, may be invited to meetings by the Chairman, members of the WG, or the IHB. Attendees are to inform the WG Secretary or Chairman, in advance, of their intention to attend WG meetings, and of any participants that they have invited.
- b) The WG should be chaired by an IHO representative. The Chairman and the Vice-Chairman should be chosen by the WG for a period of three years.

VI. DATA QUALITY W.G. (DQWG) [*currently dormant*]

1. Objective

To develop appropriate methods of classifying and depicting the quality of digital hydrographic information.

2. Authority

The Working Group (WG) is a subsidiary of CHRIS and its membership and decisions are subject to the Committee on Hydrographic Requirements for Information Systems (CHRIS) approval.

3. Procedures

- a. The WG should:
- (i) monitor and develop the further use of quality indicators for hydrographic information;
 - (ii) propose methods for the depiction of quality indicators, such as Zones of Confidence (ZOC), on electronic displays;

- (iii) develop guidance for the implementation of ZOC, covering the education of both the mariner and the cartographer, including the development of documentation and appropriate software;
- (iv) propose relevant amendments and enhancements for incorporation in S-57 Edition 4;
- (v) provide to the relevant IHO Bodies information on the potential use of ZOC in non electronic media (for example, paper charts); and
- (vi) propose new data quality topics and other applications for consideration by CHRIS.

b. The WG should work primarily by correspondence. The WG should attempt to meet at least every two years, normally in connection with another convenient IHO forum.

c. The WG should liaise with other CHRIS WG□s and other IHO and international bodies as appropriate and as instructed by CHRIS.

4. Composition and Chairmanship

a. Membership is limited to IHO Member States. Other participants may be invited to meetings by the Chairman or members of the WG. Members are to inform the WG Secretary or Chairman, in advance, of their intention to attend WG meetings, and of any participants that they have invited.

b. The WG should be chaired by an IHO representative.
