20th CHRIS MEETING
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Paper for Consideration by CHRIS

Role and Future of HGMIO

Submitted by:	IHB, Chair HGMIO
Executive Summary:	This paper describes how HGMIO is now a de facto WG of HSSC, and considers its current and future role. It is recommended that HGMIO WG be retired, and its liaison function replaced by an HSSC Outreach Panel.
Related Documents:	CHRIS20-07.1A – *Report of HGMIO*

Introduction / Background

1.   Discussions and developments on Marine Information "Overlays"[1] (MIOs) began in 1998 through a series of workshops, originally centred on so-called "time varying objects". The HGMIO was subsequently established in 2001 and provided a liaison between IHO CHRIS and the International Electro-Technical Committee Technical Committee 80 (IEC TC80) at the time when the display of navigation-related information was being considered by IMO. Since then HGMIO has extended its work program to include the development of guidelines for:

- *Marine Information Overlays (MIOs): Recommended Procedures for Development* [2]
- *General Content Specification for Marine Information Overlays* (MIOs) [3]

2.   The work of HGMIO has primarily been monitored and performed at the instigation and with the formal approval of CHRIS rather than IEC TC80. HGMIO members actively participated in IEC TC80 WG7 (ECDIS), WG7A (ECS) and WG13 (Navigation Display) during 2002-2007. However, with the completion of IEC 61174 [4] (ECDIS), IEC 62376[5] (ECS), and IEC 62288 [6] (Presentation of Navigation-related information onboard Shipboard Displays), currently there is no longer HGMIO involvement in any IEC TC80 WG.

3.   Direct IHO Member State involvement in HGMIO has been minimal. The majority of participation has been by representatives of maritime safety administrations, NGIOs, and commercial providers developing specific MIOs in support of sea ice coverage, status of Aids-to-Navigation (AtoN), and marine protected areas.

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[1] Wording revision (Objects → Overlays) made at HGMIO4, May 2007.
[2] Approved at CHRIS17, September 2005.
[3] Approved at CHRIS19, November 2007.
[4] IEC 61174 - Maritime navigation and radiocommunication equipment and systems – Electronic chart display and information system (ECDIS) – Operational and performance requirements, methods of testing and required test results, Edition 3., Dec 2007.
[5] IEC 62376 - Maritime navigation and radiocommunication equipment and systems – Electronic chart systems (ECS) – Operational and performance requirements, methods of testing and required test results, Edition 1. (CDV), Aug 2008.
[6] IEC 62288 - Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results, Edition 1, July 2008.

Analysis/Discussion

4.   HGMIO has reported regularly to IHO CHRIS and to IEC TC80. However, the work of HGMIO has in the main been monitored and done at the instigation and with the formal approval of CHRIS rather than IEC TC80. In view of the evolving role of HGMIO and the limited active involvement of IEC TC80, the IHB, with the agreement of the Chairman of CHRIS, approached the Chairman of IEC TC80 concerning the future governance arrangements for HGMIO. The Chairman of IEC TC80 informed the IHB that there is no longer a need for IEC to retain any formal involvement with HGMIO. As a result, the HGMIO has in effect become an IHO body. As such, it is therefore appropriate for CHRIS to now consider the ongoing role of HGMIO.

5.   **HGMIO Role.**   The role of HGMIO has evolved from its beginnings and now involves coordinating and advising on the standardisation of MIO's and related applications in general. HGMIO has developed guidelines regarding the standardization of MIO specifications intended for use by the maritime sector. These guidelines, which have been adopted by the IHO, are intended primarily for the guidance of developers rather than Hydrographic Offices. The ongoing work of HGMIO is related to the coordination of various MIOs not directly related to the IHO Work Programme or the work Programme of CHRIS. The main areas of development include:

- General Content Specification for MIOs
- MIO Encoding Guide
- S-100 MIO Register (under IHO Registry)
- Creation of new objects/attributes and product specifications for:
  - Coral Reef Habitats
  - Marine Protected Areas (MPAs)
  - Emergency Management Areas
  - Sea Ice Coverage
  - River Information Overlays (RIOs)
  - Data Quality/Fitness-for-Use Overlay

6.   As outlined in the *"Recommended Procedures for Development",* HGMIO does not initiate the development of specifications for individual MIOs or associated applications. Instead, HGMIO responds to requests for MIO applications/development. If or when the CHRIS (soon to be HSSC) has a specific requirement to develop MIO specifications, these would most likely be assigned to a suitable IHO WG, rather than HGMIO. For example, this could include SNPWG for Sailing Directions, Tidal WG for tidal or tidal stream related MIOs.

7.   **Liaison / Outreach Role.**   A significant role fulfilled by HGMIO has been to provide technical liaison or outreach between IHO and other agencies and organizations that have similar interests and requirements as the IHO.   Until recently, this has been accomplished through the development of MIOs and other applications based primarily on the IHO geospatial standards S-57 and S-100.   In particular, the Chair of HGMIO has provided IHO with a significant technical liaison opportunity with various stakeholder groups concerned with other types of MIOs and related applications - for example, AIS Binary Messages, e-Navigation, "silent" VTS, "virtual" AtoN, etc. The benefits of this liaison and outreach role should not be underestimated. It has been the mechanism by which important technical liaison and cooperation is maintained between IEC, IALA, IEHG, IMPA and others. Furthermore, the need to maintain such an outreach role will only increase now that the IHO is seeking to encourage the widest possible use of S-100.

8.   **HGMIO Opinion**. HGMIO considered the current situation at its 5th meeting on 25-26 September 2008 and agreed that it was now more appropriate for the Group to re-establish itself as an independent group, to be known as the Harmonization Group on Marine Information Overlays (HGMIO). This is reported in CHRIS20-07.1A

Conclusions

9.   It is difficult to justify HGMIO as a CHRIS WG whose principal role is technical liaison and harmonization of non-IHO developments, and whose membership is almost exclusively non-IHO. Therefore, HGMIO should be retired as an IHO WG. However, there is still a need for the IHO to maintain a technical liaison with groups using S-57, S-100 or other related IHO standards. An appropriate replacement mechanism to achieve this is required.

Proposal

10.   Providing technical liaison between non-IHO groups using S-57, S-100 or other related IHO standards can be achieved through the establishment of a CHRIS (HSSC in the future) Technical Outreach Panel (TOP). This TOP would comprise the leaders of relevant technical development groups who are relying in a significant way on the IHO geospatial standards, accredited NGIOs and the chairs of relevant HSSC WGs. In effect, the TOP would be a focussed technical stakeholders' forum whose role is to facilitate the exchange of ideas, requirements and awareness of emerging non-IHO developments that rely on the IHO geospatial standards. The TOP would normally be convened annually in tandem with an appropriate IHO technical meeting such as HSSC, TSMAD, et cetera. Draft Objectives and Procedures for such an HSSC Technical Outreach Panel are provided in Annex A.

Impacts

11.   The TOP will provide a valuable technical forum to enable the exchange of information and developments in the use of IHO geospatial standards across the widest range of potential users. It will maintain the focus and unified point of technical contact and liaison that has previously been provided by HGMIO. It will not replace the stakeholders' forums that the IHB convenes from time to time to inform the wider IHO stakeholder community and obtain feedback on IHO activities more generally.

12.   Scheduling meetings of the TOP to coincide with relevant IHO meetings will minimise MS and IHB expense yet at the same time maximise technical contact with the non-IHO users of IHO standards.

Action Requested of CHRIS

13.   The CHRIS is invited to:

   a.   **Agree** that HGMIO be retired as an IHO WG.

   b.   **Agree** the concept of an HSSC Technical Outreach Panel (TOP), which will be convened as directed by the HSSC to meet the Objectives and Procedures described at Annex A.

HSSC TECHNICAL OUTREACH PANEL

Objectives and Procedures

1. **Objective**

To provide a focus and technical liaison group to assist the IHO Hydrographic Services and Standards Committee (HSSC) in the development and extension of IHO geospatial data standards, particularly S-57 and S-100, thereby fostering the widest possible community of users.

2. **Procedures**

a) The Technical Outreach Panel (TOP) should assist HSSC and its WGs by:

(i) Recommending appropriate changes or additions to IHO geospatial standards so as to better serve non-IHO authorities and users.

(ii) Monitoring relevant international standards, specifications and developments and advising HSSC as required.

(iii) Providing or developing proof-of-concept and demonstration models or applications as resources permit.

(iv) Promoting the use of IHO geospatial standards.

b) The Technical Outreach Panel should be convened approximately once per year in tandem with a programmed meeting of the HSSC, or a relevant WG.

3. **Composition and Chairmanship**

a) The Technical Outreach Panel shall comprise:

- the Chairs of HSSC WGs and sub WGs

- recognised *Expert Contributors* to HSSC

- the Chair and Task Leaders of the Harmonization Group on Marine Information Overlays (HGMIO)

- Co-Chairs of the Inland ENC Harmonization Group (IEHG)

- one representative each from accredited NGIOs involved in the development of S-100 and S-57 based applications

b) The Technical Outreach Panel shall be convened and chaired by the Chair of HSSC or the Director assigned to the HSSC.

c) The Secretary for the Technical Outreach Panel shall be provided by the IHB.

d) All Technical Outreach Panel members shall inform the Secretary in advance of their intention to attend meetings of the Panel.