Report to the IAIN Officers' meeting on IHO

November 2011

IAIN participates to IHO conferences, which should become the Assembly when the new IHO convention is ratified. IHO is an independent organization having the status of observer in UN and comprising 84 member states. It should be noted that, although the SOLAS Convention has been approved by IMO, whereby IMO member states commit themselves to basic hydrographic services, the membership in IHO is far lower than that in IMO; this situation has the merit of clarity and sheds some light on the progress still needed in the hydrographic part of maritime safety in a lot of countries, despite the efforts of IMO and IHO.

The concept of INT charts for sharing the cartographic burden between member states and ensuring better overall consistency is being extended from paper charts to electronic charts (ENCs). It remains to be seen how it could be applied.

Hydrographic offices make their best efforts to create geospatial maritime data infrastructures, based on the data they possess, covering more needs than the safety of navigation. This puts a supplementary stress on resources which are nowhere abundant.

The most remarkable events since our last meeting are as follows:

1/ Electronic charts and related matters

1.1/ S-100

The S-100 standard is gaining momentum, the corresponding registry being operational and accessible on the IHO web site. It is being used by several users' communities in addition to IHO, e.g. for ice data and inland ENCs (official charts).

The issue mentioned last year for IMO/IALA data registry is in the process of being solved by using the S-100 standard and the IHO S-100 registry. For that purpose, a IMO and IHO have set up a HARMONIZATION GROUP ON DATA MODELLING (HGDM).

“The HGDM should:
.1 as requested by the IMO or the IHO, consider matters related to the framework for data access and information services under the scope of SOLAS, using as a baseline IHO's S-100 standard, with a view to harmonize and standardize:
   .1 formats for the collection, exchange and distribution of data;
   .2 processes and procedures for the collection; and
   .3 development of open standard interfaces; and
.2 review the results of studies by the IMO, the IHO and other related organizations which address aspects of access to information services under the scope of SOLAS, and advise the IMO and the IHO as to whether they are compatible with the e-navigation concept taking into account the identified user needs as they exist at the time.”

1 48 ratifications are needed; 32 have been obtained since 2005, of which only 4 in 2010 and 2011
2 Safety Of Life At Sea
3 The present standard (S-57) and S-100 will have to be used in parallel for a long time; the full impact of that constraint is difficult to forecast with precision, particularly with regard to human resources
1.2/ **ECDIS issues** (an ECDIS is an officially certified electronic charting system for real-time navigation) - extracts from circular letters 2011-19 and 2011-68 accessible on the IHO website.

“The problems identified so far relate primarily to reports that some ECDIS equipment at sea does not perform optimally or as expected because of shortcomings in the nature of the ENC data, or the ECDIS software implementation, or implementation of current IHO ECDIS-related standards, or various combinations of these and / or other factors.”

“In order to review progress and the results of the ENC/ECDIS Data Presentation and Performance Check, the Directing Committee proposes to host a workshop in January 2012 at the IHB, where relevant stakeholder organizations will be able to discuss progress, identify any further proposed actions and develop the key points to be reported to the IMO. These might include:

- the requirement for software in ECDIS equipment already fitted in ships to be periodically upgraded when appropriate;
- improving mariner awareness of the need to upgrade ECDIS software;
- improving the consistency of data encoding in ENCs; and
- the need for a coordinated reporting, assessment and feedback mechanism for ECDIS related equipment performance issues.”

Comment: ECDIS and ENCs and their distribution mechanisms are an integral part of e-Navigation and problems will be amplified rather than simplified by the higher level of complexity implied by e-Navigation.

2/ **Marine Electronic Highways (MEH)**

Progress in the « Marine Electronic Highway » domain: a Mediterranean project is being put together, following the West Indian Ocean and the Malacca strait/Singapore projects already under way. This last one in particular has progressed significantly during the last year and sea demonstrations are expected soon.

The term “marine electronic highway” is now widely used in certain circles to describe the information network needed to facilitate real time access to data and information by mariners, resource managers and regulators. The function of the marine electronic highway is to enable real time access to data and information by a broad base of expert and non-expert users from all walks of the maritime community. In order to be effective, a marine electronic highway must be based on common standards, be widely accessible, simple to use and cost-effective. It must also be fed with sufficient up-to-date data and that is a real issue in many parts of the world (see introduction above), where the lack of data contributes to slowing development in those parts.

It should be noted that this concept is in line with the objectives of e-Navigation, for the charting and nautical information part.

3/ **New NAVAREA zones for the Arctic ocean**

5 new zones have been created (numbers XVII to XX1), attributed to Canada, Norway and

---

4 official electronic charts
the Russian Federation. METAREA zones are created at the same time.

A regional hydrographic commission has also been created, with the inaugural meeting in October 2010. "The establishment of the ARHC is a historic event. Since the establishment of the International Hydrographic Organization in 1921, fifteen Regional Hydrographic Commissions have been established worldwide. The Arctic Ocean remained without such a Commission until today.

The Arctic is undergoing extraordinary transformations facilitating increased natural resource development and marine traffic at a time when little reliable navigational and environmental data exists. At present, less than 10% of Arctic waters are charted to modern standards. To meet current and emerging challenges, the Arctic Coastal States represented by their Hydrographic Offices, have recognized the need for enhanced collaboration and coordination of their Arctic activities and established the ARHC."

4/ Elections of the president and directors in 2012

The President (admiral A. Maratos from Greece) and one director (Captain H. Gorziglia from Chile) arrive at the end of their second term of office (twice five years) and will be renewed at the next conference in April 2012. According to (not so old) tradition, the directors should preferably originate from different continents. The only director who can be re-elected is Captain R. Ward from Australia; he has, inter alia, been deeply involved in S-100 promotion and has made the best of it as shown above.

Yves Desnoës

---

5 Appendix to the 1st report of the ARHC