

12th CHRIS MEETING
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A WIDER SPECTRUM OF DATA EXCHANGE STANDARDS - THE IHO ROLE

Introduction

1. More than 10 years ago IHO Member States recognized the need for an exchange standard for (marine) cartographic data. Several Committees and Working Groups were involved in developing this standard during the last decade. The result of these efforts is the present Edition 3.1 of the IHO Publication S-57 "IHO Transfer Standard for Digital Hydrographic Data" and several related publications (S-52 and Appendices). Efforts to date have been exclusively concentrated on developing a (product) standard allowing to produce digital data for ECDIS (ENC data); other hydrographic data (e.g. multibeam data) have not yet been taken into consideration.
2. This paper proposes that the existing family of data standards must now be extended to meet the needs of a much wider spectrum of data providers and data users.

Discussion

3. About 4 years ago the ISO established a Technical Committee (TC211) tasked to develop a suite of standards for the exchange of geospatial information. At present, the IHO considers making the next edition (4.0) of S-57 a profile of the TC211 suite of standards. ISO alignment has the advantage of influencing manufacturers with the potential of reducing the costs of implementing and deploying ECDIS and other S-57 based systems; in particular, there is great potential for reducing the cost for the production of S-57 data and for building S-57 databases [IDON paper, p.36].
4. In its Strategic Plan (adopted during the 2nd EIHC in March 2000) the IHO has identified the following strategic issues which are related to "digital data":
 - Transition to the digital era (Successful transition to provision of digital services, including production, distribution and updating)
 - Achievement of an adequate global hydrographic data coverage (Ensuring that good quality hydrographic data is available throughout the world where needed)
 - Providing services other than for navigation (Ensuring that the national hydrographic data are available for GIS applications)
5. In the IHO Work Programme, Task 3.2.10 identifies the development of a S-57 profile for a standard exchange format for hydrographic data. The aim of this task is to standardise data at the acquisition phase so that they can be exploited with as little re-processing as possible. Although this task is listed under Element 3.2, it is closely linked with activities listed under Element 3.4. It represents a slightly modified strategy, since it focuses on data rather than product.

There is clearly an emerging need for this standard. Manufacturers, surveyors, and data managers all recognise that there exists a vacuum which is a serious impediment to simple access to hydrographic data. Increasingly, users require access to original data sets rather than to products.

6. Recently, numerous countries have started to build or have indicated that they intend to build a National Spatial Data Infrastructure (NSDI); discussions to build a Global Spatial Data Infrastructure (GSDI) have started as well. In this context it might be interesting to note:

- Studies estimate that the world population living in coastal zones will at least double during the next century and that the importance of coastal zone management will increase considerably
 - The ease of data access across platforms and GIS systems will become a decisive factor for the purchase of data and systems
7. Taking into consideration above points, it seems necessary to discuss the role and approach of the IHO with regard to data exchange standards. The following questions arise:
 - Is it still adequate to confine development to cartographic data (S-57 is titled "...for **Hydrographic Data**"), and furthermore to product standards?
 - Is it still adequate to have **IHO bodies develop** exchange standards as this requires considerable time and resources (staff of IHO MS); OR might contracting out development work (using IHB budget and/or R&D funds from MS, or VHO) and have **IHO bodies to monitor** (control) the development work be more advantageous? Another approach might be to intensify cooperation with industry and academia.
 8. Widening the scope of the development of data exchange standards by the IHO without structural changes of the development process (i.e. IHO bodies would continue to develop) will inevitably lead to either budget increases for the IHB and MS or require re-allocation of financial resources (prioritise).

Conclusion

9. Extending the spectrum of the IHO sponsored data exchange standards is an important strategic re-orientation in which the CHRIS should take a leading role.

Action requested of CHRIS

10. Members are requested to review the proposals in this paper, to review the tasks identified in the IHO Work Programme Element 3.4, and to make some recommendation to IHO.

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