

INTERVIEW WITH MR HORST HECHT

A Meteorologist, Hydrographer and Electronic Chart Specialist

He started his career as a meteorologist, became head of the computer section of the "Deutsches Hydrographisches Institut" (DHI) in 1970 and was responsible for IT affairs, which brought him into close contact with hydrography and digital cartography. In 1988 he was appointed as Director of the Department of Nautical Hydrography, which became in 1990 a department of the German "Bundesamt für Seeschifffahrt und Hydrographie" (BSH). He participated in many working groups of the International Hydrographic Organisation, where his opinion was always highly valued. For many years he was and still is the Chairman of the "Deutsche Hydrographische Gesellschaft" and was EAB member of Hydro international from its birth in 1997 until last year.

The German Hydrographic Office is part of the "Bundesamt für Seeschifffahrt und Hydrographie (BSH)", with offices in Hamburg and Rostock. Could you explain the organisation? And what about the "Deutsches Hydrographisches Institut (DHI)"?

To start with, the Deutsches Hydrographisches Institut (DHI) was the predecessor of BSH. In July 1990, BSH was established from merging the DHI with the Federal Authority for Tonnage Measurement. The purpose was to create a central maritime authority in Germany. The new BSH quickly experienced an extension when the GDR succeeded the Federal Republic of Germany - the re-unification - and parts of the GDR Hydrographic Service were incorporated with the BSH. It is since then that we have the two offices.

As for the organisation of BSH, it is composed of three specialised departments, and the Central Department. The department I am heading is named "Nautical Hydrography" which basically comprises classical hydrography, i.e. surveying, chart production and nautical publications, and since 1999, the additional responsibility of the six BSH vessels (1 marine research vessel, 3 multi-purpose vessels, and 2 survey vessels - the second is currently under construction).

The Marine Sciences Department covers physical, chemical and dynamic oceanography (including sedimentology) with a strong focus on marine environmental monitoring. It includes a large chemical laboratory. The Shipping Department covers type testing and type approval of navigational and ships' safety equipment, tonnage measurement and support services related to German vessels and German seafarers. The Central Department hosts central services such as the IT services, library and administration, but is also responsible for permits for any activities within the German EEZ as well as the prosecution of contraventions against MARPOL. It is worth mentioning that the traditionally close relations between hydrography and the Navy are also taken into account, though not inside our organisation. This is done through a Navy liaison office within our Hamburg premises.

Can you point out the advantages and disadvantages of your organisation with reference to other organisations which are differently structured (e.g. an independent HO, whose only task is hydrography for charting). We can think of research projects more easily done in your organisation. If so can you mention a few of them?

Frankly speaking, I cannot identify any major disadvantages of our organisation, except perhaps that such a rather large authority requires a more complex administration. On the contrary, there are important synergies: we can afford a rather big fleet (in comparison to our small coastline) as our vessels can be used for different purposes - hydrography, oceanography, environmental monitoring and type testing. For ECDIS, the close exchange between hydrography and type approval has proved a big advantage. More generally, BSH co-operates with many international organisations. IHO of course, but IMO, IOC, IEC as well as the Helsinki Commission and the Oslo-Paris Commission responsible for environmental matters, just to mention the most important ones. This allows us to oversee and quickly correlate international issues and to draw on a broad range of expertise in our organisation. A good example is perhaps how the BSH President Dr Ehlers during his term as Chairman of the Helsinki Commission has introduced the requirement for hydrography and the demand for ECDIS into the Convention of that organisation. As another example, the combination of marine sciences and hydrography gives the BSH a strong position now in the increasingly important business of coastal zone management in Germany, as one can see from the current projects of establishing huge wind-driven electrical power plants in the German EEZ with a total capacity of about 30 GWatts. The advantages are so convincing that the process of centralising the German maritime administration, which still has a quite complex structure, should be continued further.

You are the director of the Hydrographic Department of BSH and Prof. Dr Peter Ehlers is the overall director of BSH. You are a meteorologist by origin and Dr Ehlers, who takes a very great interest in hydrography, is a lawyer and professor in this field. Who is considered to be the German Hydrographer?

Hydrography is being interpreted in Germany in the more general sense of knowledge of the sea and the sea bottom, and the technical aspects of ships' safety with regard to navigation and positioning. In this respect it is clear that Dr Ehlers as the President of all BSH is the Hydrographer of Germany. If we take the narrow view on hydrography as the science of surveying and cartographically depicting the sea for the purpose of safe navigation, I am a hydrographer too - but only related to this aspect.

For many years you have been Chairman of the "Deutsche Hydrographische Gesellschaft" (DHG). Why did the DHG never become a branch of the Hydrographic Society? What is its attitude towards the new Federation of Societies?

We have seriously considered the pros and cons of joining the Hydrographic Society as a branch society. However we found the cons exceeding the advantages; in particular it would have meant almost double the membership fees, which was not acceptable to most of the members. As far as I can see, the financial burden was one of the reasons why the formerly International Society, with its branch societies, has been devolved recently into a Federation of Societies. We do not know enough about the new constitution of the HS yet, and we certainly will have to revisit the question of joining the HS. The DHG is definitely interested in strengthening the international co-operation. This can be seen from our current co-operation with the HS where the DHG is hosting this year's Hydrographic Conference in the city of Kiel, an important port in the Baltic Sea, and we hope to see as many participants as possible from all societies of the Hydrographic Federation in Kiel. But I am not sure whether our members will deem it necessary to enter the Federation of Societies for co-operating with our neighbouring hydrographic societies.

BSH has a leading role in electronic chart certification. Could you explain briefly the situation and status of certification? (If you are personally not fully acquainted with this subject, there is no objection if Dr Jonas of BSH answers this question.)

This is the information I got from Dr. Jonas and his staff: there are currently 11 ECDIS which have the type approval certificate of BSH. Two other approvals are pending. In addition, most manufacturers have requested re-certification for soft- and hardware upgrades to comply with the 2nd edition of the IEC 61174 type testing standard, issued 2001.

Over the years you have played an important role in the development of ECDIS. How do you value the present electronic chart situation? Could we have done better? There was a moment when Germany decided to go its own way; is this still the case?

On the one hand I am extremely happy that S-57 has received such a wide acceptance as the data standard for hydrography and beyond, and for its recognition as an advanced GIS standard. On the other hand, I am deeply dissatisfied with the position which true ECDIS has on the market and onboard ship. Some things went wrong: with hindsight the finalisation of S-57 took too long and valuable datasets in S-57 version2, which already existed, could not be used any more when edition3 came out. This was a loss of time. The acceptance of ECDIS as satisfying the SOLAS carriage requirement was watered down at IMO when administrations concluded that a type-approved ECDIS operating on official data was not sufficient; it needed individual approval for each ECDIS by the national administration. This was just red tape in my view, and again lost time. This has partly been overcome now as the new chapter V of SOLAS has entered into force. The lack of official data is also completely unsatisfactory, although not unforeseeable. S-57 is complex, and requires HOs to set up costly production chains in addition to the traditional chart production. Therefore, it was a mistake to set up a data distribution system that ignored the existing market and the suppliers of commercial ECS data ruling that market instead of co-operating with them. This gave ENC's a bad starting position on the market. We hope that this will be now rectified with the new distribution concepts of the International Centre for ENC's and PRIMAR Stavanger. As for Germany's way, while we repeatedly expressed our concerns over the development, we never had the real intention of going our own way. That would have been a futile exercise; ECDIS can only unfold in a truly international joint effort, as shipping is international.

You attended the IHO Conference last April in Monaco. Did it bring what you expected and was the result of the election of the new Directing Committee in accordance with your predictions?

We were very pleased with the readiness of the Conference to give the Strategic Planning Working Group (SPWG), under the chairmanship of the Norwegian Hydrographer, Frode Klepshvik, a firm mandate for developing proposals for a broad reform of IHO. With the requirements for maritime states to establish a hydrographic service, as set out in the new chapter V of SOLAS, Reg. 9, and the need under SOLAS for ECDIS to operate on official data, the IHO has to make that happen. In particular, the need to provide the digital data service demands far stronger and closer cooperation than in the good old analogue charting world. The IHO as an organisation has to be thoroughly trimmed to be fit for the current and future tasks. The Directing Board, as elected at the Conference, appears to be committed to that goal, and is the right one at the right time.

Can you tell us about hydrographic education and/or training possibilities in Germany?

There are various possibilities in Germany for hydrographic studies and training, ranging from training on specific subjects, e.g. in surveying up to a complete study course in hydrography. For the latter, the Hamburg University of Applied Sciences is currently developing its hydrography course into a master study course, and we hope that this will be available during the next year. The usual way to apply for such training and education courses is in conjunction with bilateral programmes between an interested country and Germany through the respective German embassy. In addition, in the past BSH has contributed on-the-job training in specific fields of hydrography to students of the International Maritime Academy Trieste, and we are willing to continue that, either through co-operation with the IMA, or in direct bilateral co-operation with hydrographic offices.

Do you have a final message for the hydrographic world and for hydro-graphers/surveyors in particular?

The simple fact that a digital piece of information allows the easiest use for all imaginable purposes will alter our hydrographic world, just as the abundance of digital information on the Internet already has for information in general. Accessing the real thing - the pure information - opens a universe of applications and usage reverberating on HOs as demand for services. The consequences are:

- Hydrography is already losing its "splendid isolation": digital hydrographic data bases will have to form an integral part of a global spatial data infrastructure. Hydrographic offices will have to adjust to it, not only with respect to certain limited services. If they don't then others will take over that function
- Where there is need for customised products and services (like ENC's) they will have to be provided increasingly at near real-time and with value-adding. The providers of the fastest, most flexible yet still reliable services will win

As much as HOs have to respond to an increasing number of new challenges such as coastal zone management, claims for maritime boundaries according to UNCLOS, they will have to integrate their data services into networks with other authorities, organisations and private industry. The IHO data standard S-57 offers an excellent basis for current and future developments of data services - but only if

HOs, in far-seeing planning, make prudent and efficient use of it. IHO as an organisation should facilitate that development.

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