

THE FAILURE OF ECDIS VERSUS THE APPARENT SUCCESS OF ECS

A Chart Distributor Perspective

In its current state of development, ECDIS is not only a commercial failure but it is also a clear demonstration of the fact that a number of Hydrographic Offices and IHO have been unable to capitalise upon their monopolistic grasp on the distribution of official paper charts and transfer the business model to ENC's. The first question that comes to mind is: should we use the same business model? The second question should be: can ENC's and paper products complement each other rather than compete?

This failure is so embarrassing because the concept of ECDIS has been discussed at length, to the point at which standards governing its use were adopted by IMO; this meant that the whole marine community was expecting systems and coverage in S-57 format. Many years down the road, a number of systems are finally type-approved but official coverage is disappointingly limited to a few countries whereas private data providers have seemingly produced "near" world-wide coverage. What are the Hydrographic Offices to do to regain momentum?

So far, the hydrographic community has failed to make the transition to a commercially viable ENC service. The collapse of Primar (the first RENC) clearly demonstrates that HO's are having difficulty in transforming their business model from paper chart distribution to ENC's. What is the right business model for distribution of ENC's?

Lack of Co-operation between HO's

Evident lack of co-operation and communication between HO's and the lack of resources and/or leadership of IHO resulted in a proliferation of various chart formats, especially in raster. The end result is that mariners end up buying navigation systems that are unable to deal with this variety of formats. Why indeed do we now have HRCF format used mostly by the UKHO and Australia, BSB used in North America by the Canadian Hydrographic and NOAA in the USA, and PSX used in the Caribbean?

Lack of Coverage in S-57 Format

It has been said very often that HO's have very limited resources and that their budget is equal to a very small portion of the national budget. Moreover, some countries force their HO's to run on their own resources and income generated by the sales of their products, while other countries see the service as a national requirement and even favour free distribution of information collected and paid for by tax payers' monies. No wonder that under such an array of administrative constraint the production of ENC's has been so disproportionate, ranging from what may be described as decent in northern Europe to non-existent in many other parts of the world.

What of SOLAS and National Obligations?

According to SOLAS Chapter V, "Contracting Governments undertake to arrange for the collection and compilation of hydrographic data and the publication, dissemination and keeping up to date of all nautical information necessary for safe navigation."

"Contracting Governments undertake to co-ordinate their activities to the greatest possible degree in order to ensure that hydrographic and nautical information is made available on a world-wide scale as timely, reliably, and unambiguously as possible."

With the adoption of these resolutions it would certainly be reasonable to expect that the above issues would have been resolved. What about the legal liability of those member states who do not meet their obligations? Can they be held accountable and liable for their lack of action? Especially after lives have been lost, cargoes and ships damaged and the environment has been spoiled.

The diagram at the right shows current coverage in Europe. Besides Canada, Japan, Singapore and a few other exceptions, is it not disappointing to see that this small coverage is what has been accomplished after so many years?

Data from Private Data Providers

I referred earlier to the lack of S-57 ENC's and lack of HO resources. If it is so expensive to produce and update ENC's, how then have private companies succeeded in building what seems to be decent world coverage? Please let's not get involved in another discussion about the legality of their products; everyone knows that SOLAS, Chapter V regulation 2.2 states that "Nautical chart or nautical publication is a special-purpose map or book, or a specially compiled database from which such a map or book is derived, that is issued officially by or on the authority of a Government, authorised Hydrographic Office or other relevant government institution and is designed to meet the requirements of marine navigation". Therefore we know that only the ENC's produced by HO's may be used by commercial vessels of more than 500GRT.

The questions really are: do these companies have access to more resources than do some nations?

Do they have better production processes? If so, why haven't they entered into agreements to share resources and knowledge for the production and updates of ENC's; under co-operative agreements for distribution and revenue sharing and under the final quality control of the countries whose waters would be charted? Wouldn't that be a new business model for a new industry? Sure, all parties involved might lose a little something: the HO's would leave bit of their pride on the table and data providers might think that they would leave some share of their revenues and/or profits on the table as well.

But consider the gains for all parties.

- For HOs: a relationship with an industry that has demonstrated both its ability to produce to demanding performance standards and the capacity to produce ENC's at an unprecedented pace, so that finally the HOs could meet their obligations under SOLAS Chapter V, Regulation 9
- For Data Provider: a relationship with the only organisations authorised to officially distribute charting to commercial ships. Whatever market share these data providers have attained so far, they would see their sales multiply; indeed a large majority of vessels have not yet installed ECDIS due to lack of coverage. Once this is resolved many more will start using the technology
- For mariners and ship-owners: the benefit of using widely available ENC's with the comfort of knowing that quality control has been performed by national authorities and therefore that no commercial bias has been introduced in the name of profit. Finally, they could also reduce the carriage of paper charts
- For chart distributors: a clear environment and rules as to where and how ENC's can be obtained for further distribution to customers

Analogy with Official Paper Charts

These are many questions which seemingly have no answers. The fact is that to many chart distributors the whole process looks like legal chaos; in our daily transaction with ship-owners and mariners we are unable to provide clear information and guidance on these issues. Chart distributors have always been valued for their knowledge and capacity to sort out the complexity of national and international charting requirements. But these days we and our customers are spending more and more time trying to understand a process that is often contradictory. In the paper chart world, had any private company decided to publish their own charts the Hydrographic Offices would have been all over them with lawsuits; why is this not the case with ENC's? What are the policies that govern such chaos?

What About the Ship-owners?

Back to paper charts again; once, anybody who tried to deliver anything but an official paper chart on board a SOLAS-class vessel would have been promptly booted off the ships. Why are ship-owners accepting private digital data? Isn't this a clear sign that the market wants ENC's but is losing patience and the hope that HOs will finally deliver?

Finally, it has to be said that a proper catalogue listing all available cells, from whatever source, is needed to allow mariners and distributors alike to order what they require for their intended journey. From a distributor point of view, it is difficult to sell a product when the (potential) customers do not even know it exists.