



Press Release

IEC 09 at the Forefront of a New ECDIS Frontier

October conference sets the stage for a new era of marine navigation

27 August 2009

When shipowners, managers, superintendents and navigators meet in Singapore from 19-21 October for the third International ECDIS Conference and Exhibition, they will be at something of a new frontier.

It will be a year since the shockwaves in the global economy began to be felt as tremors in the shipping market and less than six months since the International Maritime Organisation (IMO) quietly ushered in a new era in marine navigation.

The decision by the Maritime Safety Committee to adopt the mandate of ECDIS on the recommendation of the NAV sub-committee is perhaps the most significant change in the shipping industry since the introduction of radar, but it has been a long time coming.

What is undeniable is that this year's conference - once again organised by the Maritime and Port Authority of Singapore (MPA) and the United Kingdom Hydrographic Office (UKHO) - will be the one at which the participants can talk about the key issues of safety, efficiency, coverage, quality and training safe in the knowledge that the deadlines are set.

"The last two ECDIS conferences organised by MPA and UKHO focused on the benefits of ECDIS and Electronic Navigational Charts (ENCs) as part of efforts to encourage the adoption of eNavigation.

With the mandate of ECDIS by IMO, the upcoming conference will focus on transition and implementation issues. We expect heightened interest in the conference and that both users and non-users of ECDIS will benefit from the conference," says MPA Chief Executive Yi Young Lam.

UKHO Deputy CEO and UK National Hydrographer Rear Admiral Ian Moncrieff echoes the sentiments of MPA; "The maritime community now has certainty over timescales for implementation and any ambiguities between what is official and unofficial data, and can or can't be used to fulfil the SOLAS carriage requirement for charts and publications will now be cleared up," he says.

It was 2003 when industry leaders last came together to discuss the future of electronic navigation. But as delegates discovered, adoption of ECDIS – let alone its mandate – was far from being a smooth process.

The following year, the UKHO and MPA commissioned consultant Paul Hailwood to research



the obstacles to mandation and suggest solutions. At its root, the problem was summed up as 'coverage, quality, cost'. Capt Hailwood found that mariners were keen to see improvements in accuracy and efficiency of ENCS that would begin to remove the requirement to carry paper charts.

Over the next few years, coverage continued to creep up but the turning point came in 2008 at NAV54 where it was concluded that implementing ECDIS could provide a reduction in grounding frequency of 30% by 2012 if ECDIS were mandatory.

NAV's decision was agreed by the subsequent Maritime Safety Committee and adopted in May this year. The International Hydrographic Organization (IHO) is in the process of preparing a reference document giving guidance on electronic charts and carriage requirements based on guidelines published by the RENCs. The UKHO has also produced its own 10-step guide to ECDIS mandation.

Petter Brandt, navigation superintendent at Stolt-Nielsen who is overseeing the transition to paperless navigation on the chemical tanker operator's fleet has clear advice for owners considering their next move.

"Our strategy was to start planning early. Our first ship has been sailing paperless for a year and a half and we started planning one and a half years before that, so we had a long runway. But take care how you choose a system. Saving money shouldn't necessarily be the aim. We have managed to achieve lower running costs on our charts and nautical publications than on our paper ships, but it is quite easy to get it the other way around if you don't manage the set-up properly."

The UKHO's strategy for improved coverage over recent years has been to put high quality charts in the hands of mariners and make the purchase and updating process simpler. Working with other IHO member governments, the UKHO embarked on a major programme to generate new chart content where gaps existed and package the data in folios with flexible licensing, to create the Admiralty Vector Chart Service (AVCS).

"The UKHO has been supporting the IHO in delivering on its promise to have adequate coverage to support a mandatory official carriage requirement," says Adm Moncrieff. "Since NAV54, AVCS has been constantly upgraded and since its launch in April 2008 now comprises more than 9,500 ENC's. These cover all the world's major trade lanes and over 1,700 of the world's biggest, busiest ports and routes."

The UKHO claims AVCS is the most comprehensive and complete ENC service on the market and it has been the model for a number of similar packages of official and unofficial data from other providers.

But the setting of deadlines, while important, represents a waypoint on the journey, rather than the destination, according to Adm Moncrieff. Having helped to make ECDIS mandation a reality, the UKHO is focusing on providing the support, training and information requirements identified by the Hailwood Report.

The Singapore conference will doubtless be relieved to hear positive messages about ENC coverage but with mandation adopted, new issues are surfacing.

The demand for training is expected to increase rapidly as owners begin to plan their ECDIS transition but the UKHO is going beyond improving quality and integrity of electronic chart data and helping navigators to become familiar with the technology in a broader sense.

The next phase of its value-added programme will come with full availability of UKHO's Admiralty e-Navigator, a chart management system which provides a single window to ship



and shore of paper and digital chart holdings, ordering and delivery as well as bundling weather, tide and other related data to aid voyage planning.

Tools such as e-Navigator will become more important as ECDIS take-up grows, providing not just access to improved ENC coverage and a means of managing information but adding value to the navigation and safety function of ECDIS itself.

Capt Brandt says navigators must keep an open mind about what ECDIS will mean to the bridge staff. "You need to have reliable equipment and adequate redundancy but beyond the regulatory requirement for training you need to give people onboard an understanding that ECDIS is more than individual equipment - how it interacts and works across the bridge."

The maritime industry has for so long been distracted by what ECDIS lacked that it is worth remembering what it adds: the ability to improve situational awareness and reduce workload. Better voyage planning and optimisation, dynamic filtering of navigation information and integration with other elements of an integrated bridge system are the features of a well-deployed ECDIS.

Navigation Superintendent with Arklow Marine Dave Elliot says his company has achieved cost savings of 10-15% by switching from paper charts to ENCs. Flexible licensing gives easy access to chart updates and flexible operations are suited to Arklow's business in the short sea trades.

"Usually we work standard routes but with times being as they are, some of our vessels are finding themselves sent off to some weird and wonderful places," he says. For a recent trip to Madeira, Arklow's regular chart distributor was able to email a code for new charts in minutes. "It's in situations like that that you appreciate the way the system lets you filter the information you have on-screen. If you're going into a port you know well, you can keep things simple. But if it's one you don't know so well, you can take out some of the filters and get the extra information you need," he adds.

As Adm Moncrieff points out, many of these benefits remain theoretical until a commitment is made to adopt electronic navigation, but the results can come quickly. "Seventy per cent of navigation is preparation so the ability to plan the most optimal route electronically and maintain an up-to-date official electronic chart outfit with minimal user-maintenance will dramatically reduce the workload of seafarers.

The other thirty per cent, using ECDIS in tandem with other aids to navigation will give the mariner real-time situational awareness that just isn't possible from paper alone. Navigation has changed and understanding that is the best first step."

That still leaves a number of steps to be made by shipping industry users to ensure a smooth transition from paper to digital navigation before the first mandation deadlines begin in 2012. One of the first and most influential will come in Singapore on October 19-21.

Ends

Notes to Editors

1. The Maritime and Port Authority of Singapore (MPA) was established on 2 February 1996, with the mission to develop Singapore as a premier global hub port and international maritime centre (IMC), and to advance and safeguard Singapore's strategic maritime interests. MPA is



the driving force behind Singapore's port and maritime development, taking on the roles of Port Authority, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative.

MPA partners the industry and other agencies to enhance safety, security and environmental protection in our port waters, facilitate port operations and growth, grow the cluster of maritime ancillary services, and promote maritime R&D and manpower development.

2. UKHO, which is part of the Ministry of Defence, has been charting the world's oceans for more than 200 years with the primary aim of providing navigational services for the Royal Navy and merchant mariners to save and protect lives at sea.

UKHO produces a worldwide series of some 3,300 paper nautical charts and 160 publications under the Admiralty brand and has a growing portfolio of Electronic Navigational Charts (ENCs). These charts are sold globally and used by nearly 70 per cent of international shipping.

UKHO also plays a central role, in support of the Maritime and Coastguard Agency, in discharging the navigation element of the UK's Safety of Life at Sea Treaty obligations for waters of UK national responsibility.

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