

Digital Ship

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grounding had caused it significant damage."

"The investigation into the many causative factors highlighted that the effect of tides and tidal streams was completely absent from the entire passage plan, which is contrary to the requirements of Chapter V of SOLAS."

"That the ship would be set across the track should have been clear from the information provided in the tidal table printed on the chart. But the failure to allow for set was even more surprising given that the ship had been at anchor for several days and had to reposition after the strong tides caused the anchor to drag."

Solutions

Issues like the ones raised by the London P&I Club would seem to act as a strong endorsement of industry moves towards increased integration and connectivity in onboard navigation systems.

IMO's push for e-Navigation and the introduction of a mandatory carriage requirement for ECDIS (electronic chart display and information system) from 2012 could help to reduce the possibility of vessels sailing with charts that do not represent the most accurate and up-to-date representation of their navigational environment.

The transmission of digital chart data, whether by satellite or using other broadcast systems, is quite obviously the fastest way of getting the latest corrections on to a vessel bridge.

Satellite connectivity can allow a vessel, in the deepest parts of the ocean and far from land, to be updated with the most accurate charts available almost instantaneously.



Electronic charts and ECDIS can make it easier to update folios, and may also reduce the burden on the navigator

In addition to this, onboard ECDIS systems dealing with digital data could also create the benefit of removing the burden of updating the onboard chart folio from the navigator, giving him more time to concentrate on the task at hand - ensuring safe passage for the vessel.

One recent example of how this technology could be applied is a new ECDIS system released just weeks ago by Swedish company Adveto, which comes with a built-in connection to communicate directly over the internet (see page 25).

Using this kind of technology with an ECDIS could help to remove the spectre of out-of-date charts almost completely, with the system able to automatically connect with ENC (electronic navigational chart) databases onshore at commencement of

the voyage to get the latest chart editions.

Updates could be constantly transmitted as they are produced, and applied automatically without the navigator having to intervene.

IMO's vision of e-Navigation is "to integrate existing and new navigational tools, in particular electronic tools, in an all-embracing system that will contribute to enhanced navigational safety (with all the positive repercussions this will have on maritime safety overall and environmental protection) while simultaneously reducing the burden on the navigator."

The ECDIS is sure to play a central role in the evolution of this strategy - and will hopefully live up to the claims that it will positively reduce the number of accidents and incidents in the shipping industry. **DS**

Wired Ocean broadband system approved by Thrane

www.wiredocean.com
www.thrane.com

Wired Ocean has been awarded the official status of Thrane & Thrane 'Accredited Solution', confirming the compatibility of Wired Ocean's S-Box and service for use with SAILOR FleetBroadband and Fleet terminals, and a forthcoming line of SAILOR SAT TV antennas.

The accreditation follows a period of testing by Thrane of the Wired Ocean 'hybrid' technology, which integrates mobile satellites and television broadcast satellites to deliver high speed broadband.

Typical internet use consists of relatively small amounts of data (such as webpage or search requests) being sent from the vessel (uplink), with much larger amounts of data (for example web pages, manuals, software upgrades, weather and navigation information)



The Wired Ocean S-Box has demonstrated compatibility with a number of Thrane terminals

being received (downlink).

By utilising a vessel's satellite TV antenna for the downlink portion, Wired Ocean aims to reduce airtime costs for the downlink, whilst the primary satcoms system is used as normal for the uplink.

"Although our services are already used aboard many SAILOR fitted vessels we are delighted that Thrane & Thrane has officially recognised Wired Ocean's

ability to significantly improve the performance and affordability of onboard internet," says Victor Barendse, managing director, Wired Ocean.

"Combining Wired Ocean's S-Box with SAILOR FleetBroadband and SAILOR SAT TV provides ships with cost-effective broadband, in addition to the voice, data and television services available through the SAILOR equipment."

Ship Equip buys 51% of Exectiva

www.ship-equip.com

Ship Equip has acquired a majority 51 per cent stake in consulting company Exectiva from its two owners, Stig Even Larsen and Lennart Utgård.

The company will become part of the Ship Equip Group while a long term consulting agreement is agreed between

the two companies.

Exectiva works in the development and support of IP telephone systems, with experience in broadband deployment, telecoms and programming. The companies say that the new team will work closely with the R&D department at Ship Equip on a number of different projects.

"With their long time background in

development and maintenance of IP based telephony systems the Exectiva consultants are a good match with the current and future needs of Ship Equip," said Ship Equip CEO, Ivar Nesset.

"We saw that they would be able to contribute and found it right to invest in the company."

Following the acquisition Mr Nesset will become the new chairman of the Exectiva board and Morten Qvigstad (Ship Equip CTO) will become a new board member.

New ECDIS adds internet connection

www.primar.org

Primar has reported that its electronic navigational charts (ENCs) can now be downloaded directly to electronic chart display and information system (ECDIS) units, after type-approval of the first such system able to communicate directly via the internet.

Certified by Det Norske Veritas (DNV), the new ECDIS-4000 from Sweden's Adveto Advanced Technology includes an ECDIS security internet gate (ESIG), which makes it possible to connect to the internet for both on-line ordering and downloading of Primar ENCs.

The unit also features a control unit for remote selection of navigational functions, and a night-presentation capability.

This solution has been developed by Adveto in close collaboration with Primar, which currently offers more than 8,000 ENCs through its international distributor network.

"Our secure Primar ECDIS Online service allows the ECDIS-4000 to receive real-time

ENC updates directly from our database," explained Primar director, Kjell Olsen.

"Following a year of development and testing work with Adveto, this advance means that users get the very latest navigational information at all times."

"Adveto is the first of our distributors to implement this service fully and to have the ESIG type-approved as part of its ECDIS-4000 certificate."

Adveto chief executive Kent Sylvén believes that the new system will be of great benefit to vessel operators, in reducing both the time and costs involved with chart folio maintenance.

"Once a route is planned, our ESIG hardware allows users to connect to the web and order the required Primar charts directly via the ECDIS," said Mr Sylvén.

"This means they only buy and pay for the charts they need, and will always have the latest versions. It also cuts administration on-board and at the shipping company office."

Intrinsically Safe digital camera released

www.gentay.co.uk

Gentay Ltd has released what it claims is the world's first Intrinsically Safe digital camera with flash, certified for use in Hazardous Areas in the maritime and oil and gas industries.

The iCam501 has been launched with ATEX certification and can record digital images from areas of low lighting where a conventional digital camera can not be used.

The camera uses four LED lights for illumination, has 3.1 megapixel resolution and includes 1 gigabyte of internal memory to hold approximately 5,000 jpeg images.

The unit also incorporates a Voice Annotation feature which allows the user to record a voice message whilst taking a digital image. Both the digital image and voice annotation are date and time stamped to create a chronological history.

A USB socket is built into the device for downloading the images and voice annotations directly to a computer.

"The market has required a competitively priced intrinsically safe digital camera for use in areas of low lighting for a long time now, and after intensive market analysis the iCam501 is designed to meet and exceed the expectations of our many customers world wide," said Daniel Merrens, Gentay director of sales and marketing.

"The Voice Annotation feature will prove to be a welcome feature, enabling the users to attach a short message for detailed reporting."



The new camera has been certified for maritime usage



The new system can download Primar ENC updates directly into the ECDIS in real-time

Letter to the editor

To the Editor,

Andy Norris writes (*Digital Ship* Jan-Feb 2010) that the US has made a decision to abandon eLoran. From that he argues that "eLoran is well and truly dead". While that scenario could happen, it certainly hasn't happened yet. The current US Government studies, meetings, and discussions about eLoran continue and there is a furore in the technical press on the question.

What's in a name? In the US, Loran-C is a 460m accuracy, hyperbolic positioning system. eLoran takes full advantage of 21st century technology to provide positioning, navigation and timing information in a way very similar to GPS. The General Lighthouse Authorities' trials have demonstrated 10 - 20 m accuracy.

True, Loran-C in the US has come to the end of its life. But that's something both opponents and supporters of eLoran wished to see. Indeed, the US signalled the replacement of Loran-C when it announced its February 2008 decision to adopt eLoran as its national fall-back to GNSS.

Andy Norris focuses on the need for a backup positioning system at sea. But the case for eLoran is about much more than that. It is part of a search for "Resilient PNT (positioning, navigation and timing)" for all sectors of transportation, industry and commerce. Advanced societies depend on robust sources of accurate location data and, especially, precise timing. These are key parts of their national critical infrastructures. Of course radar continues to play a major role at sea - but it cannot provide the timing fallback to GNSS used in ships' electronic systems or, of course, for telecommunications on land. The attraction of eLoran, for the 15 nations that currently deploy Loran-C, is that it provides highly cost-effective location and timing for land, sea and air. Loran-C could never have done that; but US government studies showed that eLoran could. We will see whether it will.

Dr Sally Basker,
Director of Research and Radionavigation,
General Lighthouse Authorities of the
United Kingdom and Ireland

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