

Digital Ship

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www.thedigitalship.com

Maersk Tankers to deploy CommBox on 70 vessels

Maersk Tankers is to install KVH's CommBox network management technology on 70 vessels in its fleet, taking the total number of its vessels employing the system to 120

Maersk Tankers is to install the CommBox communications management system from KVH aboard 70 vessels.

This group of 70 ships is in addition to 50 existing CommBox-equipped vessels that joined the Maersk fleet following its acquisition of Broström tankers in 2010.

The system will be used on the 120 vessels for least cost routing and to coordinate file transfers, e-mail, and internet access for both

business and crew use.

"Maersk Tankers is the largest product tanker owner in the world, and as such, they recognise the need for dynamic network management onboard commercial vessels," said Morten Aasen, managing director of KVH Norway AS.

"The CommBox is the right solution for these vessels – it will allow Maersk captains and IT managers to closely monitor use of each vessel's onboard satellite communications

systems, ensuring good performance at a reduced cost."

"With the CommBox QuickWeb and QuickCrew software modules, internet access increases, which benefits crews in their leisure time. In addition, crews get floating e-mail accounts that will travel with them even if they switch vessels."

Acquisition

The CommBox was originally developed by Norwegian company Virtek, which was acquired by KVH in September 2010 for \$6.5 million.

Martin Kits van Heyningen, KVH CEO, said at the time of the acquisition that he believed "the capabilities offered by Virtek's CommBox technology (would) complement and expand the comprehensive satellite communication concept that is at the heart of the TracPhone V7 and mini-VSAT Broadband solution."

At that time Virtek was supplying the technology to approximately 50 different shipping companies, primarily based in Scandinavia and Northern Europe, with about 700 vessels installed and estimated revenues for 2010 of between \$2 million and \$3 million.

Since that deal however, and after announcing this new deal with Maersk, KVH has been able to confirm that it has now increased this number of units in the market by

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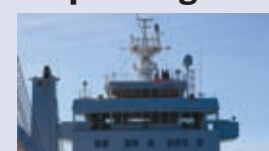
Maersk Tankers is to increase the number of vessels in the Group using the CommBox to 120. Photo: Maersk

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Digital Ship Limited
2nd Floor,
8 Baltic Street East
London EC1Y 0UP, U.K.
www.thedigitalship.com

PUBLISHER

Stuart Fryer

EDITOR

Rob O'Dwyer: Tel: +44 (0)20 7017 3410
email: odwyer@thedigitalship.com

DEPUTY EDITOR

Julie Ann Chan: Tel: +44 (0) 20 7017 3414
email: julie@thedigitalship.com

CONFERENCE PRODUCERS

Karl Jeffery: Tel: +44 (0)20 7017 3405
email: jeffery@thedigitalship.com
Cathy Hodge: Tel +44 (0) 20 7253 2700
email: cathy@thedigitalship.com

ADVERTISING

Ria Kontogeorgou: Tel: +44 (0)20 7017 3401
email: ria@thedigitalship.com

PRODUCTION

Vivian Chee: Tel: +44 (0)20 8995 5540
email: chee@thedigitalship.com

EVENTS

Diana Leahy Engelbrecht
Tel: +44 (0)118 931 3109
email: diana@thedigitalship.com

CONSULTANT WRITER

Dr Andy Norris (navigation)
apnorris@globalnet.co.uk

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GBP £150 per year for 10 issues
Subscribe online at
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venter@thedigitalship.com,
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approximately 40 per cent, having completed the shipment of its 1,000th CommBox.

The company regards this to be a significant milestone and part of a trend of increasing integration of on board IT networks and shipboard communications as a result of advanced mobile satellite communications technology.

"KVH is committed to providing the best, most flexible, and most reliable satellite communications products and services for our customers, and the CommBox is an integral part of our end-to-end line of information technology and communications solutions," says Mr Aasen.

"The demand for this highly customisable onboard IT manager has been growing steadily since its release, and we're quite pleased to be shipping our 1,000th unit with that demand still going strong."

"Clearly, the CommBox is the preferred solution for fleet IT managers in need of convenient integration of onboard networks with satellite communications services, and we are committed to keeping it that way."

37cm VSAT

Apart from its recent success with the CommBox, KVH has also announced that it has completed the first shipments of its new TracPhone V3 system, a Ku-band maritime VSAT antenna measuring only 37 cm in diameter.

The company says that the units will arrive at their first owners' vessels complete with newly granted commercial licence authority from the US Federal Communications Commission (FCC).

The new licence builds upon KVH's existing earth station onboard vessel

(ESV) licence for the mini-VSAT Broadband satellite communications service and 60 cm TracPhone V7 antenna.

"This approval for the TracPhone V3 means that all mini-VSAT Broadband subscribers can enjoy 100 per cent FCC-approved, licensed service regardless of which TracPhone antenna they choose," said Mr Kits van Heyningen.

"KVH's legal team has worked diligently with countries around the world to ensure that our mini-VSAT Broadband network meets or exceeds their national requirements, and receiving an FCC ESV license for the TracPhone V3 is an integral part of that ongoing effort."

"Mariners now have an outstanding new option for an ultra-compact satcom solution that is far more affordable and faster than L-band services like Inmarsat."

DS

SingTel launches second commercial satellite

www.singtel.com

Singapore Telecommunications Limited (SingTel) has announced the launch of the company's second satellite, ST-2.

ST-2 is almost twice as powerful as ST-1, SingTel's first satellite, which was launched in 1998 and which will eventually be replaced by ST-2.

The new satellite, which was built by Melco, is a joint venture between SingTel and Chunghwa Telecom and will provide 20 per cent more transponder capacity and a wider coverage footprint than ST-1.

SingTel has an approximately 62 per cent share in the joint venture, while Chunghwa Telecom owns the remaining 38 per cent. ST-2 will have a wide-ranging footprint of C-band and Ku-band coverage that will cover the Middle East, Central Asia, the Indian sub-continent

and South East Asia.

The wider footprint is expected to offer customers in the maritime industry access to satellite communications over larger areas while out at sea. The satellite will also offer switching capabilities to meet the demands of different regions.

"This is an exciting milestone for SingTel and Singapore," says Ms Chua Sock Koong, group CEO, SingTel.

"Satellite services play an important role in SingTel's overall vision for the corporate business market, enabling us to lead and shape key markets such as the maritime, oil & gas, media & broadcast and logistics industries."

"ST-2 will enhance our ability to offer businesses such as shipping companies and DTH operators a one-stop ICT experience that will empower them to stay ahead of the competition."



The ST-2 satellite will provide a wider coverage footprint for SingTel's satellite services

FleetBroadband to have 9 voice channels

www.inmarsat.com

Inmarsat has announced the development of a multiple voice calling capability for FleetBroadband that will allow up to nine simultaneous voice calls through a single terminal.

The company says that it plans to introduce this new capability in the fourth quarter of 2011.

Becoming part of the standard FleetBroadband service, the multi-voice capability will offer additional telephone lines, each with their own +870 telephone number, to support up to nine concurrent voice calls.

Inmarsat says that the service will work on existing FleetBroadband terminals with just "minor modifications" needed, depending on the terminal.

"Ship owners and managers can now access up to 9 telephone lines from a single terminal, allowing them to assign telephone lines for specific requirements, and also to more easily separate the business and operational communications needs from those of the crew," said James Collett, senior director of maritime business at Inmarsat.

"We see this as being particularly beneficial for crew communications."

Inmarsat has also announced a date for the commercial introduction of its new FleetPhone service, planned for 30th June 2011.

FleetPhone hardware will be produced by Beam Communications, which also developed Inmarsat's IsatPhone Pro docking units. There will be two variants of FleetPhone: the Oceana 800 and Oceana 400.

The Oceana 400 is a below-deck unit with an IP53 (rainproof) rated enclosure. It features a POTS/RJ11 interface, enabling five standard corded/cordless phones or integration to a PABX system.

The Oceana 800 is an IP54 rated terminal, with integrated Bluetooth for voice communications, a colour LCD display for phone-book and SMS access, a side SIM port for the use of temporary SIM cards, an active privacy handset, and in-built speakerphone.

In addition, the Oceana 800 terminal features a dedicated internal GPS receiver that can provide tracking and instant messaging with a single button press.



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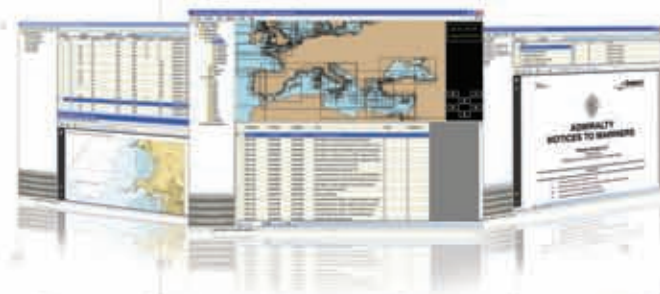
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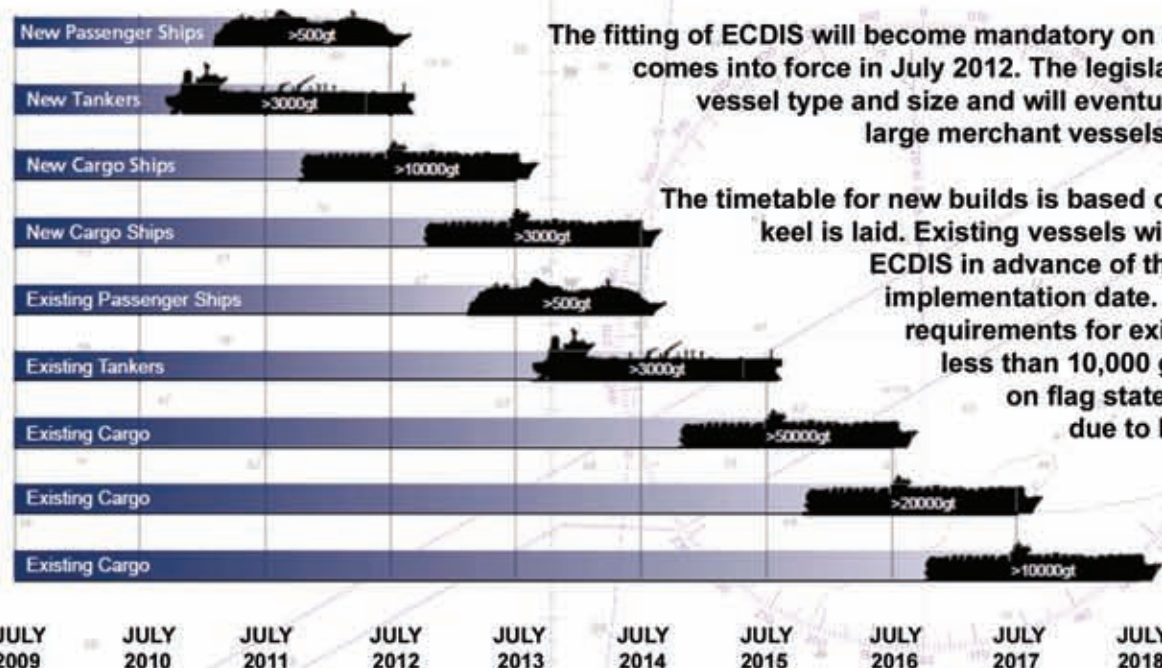


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ECDIS Mandation Timeline



The fitting of ECDIS will become mandatory on a rolling timetable that comes into force in July 2012. The legislation will be phased by vessel type and size and will eventually apply to almost all large merchant vessels and passenger ships.

The timetable for new builds is based on the date the vessels keel is laid. Existing vessels will be required to install ECDIS in advance of the first survey after the implementation date. There are currently no requirements for existing cargo vessels of less than 10,000 gross tons. Depending on flag state requirements vessels due to be taken out of service within 2 years of the implementation date maybe exempt.

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Vessel tracking available on Marlink VSAT

www.marlink.com

Marlink has introduced a new vessel tracking service for customers of its WaveCall VSAT solution.

Available as part of Marlink's Customer Portal service, the vessel tracking function allows WaveCall customers to identify the exact location of all active vessels in real-time.

Status and communications statistics for each vessel are available, so that positioning can be identified and plotted at any given time, with no on-board set up required.

Users of the Portal can also access data such as bandwidth usage, terminal management and support enquiries.

"Vessel tracking has always been available to customers of our high-end Sealink solution and we have now introduced the service for WaveCall customers so they are able to manage their fleet more efficiently by easily keeping track of each vessel's location," said Tore Morten Olsen, CEO, Marlink.

"Vessel tracking is one of a wide range of services available at our Customer Portal, which is designed to offer vessel

operators and owners increased control of their satellite communications services."

In other news, Marlink has also announced that it has reached an agreement with Intellian Technologies whereby the Korean company will become an official supplier of VSAT antennas to be used in Marlink VSAT services.

Intellian offers a range of VSAT communications and satellite TVRO antennas.

"Marlink has been established for many years as a market leader in the provision of satellite communication services, so we are delighted that they have selected Intellian as one of their premium VSAT antenna manufacturers," said Eric Sung, president and CEO of Intellian.

"Intellian prides itself in designing advanced technical solutions that provide the constant and consistent communications capabilities that our customers demand."

"Our relationship with Marlink will mean that an even wider customer base will have access to our world leading technology."

Both companies will be able to offer service and local support for customers globally.



Vessels with Marlink's WaveCall product can be tracked from shore via the Customer Portal

FleetBroadband tracker launched

www.globalsatellite.us

Global Satellite USA has introduced a tracking system that integrates with the Inmarsat FleetBroadband terminals manufactured by Thrane & Thrane, SatLink, Glacom, and JRC.

The GSAT Track FleetBroadband Tracker allows a ship to be tracked anywhere in the world. The hardware requires no additional power, just needing to be plugged into the FleetBroadband system to begin transmitting position to a tracking platform at GSATTrack.com.

The tracker contains six status indicator lights to display the current status of the terminal, and a single Ethernet port to plug into the Fleet Broadband.

"Having listened to our customers, we wanted to develop an all-in-one package that provided broadband connectivity onto the boat and tracks it in one simple solution," said Martin Fierstone, CEO of

Global Satellite USA.

"The FleetBroadband Tracker provides an excellent, easy-to-use IP connection that capitalises on functionality when space is a premium."



Indicator lights on the unit display the status of the tracking system

ITC buys Broadpoint

www.itcglobal.net
www.broadpointinc.com

ITC Global reports that it has entered into a definitive agreement to acquire the satellite operations of Broadpoint LLC, a provider of VSAT and communications services to the oil and gas sector in the Gulf of Mexico.

Broadpoint's satellite communications business provides customers with managed communication services including broadband IP networking, MPLS, voice over IP, real-time video and internet access.

Its managed satellite communications solutions include stabilised, portable and fixed satellite communications services supported by its teleport and network operations centre located in Harahan, Louisiana.

ITC Global's worldwide coverage footprint and support services will be available

to Broadpoint customers after the acquisition is completed, though Broadpoint will retain its core cellular telecommunications business following the deal.

"Broadpoint is a respected service provider that has built a top-tier market presence and a track record of responsive support for demanding customer requirements," said Joseph Spytek, vice president of business development for ITC Global.

"The acquisition supports ITC's strategic goal of growing its already strong presence in the global resource segment in addition to providing a strong beachhead into the Gulf of Mexico's oil and gas market for our customer base."

"Our vision is to fully integrate the Broadpoint operations into ITC Global and firmly establish ITC as one of a very short list of companies able to provide fully managed networks on a truly global scale."

Satcom Direct has become a Distribution Partner for **Inmarsat's** satellite phone services, including the IsatPhone Pro.

Alphatron Marine's PABX Alphaconnect 48 and 128 systems, and relevant telephone sets, have been type approved for use on all ships and mobile offshore units by **DNV**. The Alphaconnect product line is developed and produced at the company's own facilities in Denmark.

Errol Olivier has been appointed as president and chief operating officer (COO) of **MTN**. Prior to joining MTN, Mr Olivier served as the president and CEO of **Broadpoint**, and was formerly president and COO of **CapRock Communications**.

Tom Eaton has been appointed as president of **Harris'** global communications services business. Mr Eaton served as **Harris CapRock's** global operations officer and formerly led the business' government division.

Intellian has appointed Jon Harris as senior director of global sales & business development. Mr Harris formerly managed the European sales and service operation of another satellite communications systems provider, and has over 20 years' experience in the marine telecommunications field.

Intellian has also opened a sales and support office, Intellian B.V. in Rotterdam, Netherlands as part of its global expansion within marine markets. The new office

will be able to provide sales and technical assistance to Intellian customers.

Marlink has opened a new customer support office in Stavanger. Based on the West Coast of Norway, the new office will accommodate Marlink's field engineers and logistics personnel.

Globe Wireless has appointed Don Wamsley as the senior vice president of customer care. Mr Wamsley previously worked for **JDS Uniphase** and **Hughes Network Systems**.

Telaurus has appointed Geoff Davison as product manager - value-added services. Mr Davison joins Telaurus with 20 years' experience in electronics, having spent the last 10 years at **AND Group**.

Radio Holland Connect has been awarded Gold Partner status under the **Inmarsat** Connect Accreditation programme for service providers. The company offers communications services from Inmarsat, Iridium and Thuraya, as well as VSAT connectivity.

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MTN and ERZIA deploy RDS on Spanish research vessel

www.mtnsat.com
www.erzia.com

MTN Satellite Communications (MTN) and ERZIA, a provider of VSAT maritime communications in Spain, have jointly announced the installation of MTN's Rapid Deployment System (RDS) on the Spanish research vessel BIO Hesperides.

The RDS solution enables offshore energy vessels to establish voice and data communications using a temporary turnkey Ku-band satellite connection and VSAT equipment. The RDS is designed to provide VSAT communications on a temporary basis to vessels that require remote broadband access.

The Spanish vessel, bound for the last segment of a Spanish National Research Council-led Malaspina expedition, needed rapid deployment of a temporary broadband satellite communications solution for the voyage. MTN/ERZIA says that its team subsequently managed to install the RDS within one day.

"The solution from MTN is essential for meeting the Malaspina expedition's objectives," says Jordi Sorribas, CTO of Unidad de Tecnología Marina.

"Broadband communications allow for us to conduct real-time transmission of data such as the vessel's position and altitude, as well as the depth of the ocean and its physical and chemical characteristics."

"We transmit this data direct to shore now, instead of relying on an onboard data-processing technical specialist to do so. And the entire system can be repaired

and reconfigured remotely in case of any failure or needed operational changes. We can even have new software installed remotely as new demands for the project emerge."

News of this new installation followed shortly after the official opening of a new teleport in Spain developed under a joint venture between MTN and ERZIA.

The teleport will serve as a centralised gateway for MTN's VSAT communications with coverage over the Americas, Europe, and Asia. The facility is located in Santander, in northern Spain.

The new facility is one of the first in the world to provide C- and Ku-band commercial service as well as X-band service for government customers at a single location.

The Santander teleport can see all of the satellites in the GEO orbit from 60W to 65E, covering a region from Western Australia to North America, the Mediterranean Sea, and the Indian and Atlantic Oceans.

"The combined resources of MTN and ERZIA within the Santander teleport offer efficient and innovative managed networking technologies from a new and far reaching international satellite gateway," said Richard Hadsall, CTO at MTN.

"Our intent is that this new facility will lift the whole industry to a far more competitive position by creating attractive opportunities for not only MTN but for Spanish and European service providers, enterprise and even consumer subscribers."

FleetBroadband for 211 vessels in India and Germany

www.shipindia.com
www.harren-partner.de
www.stratosglobal.com

The Shipping Corporation of India (SCI) is to deploy an integrated FleetBroadband solution on its fleet of 156 vessels, while Harren & Partner Ship Management of Germany is to equip 55 ships with the satcom technology. Both companies have partnered with Stratos on the new installations.

SCI is India's largest shipping company, and will implement the FleetBroadband system in conjunction with Stratos' AmosConnect 8 communication software, as well as introducing crew communications via AmosConnect CommCenter and deploying the Blue Ocean Wireless (BOW) GSM service.

AmosConnect 8 integrates vessel and shore-based office applications, incorporating e-mail, fax, telex, GSM text, interoffice communication, and access for mobile personnel into one messaging system as well as bringing ship-relevant data to a central information page.

AmosConnect Crew CommCenter provides each crewmember with a separate account for calling, private e-mail and SMS at flat rates.

SCI says it expects to deploy the internet café function of the system later this year, and that it hopes to improve crew welfare and promote crew retention as well as increase productivity and control costs.

"In our ongoing mission to ensure optimal business efficiency, crew productivity and cost control, we understand the critical importance of broadband connectivity," said Kailash Gupta, SCI's director, per-

sonnel and administration.

Under its deal with Bremen-based Harren & Partner Ship Management GmbH & Co. KG (H&P) Stratos reports that it is nearing completion of its deployment of an integrated FleetBroadband solution, including several Stratos applications, on 55 commercial vessels.

The deployment on the last 15 of the H&P vessels will include accounting authority and point-of-activation services, as well as the AmosConnect Crew CommCenter, online Stratos Dashboard and Stratos ChatCards.

To enhance internet security an encrypted Virtual Private Network (VPN) via IPSec has been implemented between Stratos' Land Earth Station in Burum, The Netherlands and H&P's corporate office in Bremen.

H&P uses the encrypted VPN's remote dial-in option from Bremen to connect to all its vessels providing direct access to each FleetBroadband terminal, the system's firewall and the captain's computer system.

H&P will use the data connection for numerous onboard applications, including planned maintenance systems, purchase systems and remote management.

"In the design and implementation of this FleetBroadband network, Stratos demonstrated its ability to customise an advanced system to our precise requirements," said Caspar Graf von Spee, H&P director.

"We appreciate being able to secure this type of comprehensive solution – including new terminals, airtime, cost-containment applications, remote-access tools, our own e-mail domain and encrypted VPN tunnel – from a single provider."

Intellian announces 83cm Ku-band antenna

www.intelliantech.com

Intellian Technologies has announced that it is to release an 83cm 3-axis Ku-band stabilised VSAT communications antenna, to begin shipping in September 2011.

The antenna will feature Intellian's gyro-free satellite search algorithm, to find and lock onto the satellite without using a separate input from the vessel's own gyro-compass.

The company also says that it has incorporated a "higher gain performance design" to allow the v80G to increase operational dependability on the edge of a signal footprint.

The three-axis v80G has unlimited azimuth, and uses two cables between the v80G's ADU and BDU by combining the BUC power and TX signal into one cable. The other cable carries the RX signal.

The antenna has an elevation range from -15° to +110°, a maximum roll of +/- 25° and pitch of +/- 15°.

Intellian has developed an Antenna Control Unit (ACU)

for the v80G that supports Wi-Fi connectivity for control and monitoring of the system. A Bluetooth Connection Module is also provided to connect directly with the antenna dome.

The antenna supports a range of Block Up Converters (BUC) including NJRC 4w, 8w, Codan 8w mini BUC.



Intellian's 83cm VSAT unit will begin shipping in September 2011

Tesacom granted Iridium licence in Panama

www.tesacom.net

Tesacom, a provider of telecommunication solutions in Latin America, has announced that the company has been granted licences to provide Iridium voice and data communications in Panama, the first company to have such a licence in the country.

Tesacom has developed and certified a VKI Tesacom product, for use on the Iridium global network, providing integrated voice, data, e-mail and vessel monitoring solutions for the Panamanian mar-

itime sector.

"This announcement reinforces the strong relationship we have maintained with Iridium since 2007, as well as our commitment to the region," said Jose Sanchez Elia, CEO of Tesacom.

"Acquiring this licence enables us to expand the Iridium footprint, bringing advanced voice and data communications into Panama. Tesacom's first-rate customer service and after-sales service in Spanish, Portuguese and English, makes us uniquely qualified to serve end-customers within the region."

Datacom to launch eNOAD solution

www.getdatacom.com

Communications provider Datacom has announced the launch of its new solution for electronic Notice of Arrival/Departure (eNOAD) compliance.

eNOAD is a requirement by the United States Coast Guard (USCG), which obliges a representative (i.e. the captain or fleet operator) of a vessel to notify the USCG upon arrival and departure at the US border.

Fulfilling this obligation, says Datacom, can create an administrative challenge, especially if vessels were not previously

required to carry a satcom system with access to the internet.

As a result Datacom and KVH have jointly created a system for the workboat sector, incorporating KVH's mini-VSAT broadband system using 60cm or 30cm antennas, and offering specialised rate plans.

"This solution now makes it affordable for vessels like tugs, barges, and fishing boats to get reliable broadband service," said John Poindexter, CEO of Datacom.

"There's no better combination of size, speed, and coverage on the market today."



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Piracy calls on Iridium now free of charge

www.iridium.com

As part of its anti-piracy initiative Iridium reports that it has made all calls from ships equipped with its communications terminals to the UK Maritime Trade Operations (UKMTO) centre free of charge, effective immediately.

The UKMTO office in Dubai is the primary point of contact between merchant shipping and naval forces patrolling the high piracy risk zone off the Somali coast.

UKMTO has direct communication to all naval assets in the area and plays a key role in coordinating the naval response when pirates board and attack ships.

Under Iridium's calling plan, all calls to the UKMTO +971 number will be connected through the Iridium network free of charge.

"As a service to our important mar-

itime customers, we strongly support the improvement of communications for ships who may encounter piracy," said Dan Mercer, vice president and general manager, Europe, Middle East, Africa & Russia, Iridium.

"Recognising that Iridium can provide a critical communications lifeline in a potentially life-threatening situation, it is our responsibility to support the crew by removing any barriers to free and open communication with authorities."

Iridium notes that it has been working with its partners to outfit an increasing number of ships with 'citadels,' where crews can take refuge and wait safely when pirates board.

A key element in the citadel strategy is a stand-alone, secure communications link to the outside world, so the crew can connect with rescue operations.

Several companies are now offering citadel communication packages with a concealed external satellite antenna and cabling that cannot be easily disabled by the pirates on the ship.

"The anti-piracy patrol zone is so large that naval forces are seldom able to come to the aid of a vessel under attack before the pirates take over the ship," said Michael Capocchi, president and CEO of Beam Communications, one of the companies offering Iridium-based citadel solutions.

"It becomes difficult, if not impossible, for a rescue attempt to be made without endangering the lives of the hostages. This is why it is critically important for military authorities to confirm that all crewmembers are safely barricaded inside the citadel before any attempt can be made to storm the ship."

Thrane & Thrane launches FB voice distress system

www.thrane.com

Thrane & Thrane has announced the launch of a non-SOLAS voice distress calling system using FleetBroadband, via its 'SAILOR 3771 Alarm Panel FleetBroadband'.

Inmarsat says that the company's recently launched Voice Distress (Non-SOLAS) Calling service provides full priority access in both ship-shore and shore-ship communication in emergency situations, together with pre-emption for distress priority calls initiated by activation of the 'red button'.

The service is able to interrupt non-urgent calls once the distress button has been activated and give full priority to subsequent emergency communications.

A voice distress call from the FleetBroadband system will be connected to an operator at an MRCC (Maritime Rescue Coordination Centre). Each Inmarsat-4 satellite region has a nominated MRCC; RCC Australia, RCC Den Helder (Netherlands) and RCC Norfolk (USA), which assesses the call and directs details to a suitable rescue co-ordination centre closer to the scene of the incident.

The SAILOR 3771 Alarm Panel FleetBroadband has been designed for integration with Thrane & Thrane's SAILOR 150, 250 and 500 FleetBroadband terminals and is the first system in the market to pro-

vide the Inmarsat Voice Distress (Non-SOLAS) calling functionality.

"Inmarsat has, throughout its existence, strived to provide the broadest and most efficient means of enabling the seafarer to make contact with the appropriate authorities in times of distress or trouble," says Peter Blackhurst, head of maritime safety

services, Inmarsat.

"The new voice distress service will enhance safety for any vessel where the option is fitted to its FleetBroadband terminals. We are also working towards bringing the system to the IMO in order to establish it as a full part of GMDSS in the future."



The SAILOR 3771 has a 'red button' which will activate distress calling, with priority and pre-emption, on FleetBroadband

Broadband by Powerline for ships

www.gentay.co.uk

British IT supplier Gentay has launched a wireless network solution for vessels using 'Broadband by Powerline' (BPL) networking technology.

Gentay says it has devised a system for establishing a large, stable combination of a wired and wireless network on board a vessel, using power cables to carry network traffic.

The network system developed by the

company was subsequently tested in collaboration with Wallem Group, and demonstrated during sea trials that the BPL technology was equal to conventional networks with regards to speed, capacity and stability, according to Gentay.

The aim of the technology is to remove certain disadvantages which Gentay has identified in the current wired or wireless network options usually used on board, such as time consumption in installation, and the expense or difficulties of repairing

faulty networks.

"Low cost practical networking solutions will open the door to many applications that will be of great use to the maritime industry but have been unaffordable because of the prohibitive costs of installing the required physical network on board," said Martin Nygate, director of Gentay.

Mr Nygate notes that IP CCTV could be one prime example of an application that could be easily installed and operated using the BPL system.

Integrated FB and VSAT service from Telemar

www.telemar.se

Telemar has launched a new integrated VSAT and FleetBroadband service, named SeaCall Duetto, offering global satellite connectivity for a fixed monthly fee.

The service is managed via the Telemar Office Connect onboard server, which controls selection of the different systems and the transfer of data between ships and shore.

This switching is done automatically, so the user does not have to manually choose the appropriate satellite communications option for their particular location. Various communications optimisation options are also managed by this service.

While the FleetBroadband service will come into effect in areas where Ku-band coverage is unavailable, Telemar says that, in its overall experience testing the new service, the vessels using the system only needed to switch over from the VSAT for a few hours over a period of some months.

Telemar also says that it will soon be offering the Duetto product with a number of additional optional extras, such as its SeaView IPTV@sea and Vision@sea services.

These applications allow crews to view multimedia content from PCs or TVs and allow officers to communicate via video calling through the use of video-on-demand and secured satellite capacity.

Modular maintenance contracts can also be included with the satellite communications package.

Elektrikom to expand VSAT capacity

www.vsat.eu

www.telenorsbc.com

Telenor Satellite Broadcasting (TSBc) has signed an agreement with maritime VSAT provider Elektrikom for the provision of satellite capacity from its 1°West orbital location.

Utilising capacity on TSBc's IS 10-02 Spot 1, Elektrikom will manage and deliver VSAT services throughout Europe.

"The additional capacity on IS 10-02 Spot 1 will be used for maritime VSAT services, providing shipping vessels, specifically in the Mediterranean, with much needed capacity to support additional broadband communication services, demanded by crew to stay connected at all times, whilst at sea," said Andre Eerland, CEO of Elektrikom.

"This is the first contract we have signed with TSBc and look forward to working with them in the very near future to grow our capacity requirements at 1°West."

TSBc says that its next satellite, THOR 7, due to commence commercial service in 2014, should also expand the satellite services available to maritime customers via its network.

Integrated communications at Port of Antwerp

www.portofantwerp.be

The Port of Antwerp has launched the Antwerp Port Community System (APCS), a collaborative venture providing a network of systems and solutions for electronic communication in the supply chain.

APCS is a project governed by the Antwerp Port Authority and Alfaport, covering the entire port, with the aim of

making the supply chains that interact with the port more efficient, transparent and reliable.

Various companies within the Antwerp port have, over the years, developed a wide range of IT applications which have now been brought together under APCS in an attempt to offer customers better transparency and efficiency in their supply chain.

APCS, available for containers, break-

bulk and bulk, merges different IT applications into one solution, which simplifies communication between Port Authority, Customs & Excise, shippers, forwarders, rail carriers and logistic service providers.

"(The new system is) creating more

transparency, along with faster and more efficient exchange of information. APCS supports part of the supply chain and brings visibility to cargoes within our port," explains Alfaport chairman, Walter Van Mechelen.

Vizada launches XChange

www.vizada.com

Vizada has announced the launch of Vizada XChange, a new platform designed to provide a secure communications environment that integrates voice and broadband data for ship operations and crew.

The platform supports data, voice, VoIP and local networks. The company claims that it enables ships to become 'virtual mobile offices' encompassing local area networks and dynamic intranets for administration and crew.

Vizada XChange consists of a wall or rack mounted box component which interconnects on board IT with the corporate network as well as a web portal. The platform incorporates voice, VoIP and broadband data and is compatible with

other maritime communications connectivity services (including Inmarsat FleetBroadband, VSAT, etc.).

Ship administrators can use the Vizada XChange portals to choose their connectivity, configure access for crew and captains, re-bill and split costs.

"We've already seen some solutions released in recent years, but Vizada XChange is so much more than just a box," says Patrick Decool, director of new products, Vizada.

"This is a complete service offer that we hope will change the way people manage their maritime communications. Vizada XChange is not only versatile in its simplicity, but incredibly performant and I really believe that the end-users are going to enjoy using it."

Globalstar plans launch of new satellites

www.globalstar.com

Globalstar has announced that six new satellites are being prepared for the second in its series of launches under its second-generation satellite constellation programme.

Launch services provider Arianespace and satellite manufacturer Thales Alenia Space have begun the necessary testing and integration process in preparation for a July liftoff, which will use the Soyuz launch vehicle.

Globalstar plans to conduct two additional launches of six satellites per launch in 2011. Globalstar plans to integrate the 24 new second-generation satellites with eight first-generation satellites that were launched in 2007.

The new satellites are designed to support Globalstar's current line-up of voice, Duplex and Simplex data products and services.



Globalstar's planned July launch will be the second in a series of four, with the first (pictured) successfully completed in October 2010. Photo: Arianespace

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Modern communications at Bernhard Schulte Shipmanagement

Having implemented a new Microsoft based communication platform across its organisation in late 2009, Bernhard Schulte Shipmanagement (BSM) has spent the last year refining the use of the technology to maximise productivity. Christos Vassiliou, BSM IT manager, told *Digital Ship* about the project

Bernhard Schulte Shipmanagement (BSM), as one of the largest shipping companies worldwide, operates with over 1,200 employees in more than 30 offices, and owns and manages a multitude of vessels sailing all over the globe.

The size, complexity and geographical arrangement of the organisation require a high volume of internal communication, with the company having additionally had to deal with the challenges of integrating the operations of Hanseatic Shipping, Dorchester Atlantic Marine, Eurasia Group and Vorsetzen Bereederungs- und Schiffahrtskontor when they merged to form BSM in 2008.

In these circumstances it became clear that the conventional communication systems used within the company were no longer able to keep up with its growing demands, and the decision was taken to invest in a new, consolidated communication solution.

As a result, in December 2009 BSM decided to implement Microsoft's Office Communicator software system to form the foundation of this project.

The software provides users across over 30 BSM offices worldwide with one standardised communication interface, and is also now being used at sea, aboard one trial vessel.

According to BSM, the communication technology, which integrates services such as telephony, e-mail, instant messaging, video conferencing and data sharing, is a time and money saver that has made a considerable impact.

BSM management is spread across various locations – a demanding setup leading to hours of internal overseas communication and requiring people to travel on a daily basis.

Additionally, with BSM operating a worldwide organisation, various ongoing projects would require team leaders and team members to work in various different locations.

This spread of key resources would result in more than 100 hours of internal overseas calls daily, as well as dozens of employees travelling around the world for internal meetings every day – a situation that was less than optimal, as Christos Vassiliou, BSM IT manager in Cyprus, recalls.

"There is no centralised management, there is no one place where all the managers are based, we have directors and managers in almost all offices," he told us.

"Imagine all those daily meetings where directors and managers have to talk together, imagine the time that is required to set up such meetings and all the communications cost."

"Sometimes the meetings would have to be done on site because there would be some kind of presentation or very important discussions and they would have to travel to one place or the other to be together."

Integrating the organisation

BSM subsequently decided to begin its communications overhaul with the introduction of the Microsoft systems at the end of 2009, starting initially with a four month test phase.

With the results of this trial deemed successful by the company BSM deployed the technology throughout the organisation

wait for a return call and eventually have to call again."

"At times there is no option to leave a message or the recipient does not return the call promptly, or at all."

BSM has established that a significant volume of internal calls are not answered directly and do not result in a call-back as the intended recipient has not been made aware that someone was trying to contact them.

"About a third of the calls we make [at BSM] are missed calls and are not returned, maybe because of a lack of a notification system, or device that can take a voicemail," notes Mr Vassiliou.



'Organisations that invest in unified communications can create a good return on investment' – Christos Vassiliou, Bernhard Schulte Shipmanagement

tion in April 2010.

In the year since the system was first deployed BSM has continued to refine and improve the set-up, having now upgraded the Office Communicator to the Microsoft LYNC platform.

BSM is currently in the process of implementing the new version of the solution, a single integrated communication system which Mr Vassiliou notes has created huge time and cost savings.

"If you have to look up a phone number, this is a waste of time," he says.

"Maybe it takes half a minute or a minute for someone to find the number of the person they want to call. Time is wasted trying to phone the contact person in vain. The caller might leave messages,

system, VoIP channels between some offices were in use," said Mr Vassiliou.

"However different models and makes of telephony systems were giving us a hard time due to numerous compatibility issues."

"Video Conferencing (VC) room units have also been in use since early 2008. Following the deployment of the unified communications system, some of these VC units have been integrated into LYNC and can now be called within a LYNC session."

With all of these obstacles taken into account, BSM has figured out that overall more than ten per cent of working time is wasted in the process of looking for the right contact person and in the process of organising the contact or meeting.

"All these things waste our working time, so productivity is decreased," said Mr Vassiliou.

"Organisations that invest in unified communications can create a good return on investment with regards to productivity, flexibility and communication."

Real time communications

Apart from the time wasted, the previous conventional communication systems also incurred direct tangible, monetary costs.

The company set-up had comprised the use of traditional land based telephone lines as well as mobile phones, creating a cost factor which, especially for a large, geographically spread organisation, could become substantial.

The Microsoft Office Communicator offered a solution to this by providing a single platform to integrate real-time services such as VoIP based telephony, video conferencing, instant messaging, presence and data sharing, as well as near-real-time services such as e-mail, text messaging and voicemail.

The platform is a set of products that is designed to provide a consistent unified user interface and user experience across multiple devices and media types. It allows users to communicate within the same company without having to change interfaces, with data also able to be shared across the same platform.

Real-time communication for BSM most importantly consists of telephony, and within the new communications solution all intra-organisational telephone calls are integrated into the software system.

Instead of using conventional telephone lines, the system utilises VoIP as a transmission technology. VoIP allows for internet-based calls between offices in different countries, as well as to home workers that have connected their telephone to

the unified communications platform.

The option of connecting mobile phones to the platform is now also available, which the company says in many cases dispenses with the need to carry a laptop when travelling – all communication methods are made accessible with normal mobiles which have LYNC integrated software installed.

LYNC essentially allows the user to make a phone call without having to pick up the phone. The platform provides the telephone and mobile phone number, and, with a click on a symbol, a call utilising VoIP can be initiated.

If the recipient of a call is not at their desk, LYNC offers the option to have all calls forwarded to a LYNC compatible and connected home phone or mobile device.

“We can utilise the system any way we want, this is a big advantage,” notes Mr Vassiliou. “For people that have to be 24/7 available this is a must.”

If face-to-face communication is required the system allows for video conferencing across global offices from within the same platform, simplifying group communication.

If a presentation is to be discussed, the system allows for desktop sharing, enabling several users to see the presentation live on their respective screens.

A shared whiteboard feature is also included, allowing people to more efficiently work together on a project regardless of where they are.

Instant messaging (IM) is another feature integrated into the communication solution.

Instead of having to sign up to various different IM providers, all IM communication is centralised and incorporated into the interface used for telephony, video conferencing and near-real-time communication services.

This unifies IM communication for the users, as well as reducing the administrative complexity for IT support.

If data needs to be distributed within the company, users can utilise the platform’s data sharing solution. Data packages can be shared with other users within the system instead of sending the data across via e-mail.

In this case it is uploaded onto the communications platform, where it is made accessible only to authorised users.

Near-real-time communication

Apart from real-time communication services, the communications platform further integrates solutions for near-real-time communication, where the action of a user reaches the recipient with a certain delay.

As such the platform comprises an e-mail program, as well as the option to text message to LYNC-integrated company mobile phones or leave a voicemail.

These services are part of the same user interface that includes the telephony, video conferencing and data sharing.

In addition to incorporating communication means already in use, albeit on different systems, the platform further features a tool that is called ‘Presence’.

This allows the individual user to make

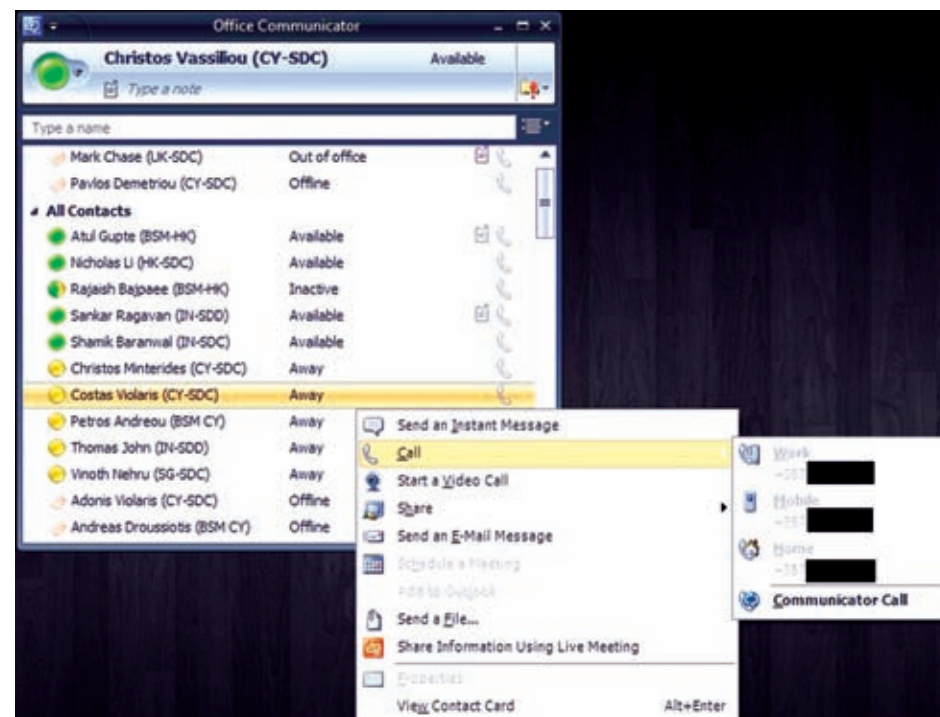
his or her data, such as name, position, geographical location and office position, picture and contact details available to other users, and enables the user to fully integrate their Outlook calendar into the platform and thus share appointments and availability for communication.

The tool additionally recognises when a user is in a phone call and sets their status accordingly, regardless of whether the caller uses a desktop phone, mobile or home phone – as long as they are connected on LYNC.

Presence also shows how long a person is available for, according to their schedule, so another person wishing to contact them can therefore determine whether the time frame is long enough for the particular call, or if it will make sense to wait until a more convenient time.

The availability status is colour coded, to make it instantly recognisable if a person can be contacted. The colour coded information window is visible on all communication methods.

A user who receives an e-mail can



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therefore instantly determine whether he can call the sender back for a question that needs clarifying or whether that person is busy, and until what time.

Software platform

The communication platform is based on Microsoft software. Initially BSM chose Microsoft Office Communicator, which has been updated to Microsoft LYNC as new versions have been released.

The LYNC platform requires the use of both physical and virtual servers to run the integrated solution, as Mr Vassiliou explains.

"Successful LYNC platform deployment requires the use of at least two physical servers and a number of virtual servers each having a specific role," he said. "Integration with telephony also requires LYNC compatible telephone devices."

"This is the basic infrastructure. Of course additional servers and gateway devices are required for redundancy for uninterrupted telephony service if LYNC enterprise telephony is deployed."

Voicemail messages can also be delivered to Outlook as audio files. This ensures that voicemail messages can be picked up from anywhere in the world whenever internet access is available.

The platform further allows call forwarding from the LYNC client to a user's integrated mobile phone, home number or to a colleague functioning as a backup.

"The LYNC server is centrally hosted in BSM Datacenter and it is controlled by the BSM Cyprus IT Dept," said Mr Vassiliou.

"Local offices require only minimal IT support to set-up the client application on users' computers and provide brief training. The vital role of LYNC telephony increases the infrastructure requirements and BSM is now planning to setup local LYNC servers for redundancy and uninterrupted telephony service."

"When you deploy such a system is very important to have reliability. You cannot rely on a single server or a single internet provider or a single location."

Unifying communications at sea

Of course, in addition to its more than 30 land based locations BSM has a multitude of vessels at sea at any one time, also acting as 'floating offices'.

To maximise the impact of the implementation of a unified communications platform it is not only the employees in the offices ashore that have to be connected to the communication solution, but also the masters at sea.

BSM's vision is to make all employees within the company available on the same platform, and allow them to be contacted using all featured communication services.

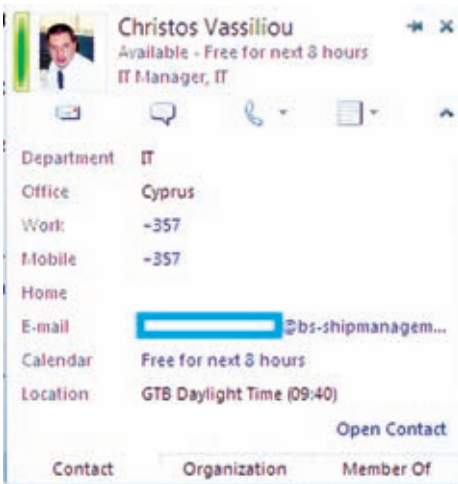
"In this vision the vessel becomes another user in our directory," said Mr Vassiliou.

"We know the presence of the vessel; we know the presence of the captain. On the other side the captain knows if the person he wants to contact is in a meeting or available. He can contact them anytime. Imagine the flexibility that the system provides!"

"How many times do masters make calls to the office trying to reach a person when the person is not there? So you save

on communication costs from the side of the vessel as well, because the master will get in touch with the person when he is available. Or he can just chat, which is much more flexible sometimes."

In order to evaluate the suitability of the communication platform for use on board BSM vessels a trial was initiated, with a first sustainable system installed on the container carrier 'Mary Schulte'.



Company employees' profiles display contact details as well as information about the person's schedule and availability

For the system to function on board the foremost requirement for BSM was to have an 'always on' internet connection. To enable this constant internet availability, the company decided to equip the Mary Schulte with a mini-VSAT system from KVH.

The satcom service was deployed in mid-November 2010, and was the first system of its kind to be installed on a BSM vessel. A FleetBroadband 150 was also installed, as a back-up solution.

The 'fixed fee' connection to the internet provided by the VSAT system enables the vessel to become an active participant in the LYNC-based unified communication platform.

The captain's availability for communication can be instantly determined through the 'Presence' tool, and telephone calls over VoIP, as well as instant messaging, become possible.

"The location of the vessel and the satellite signal level is important for a solid internet connection without interruptions," notes Mr Vassiliou.

"So, depending on this parameter the caller can initiate a VoIP session without interruption in areas where the satellite signal is strong, or compromise by using IM which is reliable and smooth even in areas with weak satellite signal."

"Further to that, the 'Presence' feature allows the vessel to have online information on the status of their contacts on shore, and saves time avoiding calls to people that are not available to answer."

One result of a four month trial period of the unified communications system on the Mary Schulte was a significant increase of in the mini-VSAT traffic to and from the ship.

From a data volume of approximately 340 MB in the first month of the VSAT deployment the traffic skyrocketed to just below 2 GB in month four of the trial period.

So far there are currently 11 BSM vessels that use a VSAT system and so are consequently in a position to avail of the

new communication platform.

BSM says that it expects this number to increase to nearly 100 over the next couple of years.

BSM also says it has seen a high level of user satisfaction since the introduction of the new platform, assisted by the fact that the set up and user introduction period has been quick and uncomplicated.

"Initially LYNC access was provided to those people identified with the higher needs of overseas communication and travelling," notes Mr Vassiliou.

"The response was very positive and soon the software was as important to them as their cell phones. By the end of 2010 our platform had over 850 registered users. The client software and the integrated Outlook module have clear and easy to learn functionality."

"A brief training of 30 minutes is more than enough for an average user to make a solid start with this new technology. People use the LYNC platform with confidence and comfort and they feel that they have in hand a great tool which helps them increase productivity and makes their working life much easier."

Return on investment

The implementation of a single communication platform across all of the offices, and potentially all of the vessels, of a global company obviously requires a significant initial financial investment.

For BSM, given the size and distribution of the company, the initial investment was "substantial", however the company is confident that the return on investment (ROI) from integrating its communications will prove to be considerable.

After a trial period of more than a year BSM believes that this has been verified, and is today so convinced of the benefits of the move that it speaks of a "guaranteed ROI" on the project.

Conventional intra-organisational telephone costs between branches, to home workers as well as to company mobile phones have been dispensed with, and offices in various geographic locations can avail of the benefit of least cost route implementation.

"We have a huge number of calling sessions on a daily basis - our OCS/LYNC platform statistics for January/February 2011 (before the installation of LYNC telephony) showed that calls and conferences were exceeding 120 sessions per day with an average duration of 15 minutes and 2.2 participants per session," notes Mr Vassiliou.

"That is a minimum of 33 hours of zero cost international telephony per day, considering that one or more people would pay for an international telephone call during each session. These numbers are expected to triple once LYNC telephony is fully deployed."

"If we add up the savings in the highly reduced travelling expenses as people can perform online presentations and have shared whiteboards beyond the use of video conferencing, the ROI is guaranteed within a very short time."

Costs are further reduced on company calls to third parties - instead of paying for the full international rate, the call is routed through the organisation's branch servers, and only the local rate for phone

calls is charged.

"Imagine someone in Cyprus wants to call someone in Hong Kong, UK or Germany; the unified communications system can route the phone call from the Cyprus server to the Hong Kong server and that server will initiate a phone call to the third party," said Mr Vassiliou.

"So, forget overseas calls!"

Other benefits

After a utilisation period of over a year BSM, and Mr Vassiliou in particular, have also been pleased with the effect that the introduction of a unified communication platform had on the simplification of IT administration, enabling the IT department to maintain a single platform rather than a multitude of different services.

"Unified Communications is not a single product, it is an environment," said Mr Vassiliou.

"It consists of several products which are integrated together under one interface. Within one software [the user] can switch between different actions just with the click of a button."

The set up and update of user accounts, which is a vital requirement for the functionality of an all-encompassing communication platform, is simplified. It takes no more than 15 minutes for installation and configuration.

BSM has seen a significant reduction in required travel as a result, with meetings over video conference becoming increasingly accepted.

"We had a huge decrease in travelling in 2010," notes Mr Vassiliou.

"People were travelling all over the world to have meetings with shareholders, directors and managers. Forget all that! Now we are doing all meetings, even important committee and management meetings online. There is no need to travel to another country for a meeting anymore."

"The user has a lot of flexibility. From Outlook he can initiate instant messaging or a voice call without having to change the interface."

The whole process of intra-organisational communication is thus believed to be operating at a vastly improved level of efficiency compared with the previous infrastructure, and financially the incorporation of the platform has proven a valuable investment for BSM.

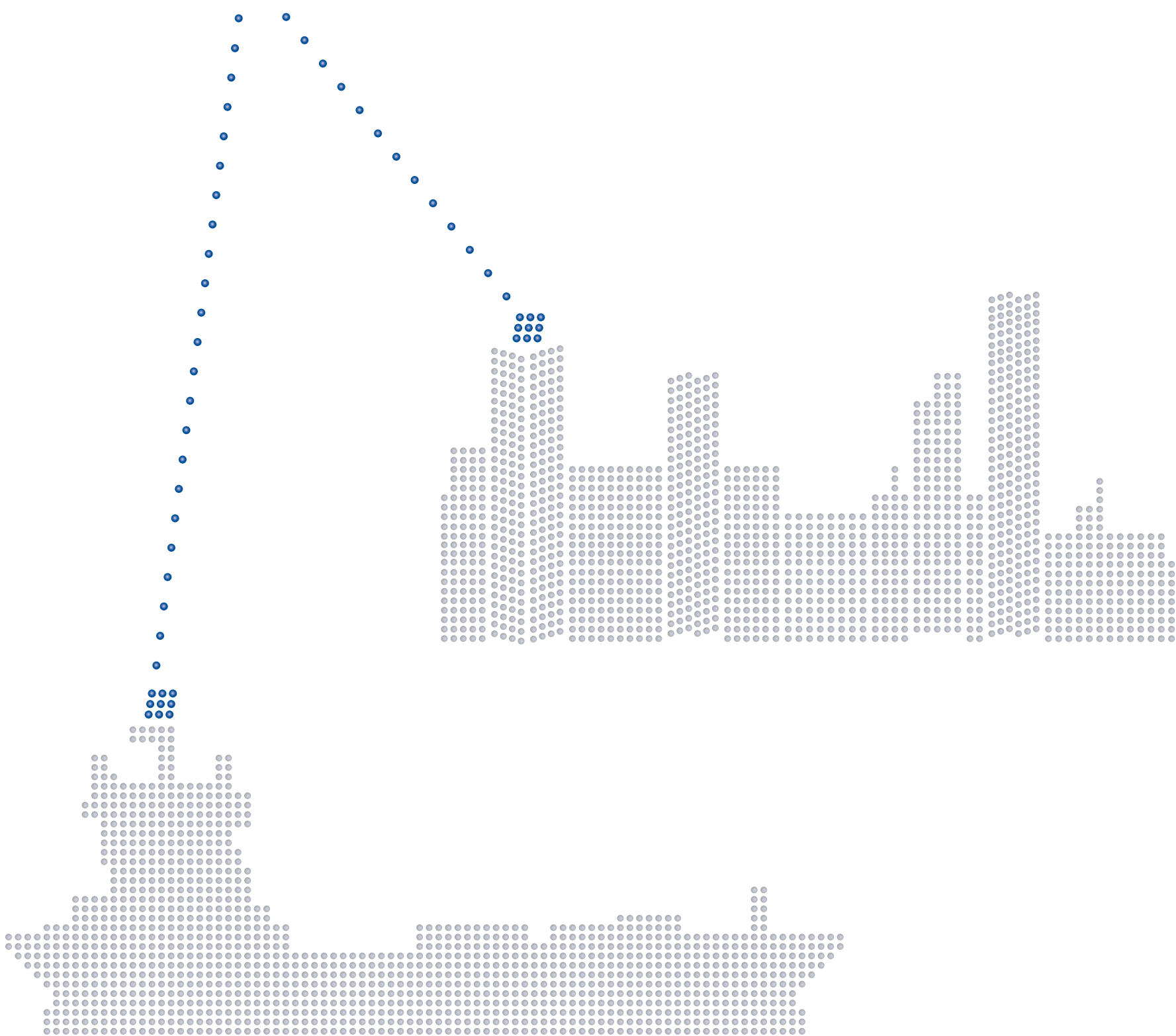
The voyage from inefficient communication using various different systems has now reached an end for BSM with the implementation of the unified communications platform. Tried and tested over a considerable period on shore and onboard the system has proven its value both financially and in terms of user satisfaction.

The success BSM has had in deploying the unified communication system on board a vessel, as well as in the offices, has also convinced the company to continue equipping its fleet with the higher-usage internet solutions necessary to facilitate the communications platform.

In fact, the experience had been so satisfactory that BSM says that it would recommend the implementation of such a system for any larger maritime organisation, and is positive that an ROI is guaranteed for companies that have extensive branch to branch overseas communication and a lot of intra-organisational travel.

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VSAT at Spliethoff – Fair Service for a Fair Price

Spliethoff Group of the Netherlands is currently in the process of rolling out a new VSAT communications network aboard its ships, having conducted an extensive vendor review to make sure that the company was getting the best possible value for its investment. Peter Van de Venne, Spliethoff, told *Digital Ship* about the process

At the end of 2010 the Amsterdam-based Spliethoff Group, the largest shipowner in the Netherlands, announced a deal to expand the use of VSAT across its fleet, signing a three-year contract with Radio Holland covering an initial 16 vessels, and potentially expanding to 50 ships.

Under the deal Radio Holland, as part of the Imtech Marine group of companies, was tasked with managing the introduction and installation of the entire network, including hardware, airtime and maintenance of the onboard systems.

Now, after approximately six months since the beginning of the implementation project, Spliethoff is running Radio Holland's Ku-band service on 13 vessels, with eight more in the process of being upgraded.

With the fleet also using KVH's mini-VSAT service on another of its ships Spliethoff will soon have a significant number of its vessels running with VSAT services installed.

The major driver for the company in its decision to embark on this project has been to offer improved services to its crews, while also opening up additional opportunities on the operational side, by increasing its usage of satellite communications.

However, with the trend in data traffic only likely to continue upwards in the future, Peter Van de Venne, director of IT for Spliethoff, decided that a change in satcom services was required – and that the company would look to obtain a "fair service for a fair price."

To introduce the kind of functionalities he had in mind Mr Van de Venne quickly came to the conclusion that Spliethoff would have to look at moving to a VSAT solution, with satcom bills likely to escalate to an unmanageable level if operated on a pay-per-use basis.

"VSAT Ku-band is the only system currently on the market where you can obtain reasonable speed for an always-on internet connection at a high but manageable price," he told us.

"It provides our crew the much appreciated internet access and on the business side it speeds up communication (not having to wait for e-mail exchanges a few times per day), and gives captains access to relevant online information like port and cargo details. It also gives our vessel support engineers the ability to provide remote support by directly taking over PCs."

"During a pilot, we found out that our vessels were 'burning up' about 10-15 GB per month each. That would translate into a lot of US dollars when paying per use, as with FleetBroadband or F77, and we did

not want to wait for the, at the time not even officially announced, Inmarsat Ka-band satellites."

Selection process

Spliethoff conducted an extensive selection process to choose a new partner to provide its Ku-band connectivity, with one of the key criteria being the availability of coverage on a near-worldwide basis, to be able to meet the demands of the company's globally trading fleet.

"When we started with our first pilot, suppliers only had bandwidth available on a few satellites and the Automatic Beam Switching (ABS) was not easy to operate and sometimes faltered," noted Mr Van de Venne.



"During a pilot we found out that our vessels were burning up 10-15 GB per month each" – Peter Van de Venne, Spliethoff

"The ABS issue is now available from most providers however, and also coverage has been improved."

Despite this, Mr Van de Venne does note that VSAT is still not a truly global service, and that Spliethoff will continue to maintain its installations of a variety of Inmarsat services on its ships in tandem with the VSAT installations.

"Still there are several areas, like the Indian Ocean for example, that are not fully covered," he said. "This is why we keep FleetBroadband (or F77) as backup."

"Before VSAT, we were and are still using FleetBroadband, F77 and Sat-C. Before that we also used mini-M, and Sat-B and Sat-A."

Another important aspect of the selection process for Spliethoff was maintaining flexibility in the hardware it installed,

so the decision was taken to use equipment that would be widely compatible rather than implementing a proprietary solution.

"We decided to select an antenna (choosing one from Sea Tel in the end) that is used or allowed by multiple airtime providers," said Mr Van de Venne.

"This gives us, in principle, freedom to switch airtime provider if needed. Healthy competition is always good for consumers."

In the end, after having proven its ability to provide Ku-band services under these conditions, Radio Holland won the VSAT contract with Spliethoff, helped in no small part by the fact that the companies had already had a successful existing relationship.

network for Spliethoff, with separate access for different users, that would be seamlessly accessible on a worldwide basis, as Rob Verkuil, manager, Radio Holland Connect, notes.

"For this network we worked together with Spliethoff to realize the setup for a very profound IT configuration. The challenge for Radio Holland was that the provided VSAT connection had to cover most of the global sailing networks of their business," he told us.

"The Connectivity Solution of Radio Holland offers the worldwide VSAT Ku-band network with automatic beam switching. As part of the Radio Holland Connectivity Solution we deliver a FleetBroadband terminal as an alternative solution in the regions where VSAT does have less coverage. In this way the connection to shore is always secured."

"The Radio Holland network capacity had to be sufficient for voice calls, business applications for remote support and e-mail traffic. Also Spliethoff required Dutch phone numbers and voice billing flexibility to their end users by a end user portal – our end user portal gives flexibility and clear insight in their network traffic and voice administration."

Spliethoff has been working with Radio Holland to push the reporting capabilities of the system even further, and expects to soon implement a daily transfer of detailed call records (via e-mail or ftp), which can be forwarded to the vessel and used to properly charge the crew for their actual communications usage before they leave the ship.

One specific aspect of the contract that Spliethoff has been happy with has been the inclusion of an agreement whereby the costs of the backup system incurred during VSAT downtime or time out of coverage can be used to reduce the monthly fee paid – a direct example of the idea of a "fair service for a fair price."

"During our pilot we managed to obtain coverage guarantees from our airtime providers," said Mr Van de Venne.

"That is why an out of coverage compensation was highly appreciated. I hope that this trend continues."

Network installation

Installation of the systems onboard Spliethoff's ships has also included the introduction of separate networks for different types of use, completely segregating crew and business access.

These networks were implemented on the vessels by Radio Holland, based on the guidelines provided by Spliethoff's IT team.

"We have split the network on board

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into separate sub networks (VLANs) for business, crew and voice, as well as a sensor LAN," Mr Van de Venne explained.

"A central firewall is used to manage the interconnections. Wireless access is, in principle, not used, because it is more difficult to manage, more difficult to arrange coverage and may interfere with other radio signals."

"As the crew network is completely separated from the business network what they do on their private laptops is their own responsibility. For the business network, we have the challenge of keeping the anti-virus and anti-malware up to date."

The availability of crew communications, in particular, was a major influence on this network design, as Mr Van de Venne recalls.

"The business usage of voice and data was not our main reason for upgrade, we could have continued well with basic e-mail functionality, which we could also use for synchronising databases," he said.

"It was the crew welfare side combined with speeding up business communication that were the primary reasons for upgrading. We used to dial-in only once or twice per day to exchange messages."

"It is important to provide good facilities for crew members. Providing 'always on' internet will hopefully keep them enthusiastic about life at sea and especially to continue working for the Spliethoff Group."

As such Spliethoff is providing, on its VSAT enabled ships, online internet access to its crews without any traffic restrictions.

"(Achieving this, and doing it) at the lowest cost was the first goal," said Mr Van de Venne. "These young cadets that have grown up with internet would be shocked if they didn't have any internet access at all on board. New times call for new ways."

"An important aspect of this is defining a clear policy for use of onboard ICT systems though. In some countries the carrier is held responsible for what crew has on their own laptops. Also, we cannot allow distractions on the bridge or engine room."

Spliethoff has chosen not to add any optimisation and compression systems at this time due to what it sees as the extra cost and extra maintenance that would be involved. The company believes that there is no immediate need for such systems at present, though conceded that this may change in the future.

Another issue for the company to contend with in the management of its com-



Spliethoff's ships will be installed with the Connector by Radio Holland VSAT service (right), with FleetBroadband (left) as a back-up

munications is what, and how, to charge the crew for private use of these new services, which have been, after all, primarily installed for their benefit.

"In the old days, we would simply forward the Inmarsat phone details to the ship daily so that private calls could be charged to the crew," notes Mr Van de Venne.

"Now that is much more difficult. Just think about MSN phone calls alone. If you decide to charge based on usage, you need to install additional equipment for it which also brings additional costs."

"As a rule of thumb you may say that whatever you give as bandwidth will be taken by the vessels. The charged voice minutes could appear to remain about the same, but of course a lot remains hidden because the crew is also using VoIP calls via MSN, or other methods."

Remote access

Spliethoff's VSAT-enabled vessels are connected to shore offices via a VPN tunnel, which has helped the company to add additional remote access capabilities to its IT infrastructure.

"This allows us to monitor if they are online via VSAT and makes it easier to

access the business PCs on board for remote support," notes Mr Van de Venne.

"We are already working with remote support on ships' cranes. However, because of the less predictable connection and high latency, we are not pushing on-line applications to the office."

"A clear challenge is keeping the virus and malware control up to date. But for business applications we can rely on database synchronisation via e-mail, and do not really need a direct connection."

While this remote access has allowed Spliethoff's IT staff to more effectively manage onboard systems, Mr Van de Venne is still not completely satisfied with the remote connectivity capabilities currently available to shipping companies, and believes there is a lot of room for improvement.

"It would be nice if suppliers would get together and decide on a standard way to monitor and support their equipment," he told us.

"Suppliers have a tendency to go for a VPN connection for themselves, while we as a carrier wish to be able to have close control over how and when they get access. So we do not wish to give them

direct access via the satellite."

"We would also consider things like telemedicine and remote video, for technical maintenance support, as potential applications for the future."

However, in general Mr Van de Venne feels that, for the moment at least, online applications, such as those with a direct log-in to office applications, are not realistic in the maritime environment.

"Due to the high latency, which is true for all satellite connections not only VSAT, and potentially unreliable connections where you might have ships' cranes obstructing the satellites or weather influence, there is obviously a big difference when compared to landlines," he said.

Despite these limitations Mr Van de Venne is however fully convinced that broadband communication will be the way of the future in the shipping industry, and that the appetite for bandwidth will only continue to increase – particularly on the crew side.

"I think it is inevitable," he said.

"You only have to look at your situation at home, where in most cases you'll have at least 8 Mbps – and then we ask people to go to sea with nothing, or 0.032 Mbps?"

DS

Comtech and KNS integrate technologies

www.comtechefdata.com
www.kns-kr.com

Comtech EF Data Corporation, a provider of communication solutions, and Korea based KNS, specialising in marine antenna systems for satellite communications, have announced the integration of the SuperTrack Series of marine stabilised antenna systems and the Roaming Oceanic Satellite Server (ROSS) Open Antenna Management (ROAM) protocol.

The integration aims to enable the SuperTrack antenna systems on maritime vessels to roam across multiple satellite

beams, maintaining connectivity while moving through different satellite footprints and enhancing communication capabilities at sea.

The ROAM protocol offers a common management interface for Comtech's ROSS and third-party Antenna Control Units (ACUs) by providing a base set of ASCII character commands, information, interfaces and status queries.

ROSS is a location server that works in conjunction with Comtech's Vipersat Management System to facilitate on-the-move satellite communications for oceanic vessels.

It enables remote modems to interface with stabilised, auto-tracking antennas, maintaining connectivity as vessels move through footprints of different satellites.

Vessel position data, satellite signal and management status are monitored to determine when satellite handoff is necessary.

The ROAM protocol provides the basic parameters required to globally roam across multiple satellite beams as well as uniformity in the implementation of third-party antenna manufacturers' interfaces, while catering for unique characteristics and proprietary techniques of

different manufacturers.

"The interoperability of ROAM and ROSS with SuperTrack VSATs will enable maritime operators to have maximum bandwidth efficiencies and roaming capabilities for their satellite-based communications at sea," says Daniel Enns, senior vice president strategic marketing and business development for Comtech EF Data.

KNS's SuperTrack Series of VSAT stabilised antennas are built on 3-Axis platforms that enable them to gyrate along the X, Y, and Z axes and move 90 degrees per second.

Swire Pacific Offshore – satcoms for ‘Generation Y’

Swire Pacific Offshore is to install 60 ships with FleetBroadband 500 services, citing crew welfare as the major driver in the decision. Chris Payne, SPO, told *Digital Ship* about how communications is a ‘must have’ for crews from Generation Y

Singapore based Swire Pacific Offshore (SPO), an owner and operator of 74 offshore support vessels and with another 16 new buildings on order for delivery up to 2013, is currently in the early stages of a wide ranging satcom implementation project that should see 60 ships installed with a new communications network by the end of 2012.

This project is the result of a contract signed by SPO with Station711, the mobile satellite arm of RRsat Global Communications Network, in the first quarter of this year, comprising Inmarsat FleetBroadband 500 services and Station711's own smart@sea communications gateway, which will be introduced to each of the ships.

Installation of the Thrane & Thrane SAILOR 500 antenna systems and associated onboard Local Area Networks (LAN) will be managed through a collaborative effort between Station711 and service provider SMTS.

SPO's decision to move ahead with this communications project was driven by a need to increase the speed of connectivity available between the vessels and the shore based offices, but was also heavily influenced by a wish to improve crew services, as Colin Payne, human resources director, SPO, explains.

"The principal drivers were crew welfare, for internet and e-mail access," he told us.

"If vessels are not provided with a means for the crew to communicate with their families, then companies will find it hard to recruit and attract. This is less of an issue for Gen X, although it seems to be a 'must have' for Gen Y."

"Cheaper phone calls, internet banking access, news and sports websites, all allow the crew to remain more 'in touch'. The company also required a faster medium for transmitting information to and from the ships in respect of its own ship management systems/software."

agement systems/software."

To kick off this new project Mr Payne notes that SPO "approached, and was approached by a huge number of vendors" before agreeing to undertake a three month trial of the system proposed by Station711.

"On the whole, the trial went well," said Mr Payne.

"There was some criticism of the speed, although this was negated after some education of the crew in respect of satellite comms restrictions. There were a few teething problems and we were unable to try out e-mail properly, but on the whole the ship's crew reported positively."

Mr Payne notes that the company had evaluated a number of options other than FleetBroadband, particularly on the VSAT side, before agreeing to proceed with the Inmarsat solution.

"The choice was a trade off between size of dish and capabilities/pricing method," he said.

"VSAT was a more economical option in respect of data consumption, however the global nature of our operations required a system that utilised one satellite operator and did not suffer from rain fade. We were concerned that the data restrictions may prove unpopular, although this is not yet clear."

"The dish size was also more beneficial for SPO due to the restrictions on space availability on offshore support vessels."

Onboard networks

Station711's smart@sea gateway is used to control three separate LANs on the vessel, with one for the Master, one for commercial use and one for crew welfare.

The inclusion of this technology in the communications package was a key element in convincing SPO that this was the set-up it wanted on its ships. Station711 says that there are currently a "few hundred" of these gateway units in operation



The smart@sea gateway unit will be used to manage communications traffic over the FleetBroadband 500 systems on the ships

on ships globally.

"The principle reason for Inmarsat being the choice was the ability of smart@sea to control individual usage," said Mr Payne.

"It also provides advertisement stripping to reduce content transmitted over the web."

The onboard set-up includes a total of seven PCs and three VoIP phones for pre-paid or post-paid use, all connected directly to the gateway hardware, which is in turn connected via WAN to the FleetBroadband 500 terminal.

This gateway system is used to automatically manage a range of different communications functions, such as optimisation of the satellite traffic through compression, acceleration and caching, and security through the use of IP filtering.

With these protections in place SPO is confident that it will be able to provide a reasonable level of internet and e-mail access to the crew at a price that will suit the business, a situation which Mr Payne says was not really feasible with the previous communications set-up.

"We anticipate data consumption to increase, although we do not expect many crew to purchase additional minutes from the vendor," he said.

"Data consumption will increase due to the crews' access of the system. With Iridium (which was in use on most of the ships before the new project began), crew were not permitted to surf the internet."

"[However], there is to be no wireless access on board due to virus concerns. It will be server client based. No USB drives are permitted, except for the main ORBIS server. Individuals will not be able to connect their own PCs to the system."

Remote access to the ship from shore is also not something that SPO is planning for the moment, though that may come later, following the completion of the roll-out.

Similarly, further broadband-enabled applications such as video conferencing or telemedicine will not be considered under the current pricing structure, Mr Payne says.

"Once the system is deemed to be operating well and any bugs or issues are rolled out, we may well allow the vessels to access corporate DMS systems, drawings, manuals, etc," he told us.

"The use of applications is driven by the cost of the data. SPO is certainly not looking at new applications unless there is a step change in pricing. These other applications are nice to have but certainly not urgent."

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Functions added to fleet management software

www.awtworldwide.com

Applied Weather Technology (AWT) has added a number of new functions to its GlobalView fleet management system, including pirate data and rogue wave alerts.

Real-time NATO pirate tracking information has been integrated into the application, providing an overview of all pirate-related information including mothership locations and anticipated trajectory, hijacking information and pirate attack group operating areas.

Live links are also included, which give fleet managers one-click access to further NATO details.

Users can customise the type of data available through filters such as time-frame, location, type of pirate activity or historical data, while the system also provides visual information on war risk waters and embargo areas, as updated by the Joint War Committee of the IMO.

The rogue waves function aims to assist fleet managers in identifying relatively large, spontaneous ocean waves that occur in the open ocean in deep water, which can be a threat to any vessel.

The scientific definition of a 'rogue wave' is a wave whose height is more than twice the significant wave height (SWH), which is defined as the average of the largest third of waves in a given area.

AWT's application includes a global model used to forecast where current focusing rogue waves are likely to occur.

Information on the presence and movement of icebergs in particular sea areas has similarly been added to GlobalView.

In addition to these enhancements users can also integrate custom data into GlobalView, which should prove particularly useful for those already using Google Earth to display internal data, as this data can be configured to be displayed through the resource filters in the software.

"At AWT, we are committed to consistent advancements and innovation of our products," said Skip Vaccarello, president and CEO of AWT.

"By carefully listening to our customers, we are pleased to offer rogue wave and pirate data for display in GlobalView to help ensure vessel, crew and cargo safety."

Aside from its GlobalView product, AWT has also recently announced that it is to introduce a new range of ship routing and fleet management services to cover specialised needs by vessel and cargo type.

The company will employ experts specialising in each of five covered ship types - Tankers, Bulk Carriers, Break Bulk Carriers, Liners and Pure Car Carriers (PCC) - with the aim of meeting specific, segmented needs within the industry.

Variables like vessel age, type, size, speed, cargo, draft and client will be considered before the most appropriate routes based on the goals of each individual voyage are plotted.

Pre-voyage planning and daily status reports with alerts and links to detailed voyage information are provided.

AWT says that its experts will include meteorologists, route analysts, forecasting specialists, maritime scientists, computer scientists, mathematical modellers, end-of-voyage analysts and ship captains.

For example, as part of AWT's Tanker Service, fleet managers are given laycan data to ensure that the ETA of the vessel remains within the agreed laycan. Fleet summaries with colour-coded icons are used to identify ships that need attention regarding fuel consumption and estimated time of arrival.

The data is refreshed every hour to show the status of the fleet, while custom reports can be generated for each vessel type. Customer-centric reports can vary by company and departmental requirements.

New applications for Seacor and Bunkers

www.marinesoftware.co.uk
www.bunkersgibraltar.gi

UK based Marine Software has agreed two new separate software deals with Seacor Offshore and Bunkers Gibraltar, for planned maintenance and purchasing systems respectively.

Dubai based Seacor Offshore has been supplied with the Marine Planned Maintenance - MPM package, for installation aboard Seacor's latest diesel electric DP-2 anchor handler 'John Coghill'.

The 2,174 gt vessel is currently operating in Ghana.

Seacor Offshore has also commissioned Marine Software to assist with data migration services based on an existing Seacor Offshore MPM lead database, along with scheduling planned maintenance start dates to coincide with the final software installation date.

Seacor Offshore currently operates the MPM software on a fleet of 42 vessels of varying types, where most are technically managed from its Dubai office.

Satellite office systems have also been installed in Singapore and Qatar to manage planned maintenance for Far East and Middle East operations, enabling regular vessel maintenance status updates to be received.

"We have been operating the Marine Planned Maintenance software for many years as this continues to offer us a simple, yet effective way of managing fleet planned maintenance across all West Africa, Far East and Middle East business operations," said Seacor Offshore, in a statement.

"System simplicity is also very key for us as this ensures that non IT skilled crew are able to update the system with ease."

Meanwhile, Bunkers Gibraltar has been supplied with a Marine Purchasing Solution (MPS) for installation on board the vessel 'MT Europa Supplier I', and at the company's ship management technical offices.

MPS allows requisition requests to be raised and transmitted back to an office system for tendering and final purchase ordering. Marine Software says that the small data file exchanges between vessel and office ensure that both locations have an up-to-date view of the latest ordering status.

An additional budget system is also included, which compares actual costs for purchase orders against a set budget.

Supporting information such as photographs, quotations, delivery notes and supplier email correspondence can be stored with individual orders for auditing purposes, with the aim of assisting in the move towards a paperless procurement system.



The 'John Coghill' will be installed with a planned maintenance software package

BMT in carbon emissions research

www.bmt.org

BMT, a UK based engineering, science and technology consultancy, reports that it is to supply technology solutions to a research project aimed at limiting the environmental impact of shipping carbon emissions.

The research project, 'Low carbon shipping - a systems approach' consists of a multi-disciplinary consortium of researchers from five universities and international industrial partners such as Lloyd's Register, Shell and Rolls Royce.

The partners aim to help the shipping industry reduce levels of emissions in order to comply with new legislation and mitigate global warming.

The project has received £1.7 million from the Research Councils UK (RCUK) Energy Programme, part of the £530 million the programme is investing in research in low-carbon technologies.

BMT's contribution will cover the supply of technologies for low carbon shipping and energy efficient ship operations, including the management of human factors.

The company hopes to leverage its experience in onboard performance monitoring of fuel efficiency and emissions, energy efficiency design indexing, performance impacts of hull roughness and fouling and the design and engineering of more efficient propulsion.

"This is a very exciting opportunity to make a real difference to the design and operation of ships," says Dr Phil Thompson, sector director for transport at BMT Group.

"We have to drive down costs and we have to drive down emissions. We at BMT are delighted to be using our experience in such an important research project by developing innovative design solutions. After all, a more efficient ship is a greener ship."

Container optimisation software free download

www.logimar.it

Logimar, an Italy based shipping company, has announced its intention to make the beta version of its proprietary online container loading optimisation software 'Full Filled' publicly accessible.

Full Filled is a 3D nesting software designed to optimise the loading of standard shipping containers and make the preparation of load-sheets in operations departments more efficient.

Full Filled creates three-dimensional colour images of the cargo placed in a virtual container to assist in optimal loading via computer simulation.

Despite being offered as a complimentary program, Logimar asserts that the application is able to perform the same functions a professional version would. The company hopes that, by making the software publicly available, it will help to lower CO2 emissions and reduce pollution in the atmosphere.

Eidesvik Shipping to use Shipadmin fleet-wide

www.shipadmin.com

Eidesvik Shipping of Norway has signed a deal to roll out the Captains Secretary software system from Shipadmin on all of its vessels.

Eidesvik Shipping operates a number of seismic, subsea operations and supply vessels, and intends to implement the Shipadmin system on all 25 of its ships.

The company had already been using Captains Secretary on five vessels, and has decided to now move to the next phase of rolling out the systems to the rest of the fleet.

"I welcome Eidesvik Shipping's very modern fleet as a user of our core solu-

tions," said Per Magnus Grøsvik, general manager of Shipadmin.

"I am proud to see that Captains Secretary was chosen by another leading player in the global market."



25 ships will be installed with Shipadmin software

MLC CBT from Seagull

www.seagull.no

Seagull has launched four new Maritime Labour Convention CBT modules to cover the areas of management, leadership, lifestyle and physical health training, adding to two existing computer-based training (CBT) modules addressing the MLC.

This package of CBT modules aims to assist shipping companies in managing compliance with the Convention, which it is anticipated will enter into force during 2012.

The first of the new modules, CBT 192 - MLC 2006 Onboard Responsibilities, provides details of the requirements that the Convention places on senior ship officers with regard to compliance.

The one-hour module provides an introduction to the MLC, its background and regulatory structure, and the role of the International Labor Organization (ILO), and covers areas of inspection onboard ship, the information and onboard records required, the validity of certification and the consequences of non-compliance.

Another new module, CBT 193 - Shipowners' Responsibilities, details the areas of responsibility under MLC 2006 that are placed on shipping company office staff dealing with the employment conditions of seafarers and onboard crew facilities.

It also covers flag state inspection and certification issues relating to MLC 2006 and the consequences of non-compliance, and takes up to one hour to complete.

Two further modules, CBT 194 and CBT 195, cover physical exercise and lifestyle.

CBT 194 - Lifestyle assessment and advice is targeted at helping seafarers improve their lifestyle and assess health risks while onboard, while CBT 195 - Physical exercise and lifestyle coaching offers pragmatic lifestyle advice and an easy-to-use physical training programme.

The programme and exercises can be performed without special equipment and within the limitations of life onboard ship. Each module takes up to 45 minutes to complete.

These latest four modules add to the first two modules, CBT 197 - MLC 2006 Basic Introduction (prepared for general awareness) and CBT 191 - Introduction to the Maritime Labour Convention MLC 2006 (targeting management and operational staff).

"We have been listening to our shipping company customers, who have been telling us they want a package of MLC-orientated training titles," said Roger Ringstad, Seagull managing director.

"In response, we have been working with experts to develop training materials that specifically support companies in meeting the training requirements of MLC."

GL Noble Denton to implement Intergraph

www.intergraph.com

GL Noble Denton is to replace its existing design software for offshore and marine assets with the Intergraph SmartMarine Enterprise system, including SmartMarine 3D, which will be used to standardise operations.

This will enable the company to improve data consistency between the schematics and the outfitting within its projects.

In addition to SmartMarine 3D, GL

Noble Denton has purchased licences for Intergraph's SmartPlant P&ID (Piping and Instrumentation Diagram), Electrical, Review and Foundation Basic Integrator products.

"We benchmarked Intergraph SmartMarine Enterprise against several leading, global marine engineering design solutions, and we thought it was the most sustainable option for us," said Tor Lønnerød, GL Noble Denton's general manager for Noble Denton Brevik, Norway.

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Videotel launches hazard training module

www.videotel.co.uk

Videotel Marine International has launched a new training module designed to support the seafaring industry in reducing common ship board accidents.

The Hazard Series II module uses films to "shock" viewers into greater awareness of their own safety and that of their colleagues.

Hazard Series II aims at cadets, deck and engine crew, students at maritime colleges and training officers and comprises 10 hard hitting short films designed to both shock and teach.

The films show real crew doing real work on deck in heavy weather, working aloft, electrical work and manual handling. The training material illustrates common errors and shows how incidents can be avoided by using correct procedures and working techniques.

"Adequate training, safe working prac-



The new training module will include shocking footage of the consequences of onboard accidents

tices and good safety management systems all contribute to a safer working environment on board," says Nigel Cleave, Videotel's CEO.

"Videotel is committed to developing

quality training that makes a real difference – both to the industry as a whole and to the lives of individual seafarers."

The programme has been produced in association with The Standard P&I Club.

Anti-piracy e-Learning approved by DNV

www.imsn.us
www.dnv.com

International Maritime Security Network (IMSN) has become the first maritime security training centre to offer an e-Learning Anti-Piracy Defense Course certified by Det Norske Veritas (DNV) under its SeaSkill standard.

In the first quarter of 2011, pirates killed seven crewmembers, injured 34, and took 344 hostages according to International Maritime Bureau's (IMB) global piracy report. Additionally, 18 vessels were hijacked worldwide.

IMSN's Anti-Piracy Defense Course provides training for activities such as watch-keeping, lockdown procedures, anti-piracy drills and hand-to-hand defensive tactics, as well as contingency plans for issues such as surviving a hostage attack or movement of prisoners. The training course also covers concepts related to anti-piracy laws.

IMSN's anti-piracy training course is available online or on DVD.

"Mariners' lives are at risk everyday around the globe. Knowledge is the key component to safety and it's vital that ship owners and crew members take the protective measures of a training course to combat piracy," said Captain Timothy Nease, co-founder and CEO of IMSN.

Stanford Marine to use ABS' NS5 software

www.abs-ns.com

ABS Nautical Systems has been selected as the fleet management software provider of Dubai based Stanford Marine, a provider of offshore marine support services.

Stanford Marine is replacing its conventional paper and Microsoft Excel system with ABS' fleet management software suite NS5. Stanford Marine will imple-

ment the Maintenance & Repair and Vessel Drawings modules on 25 vessels, all of which are classed with ABS.

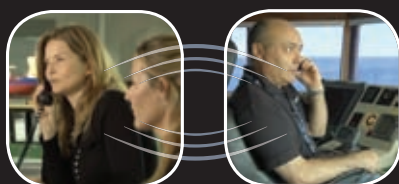
"NS5.5 allows for more flexibility and greater integration between modules, enabling maritime companies to operate more efficiently while continuously adapting to meet evolving industry needs and market demands," said Fernando Lehrer, director of product development at ABS

Nautical Systems.

Karen Hughey, president and COO of ABS Nautical Systems, also noted that the this new contract was a positive sign of growth in the Dubai maritime market.

"We anticipate a strong working relationship (with Stanford Marine) and advanced movement in both the region and in the offshore and energy sector," she said.

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Port of Southampton introduces new database application

www.logicsoftware.co.uk

Logic Software has completed the development of a database application for Associated British Ports, which will allow the port operator to manage its vehicle movement operations at the Port of Southampton with greater efficiency.

Logic says that the system should help shipping companies operating at the port to better manage the scheduling of their vessels, and to view details of the load contained within each vessel.

The application is used to track vehicle imports and exports through the port, offering a real-time view of the location of all vehicles. Prior to any vehicles arriving at the port, the database is automatically updated from an EDI message sent by the shipping company containing details of the expected delivery.

When vehicles are delivered to the port, the operational teams apply barcodes and use handheld scanners to capture vehicle data and additional information, which is fed into the central database.

The overall solution has been deployed as three separate components.

The first part was a central, web-based management system installed on to ABP's network for reporting and tracking. The second was barcode printing hardware to

allow vehicles to be individually bar-coded, and the final component involved handheld devices with barcode scanners.

The barcode scanners run an application developed by Logic Software that allows vehicles to be scanned, identified and processed by mobile workers within the vehicle compounds and on the quayside.

The number of large metal structures around the port ruled out using wireless devices as part of the system, so each handheld device is periodically loaded with a subset of the main database, con-

taining only information relevant to the state of the port at that time.

After the operational teams have captured data on vehicle movements, the barcode scanners are synchronised with the central database over the WAN from several sites across the port.

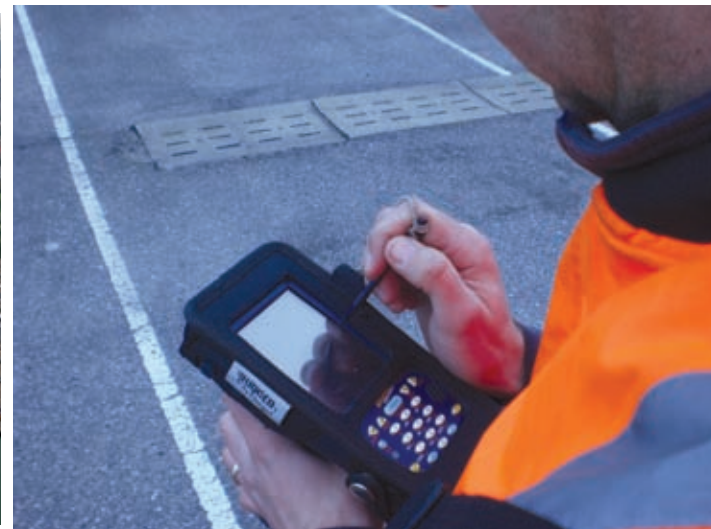
At these same locations, users are able to access the web-based system, generate barcodes for expected vehicles and then print the labels to a printer located at another location.

"Implementing this solution has reaped

major benefits for ABP and its customers," said Paul Prince, ABP operations manager at Southampton.

"ABP has achieved a significant improvement in the efficient use of its land resources and we are able to provide a prompt and efficient cargo tallying and service to the shipping lines with which we work."

"Our system is adaptable so that we can meet differing customer requirements to achieve EDI links which report the arrival of individual vehicles on the quayside and their departure from the quayside."



Operational teams at the Port of Southampton will use handheld devices to update the port database, checking against electronic messages sent from the ships before they arrive

Softship has established a new presence in Sydney, Australia to manage all activities in the Oceania region, headed-up by Alfred Verzijl. Softship Australia joins the existing network of offices in Antwerp, Buenos Aires, Hamburg, New York and Singapore.

LuraTech has signed a reseller agreement with **Plain Sailing Communications Ltd (PSC)**. PSC has developed a solution for reducing file sizes up to 90 per cent, called VIM Compact, which integrates with LuraTech's software.

www.softship.com
www.luratech.com
www.psworld.co.uk

GL software for German, Greek and Dutch companies

www.gl-maritime-software.com
www.nsc-holding.com
www.ampni.com
www.feederlines.nl

GL Maritime Software has announced the agreement of three new contracts, with NSC Schiffahrtsgesellschaft of Germany, Aegean Bunkering Services of Greece, and Dutch shipping company Feederlines BV.

NSC Schiffahrtsgesellschaft operates a fleet of modern container and multi-purpose vessels, bulkers and conbulk, and car carriers, and will equip its fleet with the full version of GL Maritime Software's maintenance management program.

This program comprises the GL HullManager software, which NSC is particularly interested in to help maintain the ships' structure, with the aim of saving

costs by early detection of failures, better preparation for dry docks and improving the lifecycle performance of its vessels.

HullManager allows for condition monitoring of hulls with visual inspections and thickness measurements based on an actual 3D model of the vessel.

"I am very proud, that a modern and successful shipping company like NSC is using the latest technology for hull maintenance from GL," says Dr Torsten Büsow, head of GL's Maritime Software business.

The HullManager will integrate with NSC's GL ShipManager shipmanagement solution for planned maintenance and procurement.

Greek shipping company Aegean Bunkering Services has decided to implement GL ShipManager and GL FleetAnalyzer on 52 vessels, installing the

Technical Management and Procurement System functions from GL ShipManager in its offices and onboard the vessels.

The shipping company hopes that the implementation of the software will help to manage tasks in a more time and cost effective manner, providing increased transparency of all vessel data and keeping operations in line with industry requirements such as ISM and TMSA.

Meanwhile, Dutch shipping company Feederlines BV will implement GL ShipManager and GL FleetAnalyzer software systems on board 48 ships in its fleet.

Feederlines has chosen to utilise Technical Management, Procurement, Compliance Management and Ship and Voyage Management software systems on board its vessels for decision support, and improved efficiency and transparency across its fleet.

Class NK and IBM to join forces on data archive

www.classnk.or.jp

Classification society ClassNK and IBM Japan have announced a new joint project to develop the world's first archive centre to meet new requirements included in the International Maritime Organization's (IMO) Goal Based Standards (GBS).

As part of the new GBS, which will enter into force in 2016, all newly built vessels will be required to maintain copies of Ship Construction Files (SCF) both onboard and at an onshore archive centre.

The new centre envisioned under the agreement will take advantage of a cloud-based infrastructure developed by IBM Japan, and will be designed to safely store

the SCF that will be required by the GBS.

The system will be designed to meet the rigorous requirements for both data security and accessibility laid out by the IMO's Maritime Safety Committee, according to the new partners.

As the SCF will include vital information related to ship safety as well as intellectual property related to the ship's design and construction, ensuring both accessibility and security of the SCF data will be paramount in the development of these new archive centres.

"As independent, third-party technical organisations, we are uniquely suited to developing and maintaining the archive centres required by the GBS," said

ClassNK chairman and president, Noboru Ueda.

"As part of our electronic plan approval activities, we have already developed the procedures and systems necessary to ensure the security of vessel plans, and earned the trust of the world's shipbuilders. The development of this new archive centre is the next logical step in our efforts to better support the wider maritime industry."

In line with the GBS new standards for archive centres will also need to be established, and a new set of industry guidelines developed by CESA, ICS, INTER-CARGO, INTERTANKO, BIMCO, OCIMF and ICS for the new archive centres was

submitted to the IMO at the 87th session of the Maritime Safety Committee in February of 2010.

According to Mr Ueda, addressing the practical and usability requirements for the new archive centres was what led ClassNK to begin discussions with IBM.

"Our goal in developing the world's first archive centre is to set a new standard for the entire industry, and with IBM we have found a partner who can help us achieve just that," he said.

ClassNK and IBM Japan have already begun the planning process for the development of the new archive centre, and hope to release a trial version by the end of 2012.



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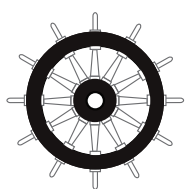
Charts

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Training

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IMO

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Footprint

A trip down memory lane and how JRC is ready for ECDIS.



JRC ECDIS

Comparison table between the various models. And more.

jrceurope.com/ECDIS ▶

Seatrans signs up to ShipServ's TradeNet

www.shipserv.com
www.seatrans.no

ShipServ has announced the signing of Bergen-based ship owner and operator Seatrans AS to the company's e-commerce platform TradeNet

Seatrans will use ShipServ's TradeNet platform to source ship supplies for 16 ships in its fleet operating in the chemicals, forest products, offshore and liner segments. The Seatrans ships will connect to shore and to their suppliers through the

ShipNet SNAPS Maintenance and Purchasing system.

"Seatrans runs its chartering and operations, management and crewing in-house, servicing a diversified fleet so we are always concerned to be as efficient and flexible as possible," says Leif Larsen, technical director of Seatrans.

"ShipServ TradeNet will give us the ability to better manage our procurement and use the built-in KPI functionality to review the performance of our suppliers."



Leif Larsen and Atle Sommer, Seatrans, and Ane Fosseng, ShipServ, mark the new agreement at Nor-Shipping 2011

Intergraph and STX sign 5 year contract

www.stxeurope.com
www.intergraph.com
www.hexagon.se

Intergraph has announced the signing of a five-year contact with STX France, French division of the Norwegian shipbuilding group STX, for the purchase of the SmartMarine Enterprise software system.

Intergraph's SmartMarine Enterprise suite is an offshore and shipbuilding solution, designed to promote improvements in design efficiency, production schedule, handover and overall life-cycle cost control.

The solution package STX has purchased includes Intergraph SmartMarine 3D and SmartPlant Foundation, SmartPlant P&ID, SmartPlant Instrumentation, SmartPlant Electrical Basic & Detailed, SmartPlant Materials, SmartPlant Foundation, SmartPlant Review and SmartPlant Review Publisher.

STX will use the software to improve its shipbuilding design efficiency through reduced design man-hours, as well as the company's design quality through integration between disciplines and by sharing standard catalogues along the project life cycle.

The implementation is further expected to reduce costs and STX hopes to achieve

better project stages coordination and accurate management of bills of material (BOM) which is supposed to be promoted by the integration of SmartMarine Enterprise and SAP.

"We selected SmartMarine Enterprise after several months of evaluation and pilot projects because the software suite proposes a large scope of integrated functionalities, required to design complex works as cruise ships are," says Christophe Dutrieux, CIO of STX France.

"It enables us to coordinate activities of hundreds of designers and subcontractors, by sharing the same model, the same catalogues, and by building a single bill of material of the ship. It provides us with the means to reduce design hours, to enhance our design quality and to improve integration and coordination between design and construction."

STX plans to build its next cruise ship prototype with Intergraph technology, which will be fully deployed in 2013.

"STX's exhaustive evaluation of competing enterprise solutions and its selection of Intergraph's SmartMarine Enterprise signal the strength of our solutions within the marine and offshore industries," says Gerhard Sallinger, Intergraph process, power & marine president.

PortVision introduces integrated software solution

www.portvision.com

PortVision has announced the availability of its PortVision TriMode workboat fleet management and business intelligence service, combining the existing PortVision Plus and PortVision Advantage platforms into an integrated offering.

The web-based service is designed to permit real-time visualisation and historical reporting to a data warehouse that processes and analyses over 40 million vessel movements each day. Vessel arrivals and departures in covered regions are recorded and the system can be configured to automatically alert users when events of interest occur.

PortVision's TriMode extends the company's PortVision AIS-based offering to include two-way cellular and satellite service for messaging and position reports. The firm claims that its software can cut overall expenses in half compared to conventional satellite-only alternatives by using least-cost routing.

TriMode integrates least-cost routing across three communication paths: AIS for

real-time reporting of the fleet and other AIS-enabled vessels when near shore or in-port; cellular for near-real-time reporting at low cost whenever a vessel is within a cellular coverage area; and satellite for guaranteed reporting and text messaging whenever cellular is unavailable.

In addition to vessel position reporting, customers can use the TriMode service to create e-mail alerts or view arrival/departure history. The data warehouse is reported to have archived over 15 billion arrival, departure, and vessel movement records spanning the last five years.

"Traditionally, fleet owners relied only on expensive satellite airtime for vessel reporting and messaging," said Dean Rosenberg, PortVision chief executive officer.

"By integrating AIS, cellular and satellite capabilities into a tri-mode solution, PortVision is able to significantly increase fleet visibility and enhance maritime business intelligence, while saving our customers up to 50 per cent in hardware and airtime costs."

Cory Brothers launch vessel monitoring software

www.cory.co.uk

Cory Brothers, a UK based shipbroker, has announced that the company's web-based vessel monitoring software ShipTrak has been made available to customers.

ShipTrak is a web-based software solution developed in-house and designed to help monitor a company's vessel operations. The application holds details of vessel operations and allows ship operators to log on wherever internet is available to access the information they need.

ShipTrak has been designed to provide a detailed log of events and enable the

comparison of projections at any stage, for any number of vessel operations.

The application is based on Java software and can exchange data with other shipping-based systems and common office software programs.

"We, and our shipping partners, use ShipTrak every single minute of the day and we find it an essential tool," says Kevin Gorman, Cory Brothers' managing director.

"It is 'platform independent' so you can use ShipTrak on your PC, Mac, mobile phone - anywhere you have an internet connection and a web browser."

Shell begins use of electronic documents

www.essdocs.com

Shell has completed its first oil products shipment using a CargoDocs electronic bill of lading, using a service provided by Electronic Shipping Solutions (ESS).

ESS's delivery team worked with Shell International Trading and Shipping Company Ltd (STASCO), Shell UK Oil Products Ltd and charterer Morgan Stanley to use original electronic documents to cover a shipment of diesel loaded on the 14,766 dwt tanker Bro Deliverer for discharge at Shell's Stanlow refinery.

An electronic bill of lading, certificates of origin and quantity and a document of enclosures form were issued to Morgan Stanley and endorsed first to STASCO and then on to Shell UK Oil Products Limited who in turn produced the electronic bill of lading back to the vessel's master.

Shell is already part of the ESS Oil Industry Steering Group, which provides

input on the development of the CargoDocs system for the oil industry through ESS's Users Association. Shell participated in pan-industry CargoDocs testing during 2008 and 2009.

Use of the technology became possible after STASCO's General Terms and Conditions (GT&Cs) for sales and purchases of crude oil and products were adapted to be compatible with the use of electronic documents, including electronic bills of lading.

"Shell has always championed innovation in its operations and the opportunity to move from the traditional paper bill of lading to a secure electronic format is one which we think has obvious advantages," said Sven Thiessen, commercial operations manager with STASCO.

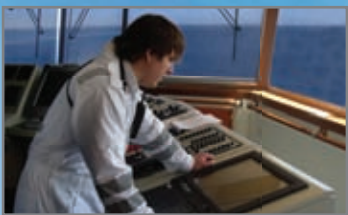
"Having amended our terms and conditions to allow for eDocs we expect to see their use increase significantly moving forward."

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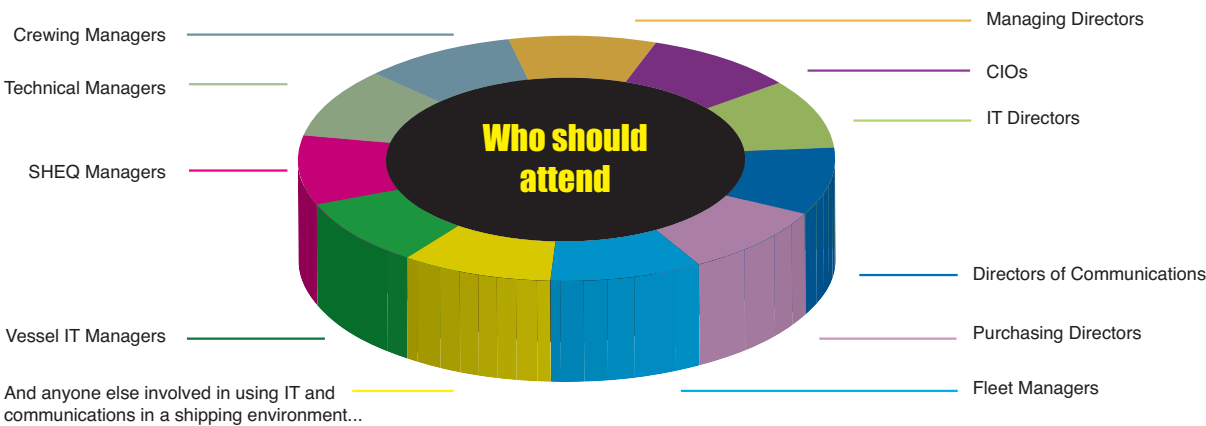
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Digital Ship produces the world's leading events for maritime IT, satcom, technical, electronics and navigation managers who want to know about the latest developments in satellite communications, maritime software, bridge electronics, green innovations and technology. For the last 8 years Digital Ship has been holding these events annually in Singapore, Athens, Hamburg, Bergen, Cyprus, and now Korea and Istanbul where they regularly attract over 200 senior representatives from ship owners and managers around the world wanting to look at all the major issues impacting and concerning this industry - *including satellite communications, software development, electronic charts and navigation, piracy, manning and training, IT to reduce costs and improve efficiency, safety and quality assurance, and of course many other topics*. They also provide an opportunity for delegates and speakers to share stories, ideas, discuss recent developments and learn from each other's experiences. For more information about how you can participate in one of these conferences please contact cathy@thedigitalship.com.

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To subscribe to our news letter or to register for a Digital Ship conference, please go to www.thedigitalship.com

Online vessel valuing service launched

www.sea-sure.co.uk

London-based shipbroker Seasure has announced the launch of VesselsValue.com (VV), an online service that provides automated data-driven valuations for commercial vessels.

Seasure says that the software can calculate real time market values for bulkers and tankers from 29,500 dwt and bulkers from 20,000 dwt upwards, processing the global fleet using all comparable sales, adjusting for sale recency, ship specifications and changes in freight earnings.

The valuation process employs statistical models, computational algorithms, a database of ships and sales as well as market information.

The service offers functionality to include portfolios, e-mail alerts and interactive charts, and a mobile version for Blackberry, iPhone and Android has been produced.

In addition to the launch of the website Seasure has further introduced its own indices, to act as synoptic indicators of vessel values with the aim of providing a general picture of the state of the sale and purchase market rather than specific information about any one vessel or vessel type.

The VV Indices are measured in units which Seasure claims have a real

economic meaning.

The company says that many indices are set to an arbitrary value (usually 100 or 1,000) on a particular date, with all subsequent values relative to the value on this date. This means that they reflect market movements and not the absolute values of the underlying assets they represent.

Seasure's aim is to offer indices representing the intrinsic value of cargo-carrying capacity, denominated in US dollars per deadweight tonne.

For each vessel type (VLCC, Capesize, etc.) all vessels in the global database are valued, and the value per deadweight tonne for each build year is calculated. These annual figures are averaged to form an index for the type.

Partitioning by build year is done so that the type index is not influenced by orderbook considerations, for example, such as recording an increase if a large number of new vessels have just been delivered.

The overall index is obtained by taking a weighted average of the type indices, where the weighting is proportional to the total value of the vessels in the type. This ensures that the economic importance of each vessel type is reflected appropriately in the index. Separate indices are produced for tankers and bulkers.

DNV releases bunker fuel analytics tool

www.dnv.com

DNV Petroleum Services (DNVPS) has announced the release of its new product 'Fuel Insight', a data analytics product for bunker fuel designed to provide real-time information on deliveries around the world and aid companies with procurement and benchmarking.

Fuel Insight is a subscription-based web application that taps into DNVPS' bunker quality database. It processes data on fuel prices, ISO 8217 quality parameters and regulatory compliance and thus provides information for supplier evaluation and purchase decision-making.

DNV says its data analytics tool will help shipping companies get the best value from bunker purchases and support ship charterers, operators and owners in optimising costs and reducing risks.

Fuel Insight further benchmarks various bunker performance indicators of individual vessels and fleets against industry averages. By integrating this data analytics tool into their overall fuel management process, ship operators may hope to identify improvement opportunities and potential cost savings.

"At today's extremely high bunker prices, getting the best value in fuel purchases is a must, especially for shipping companies struggling to stay afloat," says DNV Petroleum Services managing director Tore Morten Wetterhus.

"Fuel Insight can help bunker buyers and fleet operators decide on sources that yield optimum value, based on the test results of delivered bunkers captured in our database."

Fuel Insight offers five key features, the first of which is a 'Price Correction Calculator', which estimates the corrected bunker prices quoted by suppliers and benchmarks financial loss or gain (in US dollars) and quantity loss or gain (in metric tonnes).

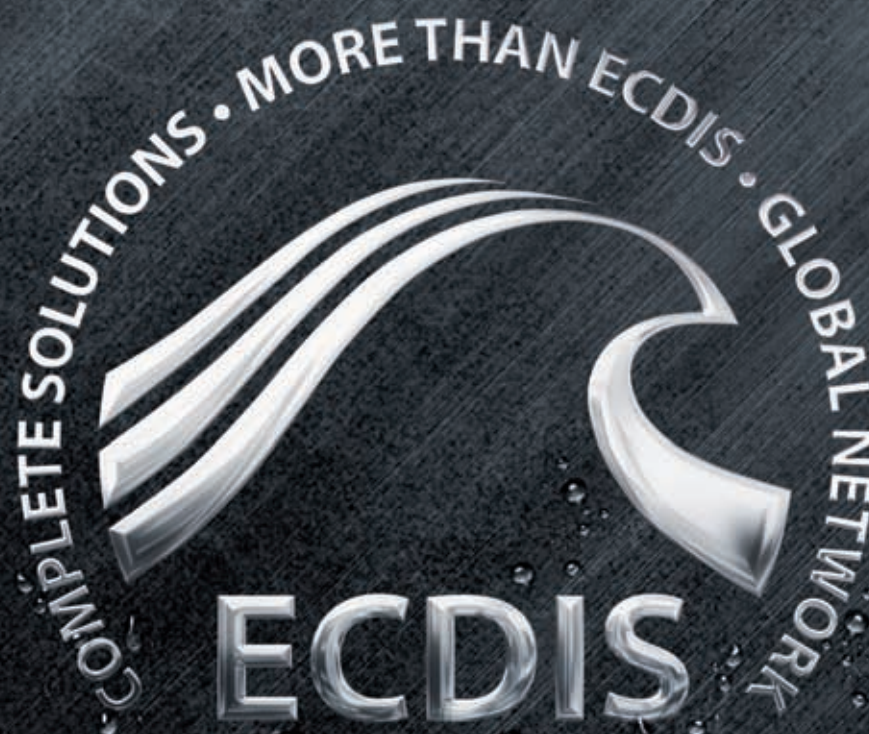
A 'Reporting Benchmark' compares the selected supplier's Bunker Delivery Note values for density, sulphur and viscosity against lab-tested results, while a 'Statutory Benchmark' evaluates the compliance record of the selected supplier's deliveries in relation to sulphur and flash-point regulatory requirements.

A 'Financial Benchmark' is also included, similar to the Price Correction Calculator except that the reporting is on a 0 to 100 scale, instead of US dollars or metric tonnes.

Finally, a 'Technical Benchmark' is used to analyse the technical quality of the selected supplier's products by evaluating ISO 8217 bunker quality parameters weighted according to their levels of importance.

Prior to its official launch, Fuel Insight was trialled by a number of shipping companies testing their bunkers with DNVPS, as well as by selected members of the Baltic and International Maritime Council (BIMCO).

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FLAGSHIP project draws to a close

The EU-backed FLAGSHIP maritime technology project, which has launched a number of new innovations for the shipping industry, has come to a conclusion – leaving a wide-ranging legacy of new products behind

Regular readers of *Digital Ship* will be aware of some of the maritime technology tools that have been introduced over the course of 2011 by the FLAGSHIP project, a pan-European maritime transport initiative part funded by the EU.

FLAGSHIP is a consortium of more than 40 European maritime organisations aiming to develop technologies that will assist in improving safety, environmental friendliness and competitiveness of European maritime transport.

The emphasis of the project has been on on-board systems and procedures, ship management systems on shore, and the impact of new technology, communication interfaces and standards and regulations.

Now, as of May 31st 2011, the FLAGSHIP project has concluded, just over six years since its inception and having facilitated the research and development of no less than 10 new maritime technology solutions, from multiple European companies.

The new tools that have been developed have covered a variety of different functions ranging from engine monitoring, hull condition forecasting and terminal logistics (see *Digital Ship* March 2011), to safety management, fuel consumption and regulatory compliance (*Digital Ship* April 2011).

However, the FLAGSHIP partners have not stopped there, and have added to these successes with the introduction of a final round of new technologies related to Integrated Navigation Systems and improving passenger safety.

Integrating navigation

The first of these new tools, called FLAGSHIP-Bridge Support, looks to provide further integration of nautical information on the bridge with the aim of supplying improved navigation information to the officer of the watch.

This new system will integrate NAVTEX messages, radar and AIS targets into a single display, which the partners hope will speed up hazard analysis, improve tracking accuracy and reduce the load on the Duty Officer.

Currently most ships receive navigational and meteorological warnings and forecasts, as well as urgent marine safety information via NAVTEX, from a stand-alone unit.

The Automatic Identification System (AIS), used for identifying and locating vessels by electronically exchanging data with other nearby ships and VTS stations, is often a separate or only basically integrated unit.

This means that the Duty Officer has to constantly monitor multiple displays, cross referring and mentally combining and analysing the hazard information. FLAGSHIP-Bridge Support aims to remove this requirement and give the

officer all the data required in a single platform.

Vessels that also run the Flagship-RCS (Regulatory Compliance Support, see *Digital Ship* April 2011) system will benefit from updates via Notices to Mariners and local navigational data from the NAVTEX system, allowing even more integration of information.

The system can be delivered via tablet PCs, ensuring pertinent information is delivered to the officer wherever he is.

Trials of the new tool have been successfully carried out and the technology has already been incorporated into SAM Electronics' NACOS 5th Generation Integrated Navigation and Command Systems, and partly also into the new NACOS Platinum Generation.

AIS target merger technology will be available in SAM's NACOS Platinum systems, scheduled to be out this year, while a portable conning unit will also be available in 2011 as a Tablet PC.

The FLAGSHIP-Bridge Support project was led by SAM Electronics in Germany, and supported, delivered and trialled in conjunction with BMT in the UK, Kongsberg in Norway and CONSAR in Italy and Minoan Lines in Greece.

Safety monitoring

The second new tool recently announced by FLAGSHIP is an integrated ship to shore system for the control and monitoring of passenger safety functions onboard ship, utilising both fixed and mobile assets.

FLAGSHIP-ISEMS (Integrated Safety and Emergency Management System) aims to enhance the onboard ability to handle emergencies by making use of real-time communication between the ship and onshore facilities.

The tool permits both parties to have a full overview of the actual developing situation and allows them to exchange requests, advice and instructions in real time. FLAGSHIP hopes that this will enable effective assistance to be provided by shore teams in an emergency situation, as well as making drills and training much more effective.

The FLAGSHIP-ISEMS software evaluates how available information, from support functions residing on shore as well as with the crew on the bridge and in the engine, can be best utilised.

This is envisioned as being part of a co-operative decision support regime between the ship and its shore based organisation on one side and other interested parties, such as port and coastal authorities, on the other.

The technology is also expected to be applied to training and drills, to be used to record the development of situations – emergency or drills – including deployment of resources and use of the safety management systems.

This can be used to analyse the potential for improvement as well as in the development of new and improved training scenarios. If an accident should occur, the system will also record the development of this scenario and enable any relevant lessons to be learned.

Per Norman Oma, section manager, software for Norwegian FLAGSHIP partner Autronica Fire and Security, commented: "The FLAGSHIP-ISEMS project team has developed new concepts to enable such ship to shore cooperation, mainly based on a new and innovative electronic plotting table and associated applications."

"The results have been well received and elements have already been implemented on board ships in service."

The FLAGSHIP-ISEMS project was led by Autronica, and supported, delivered and trialled in conjunction with Lodic and MARINTEK, both also of Norway, as well as Minoan Lines of Greece, BMT in

the UK and CONSAR in Italy.

Past successes

These new tools will add to the range of technological innovations that FLAGSHIP partners have introduced over the course of the project to improve the efficiency and effectiveness of maritime transport, many of which have already been incorporated into commercial maritime technology products.

Sub projects led by various businesses from all around Europe included FLAGSHIP-TCI, led by Marintek in Norway, which was concerned with creating Key Performance Indicators and Technical Condition Indices to enable fleet managers to compare the performance of their vessels, with each other and with benchmarks.

This has led to the development of a commercial product by DNV, called Top Monitoring, which monitors main engines. Commercial products monitoring auxiliary engines are expected to be launched later this year from two other separate FLAG-

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by RRsat

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www.station711.com

SHIP partners, Danaos and Wärtsilä.

In the UK, BMT led a sub project called FLAGSHIP-HCA which addressed the process of surveys and dry-dock repairs. This resulted in the German partner, Germanischer Lloyd introducing a new commercial tool called 'Hull Manager'.

Germanischer Lloyd also led a project called FLAGSHIP-EEM which focussed on energy savings during sailing, which has resulted in a patent being secured to cover a new process of measuring power consumption during operations. Commercial products are planned for 2011.

Alarm Filtering was addressed by the FLAGSHIP-iCAS sub project, led by Kongsberg in Norway, dealing with the problem of large cascades of alarms. Kongsberg says that the market has responded very positively to the technology, and that several orders have already been taken.

Led by MJC2, a UK business, FLAGSHIP-RTS addressed real time container scheduling and matching imports and exports in order to save unnecessary truck trips.

FLAGSHIP says that this has already resulted in large savings for China Shipping and the Port of Valencia, while several commercial solutions have since been introduced.

A sub-project called FLAGSHIP-DSS led by the University of Strathclyde in the UK dealt with the determination of an Index of Vulnerability.

Its presentation to the crew in a recent 7-week demonstration led to an immediate improvement in practices which saw the Index fall by 45 per cent in a single week - six orders from a wide variety of parties have already been received.

Continued innovation

With the project now having come to a close, Herman de Meester, project coordinator for FLAGSHIP and deputy secretary general of the European Community Shipowners' Association (ESCA), praised the work done by the partners over the six years of maritime research and development, and expressed his satisfaction at the new technologies that have been introduced to the market as a result.

"With input from organisations as diverse as shipowners, shipyards, equipment manufacturers and classification societies and research institutes the sub-projects run under the FLAGSHIP banner have been able to deliver tangible results that have already added value to the European maritime industry," he said.

"Integrated R&D in the maritime domain is necessary in order to deliver new solutions in the fields of environment, efficiency and safety."

"Furthermore there is an absolute need for innovation in order to deliver these new solutions in a cost effective and commercially viable way so that the maritime industry in the European Union can stay

ahead of its competitors across the world."

By most measurements it seems to be quite clear that the project has been a success, with Mr de Meester pointing to the fact that, while all 15 FLAGSHIP sub-projects were established with specific aims, only three of them have not quite delivered what was expected.

"As this is a research project, a success rate of around 50 per cent would have been excellent, considering the cutting edge work that was undertaken - the 80 per cent success rate achieved in practice is testament to the hard work and diligence demonstrated by the partners," he said.

"As well as meeting the vast majority of the objectives associated with sub-project delivery FLAGSHIP delivered a raft of other benefits. New relationships between partners in the project have been established, a stronger EU platform for further improvement in maritime business and new standards has been developed and important input to IMO legislation has been made."

"Furthermore we have strengthened European maritime competitiveness as well as raising awareness, knowledge and the interest in the maritime business sector."

Mr de Meester notes that, while he considers the European maritime business sector to already be very efficient and well placed to drive innovation, generating major improvement across the sector may sometimes require a shake up of the "status quo."

"There are some issues that can only be addressed and improvements made if everybody pulls together," he said. "It is simply not possible for a simple organisation to generate enough momentum on its own."

"Innovation and exchange of ideas between sectors and markets that would not usually interact is a huge positive for

FLAGSHIP and would be impossible to achieve in a forum that promotes open communication and sharing of information without the structure created by the EU."

EU investment in the FLAGSHIP project has obviously been a factor in driving its success, though Mr de Meester is keen to point out that this kind of public money cannot be a substitute for private enterprise investment in R&D.

"In fact, the Commission support only represents about 4-5 per cent of the total research funding in the European maritime cluster, mainly at company level," he explained.

"However, maritime is a very competitive business and there are often instances when restrictions on time or money within individual organisations preclude taking on larger and more all-encompassing R&D tasks."

Looking to the future after FLAGSHIP, Mr de Meester hopes that new research and innovation projects will come in to take its place.

He particularly highlights IMO initiatives and the European Commission's 2050 transport strategy for Europe, which have both targeted a reduction in greenhouse emissions of 75-80 per cent over the next 39 years, as areas where continued research would be welcome.

"When this is viewed alongside FLAGSHIP's achievements in reducing fuel consumption by 1-5 per cent and reducing greenhouse gases by 2-4 per cent, as well as enhancing engine performance by up to 5 per cent it becomes clear how much more work needs to be done," Mr de Meester said.

"However it also highlights the importance of research projects like FLAGSHIP which are doing the hard work required to develop solutions that will help address the maritime challenges of the 21st century." **DS**

Stelvio and Canfornav launch emission reporting system

www.stelvio.com
www.canfornav.com

Stelvio, a Montreal based software development house, has jointly developed a maritime emissions reporting module within its ShipDecision system, in conjunction with Canadian ship owner and operator Canfornav.

In joining the project Canfornav sought to automate the collection of its emissions performance data, which is annually reported in compliance with the Green Marine emissions reporting guidelines. Green Marine, of which Canfornav is a member and ShipDecision a partner, is a voluntary environmental programme of the Canadian and American marine industry.

ShipDecision is a maritime 'Software as a Service' (SaaS) solution that is designed to support the organisation of the sharing and use of information among business partners in the maritime sector.

Accessible via internet and protected through encryption, ShipDecision processes data, documents and communications related to individual voyages.

Stelvio and Canfornav collaboratively set up the Ship Decision Comprehensive Emissions Performance Reporting (CEPR)

Module. The companies state that the CEPR Module compiles operational data from vessel records, making it faster and simpler to generate emissions reports on a per vessel basis, as well as across the fleet.

The reporting technology addresses pollutant air emissions, specifically: SOx emissions (level 3); and NOx emissions (level 3) and also calculates GHG emissions (levels 3,4,5).

"By automating the collection of the data we need for Green Marine reporting, we can monitor the performance of our vessels on a daily basis," says Errol Francis, vice president operations, Canfornav.

"It also allows us to provide a carbon footprint, on a daily basis, to customers who want that information."

Albert Carbone, president and CEO of Stelvio, also commented that his company "had already deployed an off-line reporting module for Noon Reports, which is used across the fleet. The Emissions Reporting project was a natural offshoot of that."

"We saw the opportunity to build a Module that would not only permit Canfornav to meet their annual Green Marine reporting requirements, but that could also give them a daily snapshot of their 'Green Position'."

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Petrobras positioning contract for Veripos

www.veripos.com

Veripos has been awarded a long-term contract by Petrobras for the provision of positioning services in support of the Brazilian state-owned company's barge operations.

Under the two-year contract, which includes an option for a further two years, Veripos will provide a 122-metre dynamically-positioned barge operating on the BGL-1 pipeline installation with Standard, Ultra and Differential Glonass positioning services supported by LD2-G2 mobile receiver equipment and Verify QC software.

The contract is the second to have

recently been awarded to Veripos by Petrobras following an agreement last year to provide the Brazilian organisation with comparable positioning services on 15 vessels engaged in pipelay, anchor-handling and flowline installation undertakings.

"(This agreement) marks a further important stage in our continuing development of services for the Brazilian offshore industry following recent establishment of specialist support and workshop facilities at our local base in Rio Das Ostras, Rio de Janeiro," said Stephen Browne, regional manager of Veripos's Houston-based Americas region.

BCIT launches Marine Training Simulation Centre

www.bcit.ca

The British Columbia Institute of Technology (BCIT) has launched a new marine simulation centre in Vancouver.

The centre features seven new ship bridges, North America's only 360-degree tug towboat bridge simulator, a ship's main bridge simulation environment, and an engine room simulator complete with audio special effects and emergency lights.

The project was completed in conjunction with the Government of Canada and

Transport Canada, and with marine industry partners including BC Ferries, Kongsberg Maritime Simulation, Kinder Morgan Canada, Pacific Pilotage Authority, Port Metro Vancouver, Seaspan, and the Council of Marine Carriers.

"This unprecedented technology allows students to apply marine theory in a realistic and hands-on environment, preparing our graduates for their future and helping them become ready to play a key role in shaping the future of the marine industry in Western Canada," said Don Wright, president of BCIT.

Software Radio Technology wins \$1.8m order

www.softwarerad.com

Software Radio Technology (SRT) has announced that it has received an order worth US\$1.8 million from an existing EU based customer to supply automatic identification system (AIS) OEM products.

The order will be delivered in batches prior to 31 December 2011.

SRT develops radio communications technologies, focusing on VHF and AIS

technologies for use in navigation as well as tracking applications. The company provides its solutions in a variety of module and OEM product formats.

"Whilst we are pleased that SRT is receiving regular orders from our customers, the quantum of this order demonstrates that there are increasingly significant market opportunities arising for our customers for which our growing range of products are ideally suited," said Simon Tucker, CEO of SRT.

New simulators for VDAB

www.kongsberg.com

Kongsberg Maritime is to supply eight Polaris Ship's Bridge Simulators to Vlaamse Dienst Voor Arbeidsbemiddeling en Beroepsopleiding (VDAB) in Zeebrugge, Belgium.

VDAB will use the simulator as a basis for the training and evaluation of crew for several customers, including Jan De Nul and DEME, two of the world's major dredging shipping companies.

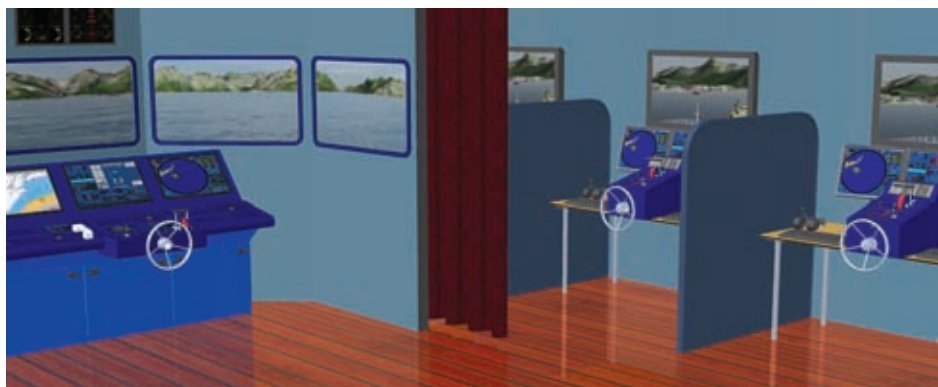
The simulator will allow students at VDAB's facility to train in a large number of sailing areas and is capable of providing training within a broad range of disciplines, including standard navigation, manoeuvring and ship handling opera-

tions, Search and Rescue operations and ice navigation.

"Kongsberg Maritime has performed very professionally and we are convinced that the new simulator installation will help us to educate more people in order to make better deck employees and officers," said VDAB Campus Manager, Patrick Naeyaert.

The delivery is due to take place in August and comprises two Polaris DNV B bridges with 225 degree Horizontal Field of View, and six Polaris Special Task stations each equipped with a 30 degree visual system.

The installation will also include an instructor station and a secondary instructor/debriefing station.



The new simulator facility is scheduled for delivery in August

SAAB announces new AIS range

www.saabgroup.com/transpondertech

Saab TransponderTech AB, Swedish supplier of maritime Automatic Identification Systems (AIS), has announced the introduction of its new R5 AIS family of products.

Saab plans to roll out the new R5 technology in a wide range of AIS products to meet different market requirements, including inland waterways, coastal fishing, deep-sea shipping, military and coastal surveillance.

The products will be brought to market in phases during 2011 and 2012.

"Our new R5 AIS products are the first to incorporate software-defined radio

(SDR) transceivers together with newly developed high-speed analogue-to-digital converters," says Gunnar Mangs, vice president Saab TransponderTech.

"The result is a dramatic improvement in receiver sensitivity, stability and signal processing. The SDR technology in the R5 products provides unlimited flexibility in adding new radio channels with software upgrades in the future."

"In addition to VHF ship-to-ship and shore-to-ship AIS messages, the R5 will also be able to process DGPS beacon signals and future satellite AIS messages and e-navigation radio channels."

Type-specific CBT for Kelvin Hughes and Consilium ECDIS

www.seagull.no
www.consilium.se

ECDIS manufacturers Consilium and Kelvin Hughes have reached an agreement with Seagull to develop product-specific computer-based ECDIS training packages.

Seagull's existing ECDIS onboard training course covers areas such as the use of ECDIS, chart projections, chart accuracy, chart types, chart datum, chart updating, sensor inputs and control, alarm and warning strategies, radar and ARPA information on ECDIS, and route planning.

Under the new agreement with Consilium, an ECDIS CBT module will be included in the library of CBT modules as 'Product Specific Training' to meet the latest revisions to STCW, working on Seagull's training system software.

"Used by qualified navigators an ECDIS increases the safety of navigation. However, in the hands of unquali-

fied operators it may contribute to misunderstandings and even accidents," said Seagull managing director, Roger Ringstad.

"Understanding the philosophy, limitations and features of ECDIS is a must."

ECDIS onboard training was both effective and cost saving, Mr Ringstad added, since the seafarer was already in situ and did not incur any travel or accommodation expenses. At the same time, the candidate would be trained in the use of the specific ECDIS system and equipment configuration onboard.

The Consilium ECDIS CBT module will be available as part of a software release by Seagull, as well as being physically delivered and supported technically by Seagull.

"This course is the same as the generic onboard ECDIS course from Seagull, but it has been amended with an Applications Trainer for the Consilium ECDIS, which will have the same assessment mechanism

built in as the standard Seagull CBT modules, while the workbook will be the same as for the standard ECDIS course," said Mr Ringstad.

The training system, which will be available via an annual subscription per ship and upgraded for as long as the subscription is held, will be based on self-tuition by navigating officers while onboard, under supervision by the ship's Master or an approved assessor, and supported by an ECDIS Onboard Workbook.

The ship's Master or the approved assessor will confirm that the candidate has performed satisfactorily, endorse the course training records and send them to the Seagull Training Centre for assessment.

There, an instructor will verify that a complete set of documents has been received and that all training records and written responses to the workbook meet the required minimum standard, on completion of which the instructor will issue, and submit to the vessel, a course certificate.

Kelvin Hughes has also announced the signing of a similar agreement with Seagull to develop a product-specific CBT module for its own MantaDigital ECDIS range.

Kelvin Hughes is planning to offer the equipment-specific CBT package as part of its ECDISplus package for on-board training on its MantaDigital range of products.

"The most practical solution to meeting the large type-specific training requirement is to institute an on-board approach," said Spike Hughes, commercial marine systems director at Kelvin Hughes.

"Using this method initial training and refresher courses can be undertaken without large costs and disruptions to the fleet operators."

"Crews changing ships can rapidly assimilate themselves in the operation of the ECDIS on the vessel they are joining, ensuring that they operate it both efficiently and safely."

ECDIS training from Kongsberg

www.kongsberg.com

Kongsberg Maritime is to offer a new generic ECDIS training course starting in August 2011, having already received preliminary approval from Det Norske Veritas (DNV).

Kongsberg Maritime's training division, offers a range of type-specific training courses for customers using Kongsberg systems, and the development of the generic ECDIS course builds on this foundation.

Designed according to the IMO Model Course, the new offering will cover ECDIS legal requirements, the main types of electronic charts, ECDIS data and its presentation, navigational and route planning functions, updating charts, ECDIS back-up and the dangers of over-reliance on ECDIS.

The courses will first be made available in Norway, Singapore and South Korea.

"I'm pleased that we are now able to offer both generic and type-specific training, so that users of Kongsberg bridge systems will be able to satisfy requirements from the authorities," says Kongsberg Maritime's instructor and course developer, Marvin Elvebakk.

"We'll be combining all of the necessary elements, with a great amount of practical

exercises, work on our cutting-edge simulators and in-depth debriefings. We've also set aside time to talk about accidents that have happened because of improper use, or lack of proper training on ECDIS."

In other news, Kongsberg has also announced that the 130-metre long, 24-metre wide new offshore construction vessel Fugro Symphony has become the first ever to sail with the company's K-Master aft bridge workstation onboard.

Built at the Bergen Group BMV yard, Fugro Symphony was delivered to its owner on 3rd May 2011.

The K-Master aft bridge workstation consolidates the traditional five to six metre aft bridge console into a single or dual operator chair and uses touch-control technology to replace mechanical switches in bridge applications, except for in critical operations.

In addition to the new K-Master system, Kongsberg Maritime also supplied all the control and monitoring systems for the Fugro Symphony, such as the automation for the ballast, alarm, thruster control, DP and Independent Joystick systems in addition to critical sensors including GPS, a HIPAP High Precision acoustic system and a Seapath system.

New orders for Satellite-AIS

www.exactearth.com

Satellite-based AIS provider exactEarth has announced that it has received multiple new orders for exactAIS, its global vessel tracking and monitoring system.

The company says that the orders have been placed by government agencies in several countries, including South Africa and Japan, and are worth in excess of CDN \$2 million over the next 12 months.

exactEarth also announced that it is seeing progress in the commissioning process related to its recent satellite launch, and that it expects its AIS payload to be placed into service by the end of June.

The company claims that the satellite payload, newly named exactView2, has demonstrated "very good vessel detec-

tion rates in even the highest-density shipping areas of the world" in a series of recent tests.

exactEarth says that it also plans to add further exactView spacecraft to its constellation in the coming months.

"exactAIS is proving to be an extremely high quality data source for a range of maritime domain awareness applications, and customer interest has been strong even at this early stage of the deployment of our exactView constellation," said Peter Mabson, president of exactEarth.

"With the near-term addition of exactView2 and three follow-on launches planned for later this year, we believe our service will become a critical component of any wide area maritime reporting and surveillance requirement."

Integrated navigation upgrade for Star Cruises

www.sam-electronics.de

Three Star Cruises' vessels, Star Pisces, SuperStar Aquarius and SuperStar Libra, are completing the installation of upgraded NACOS Platinum navigation, communication and control systems, provided by SAM Electronics' L-3 subsidiary Lyngsø Marine.

Each integrated navigation system comprises one X-band and two S-band IP radars linked to five Multipilot multi-function consoles with radar-controlled trackpilots and ECDISpilots together with other nav aids.

The new systems replace earlier NACOS systems which have been in service for a number of years.

Jointly developed by SAM Electronics and Lyngsø Marine, the NACOS Platinum

series of ship control systems feature standardised hardware and software components, as well as IP-radars for direct connection to a central IP network, enabling real-time images and ECDIS displays to be accessible from any onboard workstation.

Commenting on the upgrade project now nearing completion in Malaysia, Capt Gustaf Gronberg, fleet Captain and senior vice-president of marine operations for Star Cruises, said: "We always place safety as our top priority and are proud that Star Cruises has entered its 15th year free of accident and insurance claims."

"With the upgrade of bridge systems to the NACOS Platinum series, we are dedicated to maintaining our exemplary record for providing customers with a safe and comfortable cruise experience."

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Transas: new FleetViewOnline and 3D VTS module

www.transas.com

Transas has announced the launch of a new version of its FleetViewOnline (FVO) service, and an upgraded vessel tracking system (VTS) featuring 3D technology.

FleetViewOnline is a security protected web-based tracking system displaying a vessel's position, which includes a free automatic identification system (AIS) tracking feature.

The AIS Tracking feature allows the reception of additional AIS DPRs once a vessel is in an area covered by the AISHUB service. If an area is not covered by the AISHUB service any available free AIS data source for the area can be connected to FVO and then will be added to the AISHUB coverage area.

AIS and satellite position reports can be integrated into one track or presented separately.

Transas claims that this AIS tracking functionality enables a more effective use of FVO zone alarms, that warn staff or trigger ship agents' activity.

An FVO Tracking and SSAS service application for Android based smartphones is also being developed, which is currently available as a beta version.

Transas' upgraded 3D vehicle tracking solution (VTS) module for Port Operations is designed to provide the operator in port with a full-scale 3-dimensional view of the navigational situation in the VTS area, based on AIS sensor data.

The simulated 3D VTS picture, based on real-time VTMS data, enables the operator to observe the navigation situation from a variety of different perspectives: from the viewpoint of the ship's navigator

and pilot or in a so-called 'flight mode'.

Position, direction, zoom, height and tilt of the camera can be adjusted to enable a better overview.

Transas says that it aims to provide the operator with the same view available to the ship's bridge officers and pilot, to offer additional support to decision-makers on board in situations of limited or restrained visibility.

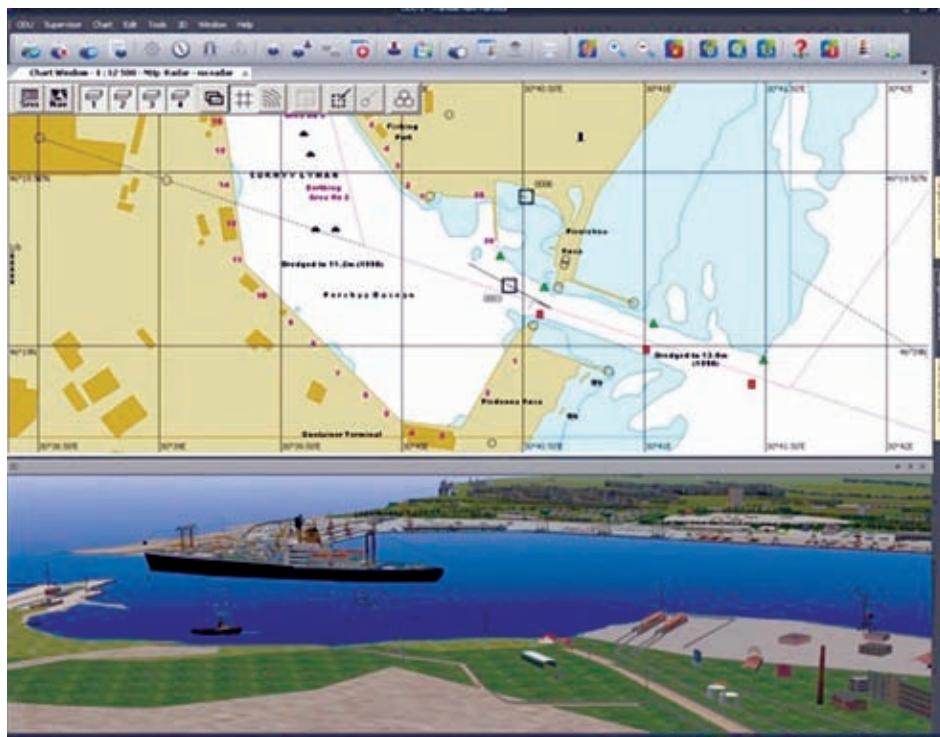
In other news, Transas and its Global ECDIS Training Network (GET-Net) partner Interschalt Maritime Systems AG have been awarded Flag State approval from Germany for their generic ECDIS training.

Transas Marine and Interschalt jointly

offer combined generic and type specific courses. The course has been certified by Germanischer Lloyd (GL) and follows the IMO Model Course 1.27.

The ECDIS training is based on a GL certified training course which follows the ECDIS IMO Model Course 1.27 and adheres to the requirements of the Manila Amendments to STCW.

Transas notes that it will continue to expand its GET-Net programme, having recently welcomed Marstal Navigationsskole, a nautical learning institution from Denmark, and PT. Promacindo, an Indonesia based nautical training institute, as new partners.



Transas' new VTS module provides port operators with a 3D view of the navigational situation

ECDIS deal for Indian Coast Guard

www.maris.no

MARIS reports that it has secured a deal to supply ECDIS installations to 36 high speed Interceptor Boats to be built at the Larsen & Toubro shipyard for the Indian Coast Guard, with a further option for another 18 vessels.

Larsen & Toubro (L&T) Limited will build the vessels at its new yard in Chennai, near Ennore. The order represents the first deal secured by L&T from India's Ministry of Defence.

The order is expected to be completed by 2013, and involves the supply, installation and commissioning of the MARIS ECDIS900 SmartLine Mk10 Flat Panel Computer with PC Radar Kit, with radar overlay and radar/ARPA, on board the newbuilds.

"We have successfully marketed the MARIS SVDR float free and Pilotmate software, but now our relationship has grown and we have established MARIS as a key supplier for ECDIS in India," commented Nafeesa Moloobhoy, managing partner of MARIS representative A.S. Moloobhoy & Sons, India.

"Winning this particular order has been a matter of great pride for Moloobhoy's".

In other news, MARIS has also announced a new agreement with weath-

er and performance systems supplier GAC-SMHI Weather Solutions, whereby the two companies will integrate the MARIS Voyage Decision Support (VDS) system and GAC-SMHI's weather routing advice and shore-based fleet monitoring software systems.

The MARIS VDS offers logging, storage, communication and display functionality, and ECDIS-related functionality such as route planning. The VDS can also

be used as an ECDIS back-up.

GAC SMHI Weather Solutions provides onboard weather data, including meteorological routing advice and shore-based fleet monitoring and analysing functionalities.

The parties have agreed to cooperate in the development, marketing and sales of an integrated system which marries GAC-SMHI's FleetWeb and VisPer programs to MARIS VDS and ECDIS.

Polish maritime services company Kongsberg Shipmedics has become a wholly owned **Kongsberg Maritime** subsidiary, called Kongsberg Maritime Poland Ltd. A 52 per cent stake in the company had been acquired in 2007 when it was renamed Kongsberg Shipmedics, with the remaining shares purchased in October 2010 - a deal approved by the Polish Commercial Court in December.

L-3 Valmarine has appointed John Egil Gilje as vice president and director sales and marketing. Prior to joining the company Mr Gilje worked as director sales and marketing at **Bjorge Marine Automation**.

UKHO has announced the appointment of Sandra Rogers as the new non-executive chair. Ms Rogers, who has been

on the UKHO's board for more than eight years having joined in July 2002, has been interim chair since October 2009 and takes up her new position for an initial term of three years.

Ocean Signal has appointed **Sartech** as UK distributor for its SafeSea product range. Based in Surrey, Sartech will have core responsibility for strengthening the presence of Ocean Signal's product line in the UK, targeting the commercial sector.

Ocean Signal has also appointed **Echomaster Marine** as its dedicated country distributor in Scotland. Echomaster Marine will be responsible for distributing Ocean Signal's SafeSea range which includes the E100/E100G EPIRB series, the S100 SART and the V100

Sperry announces new contracts

www.northropgrumman.com

Sperry Marine has announced that it has agreed new contracts with oil giant BP, the Swedish Navy and German shipping company Peter Döhle Schiffahrts-KG, for the supply of ECDIS systems, radar and the provision of maintenance services, respectively.

Under the terms of its deal with BP, Sperry has supplied electronic chart display and information systems (ECDIS) to 12 BP oil tankers.

Four VisionMaster FT ECDIS workstations were installed on each of the 12 ships for full ECDIS redundancy, supplementing existing Sperry Marine integrated bridge system installations, including radars, autopilots and gyrocompasses.

The British-flagged Bird-class vessels were originally built for BP in Korea by Samsung Heavy Industries. The 115,000 deadweight ton double-hull 'ice-class' Aframax ships typically transport crude oil or heavy lubricant oils worldwide.

In Sweden, Sperry Marine has won a contract to upgrade the navigation radars on five Swedish navy patrol boats, and will retrofit each ship with two dual-band interswitched chart radar systems.

The initial contract includes five ships with options for six additional ships, plus a spare system, spare parts, service and maintenance.

CA Clase Marinelektronik AB, Sperry Marine's sales and service representative in Sweden, will be responsible for installing, commissioning, testing and technical support for the project.

Meanwhile, Sperry's one-year contract with Peter Döhle and HAMMONIA Reederei (a joint venture between Peter Döhle, HCI Capital AG and GE Transportation Finance) covers the provision of worldwide service and maintenance for more than 135 ships.

Sperry Marine will be responsible for all shipboard service, support and maintenance of the ships' navigation and communication equipment, including repairs, spares management and required annual inspections and certifications.

Sperry says that it will coordinate on-board service from its Hamburg, Germany, service centre, utilising its network of over 250 service locations.

GMDSS Handheld Radio.

AMVER (the Automated Mutual Assistance Vessel Rescue System) has launched a new monthly podcast called the Quarterdeck, where AMVER's Benjamin Strong and USCG Admiral James Watson discuss search and rescue and other topics of interest to mariners. The podcast can be found at <http://amveruscg.blogspot.com>, or downloaded from iTunes.

www.kongsberg.com
www.valmarine.com
www.ukho.gov.uk
www.oceansignal.com
www.sartech.co.uk
<http://amveruscg.blogspot.com>

Raytheon Anschütz delivers 10,000th Gyro Compass

www.raytheon-anschuetz.com

Raytheon Anschütz has announced the delivery of its 10,000th Standard 22 Gyro Compass, which the company says makes the Standard 22 the world's most popular gyro compass.

Raytheon Anschütz has installed the milestone compass on Ulstein Shipyard's vessel REM MIST. The compass is part of Raytheon's navigation package, consisting of a triple Standard 22 gyro compass system, magnetic compass, various repeater compasses as well as adaptive autopilot system.

"By combining highest levels of reliability and accuracy with long gyrosphere lifetime, the Standard 22 Gyro Compass

has become a standard solution for the demanding Norwegian offshore industry," says Jörn Fischbach, sales manager for Norway at Raytheon Anschütz.

The gyro compass features a patented non-contact transmission of the gyro supply voltage and optical signal transmission of the sensor data.

Further functions include heading monitoring, automatic switch over, a transmitting magnetic compass (TMC) path as well as an individual speed error correction mode in addition to manual / automatic correction modes.

Additionally, universal course transducers are available for gyro compass refit solutions.



The vessel REM MIST was installed with the milestone gyro compass

Letter to the editor - ECDIS training

To the Editor,

The final draft of the revised ECDIS Model Course 1.27 (2010 edition) has recently been published by the IMO Secretariat as an STW43 paper, and posted to the IMO documents site. It should be regarded as immediately relevant to ECDIS training course development and approval processes.

This revision has been a very long work in progress, especially through the IMO validation process. But here it is, at last, after considerable international peer review, modification and validation.

STW43 must still vote on it at their next meeting, in June 2012. But approval of this final draft is expected. If this revision is approved next year, it will then officially replace the original MC 1.27.

One important aspect of this revision is that Part A (Framework) includes a kind of simulation performance standard for ECDIS training with added details and justification placed in appendices for the instructor.

Other big differences from the original MC 1.27 are that it includes full course content as well as detailed

guidance on exercises and practical underway assessment. It is all about practice in solo navigation training, and the graded demonstration of the integration of ECDIS skills with all aspects of navigation.

Because this revision is so focused on specific content in underway navigational contexts, MC 1.27 should no longer be regarded as generic training.

I welcome comments from the global community on this final draft 2010 edition of MC 1.27. Interested parties are also encouraged to circulate the document, provided that it is unaltered in any way.

- CDR Christian Hempstead
USMS

United States Merchant
Marine Academy
hempsteadc@usmma.edu

Editor's note - The IMO's final draft of the revised ECDIS Model Course has been made available for download on the Digital Ship website, via the short-link <http://tinyurl.com/ModelCourse>

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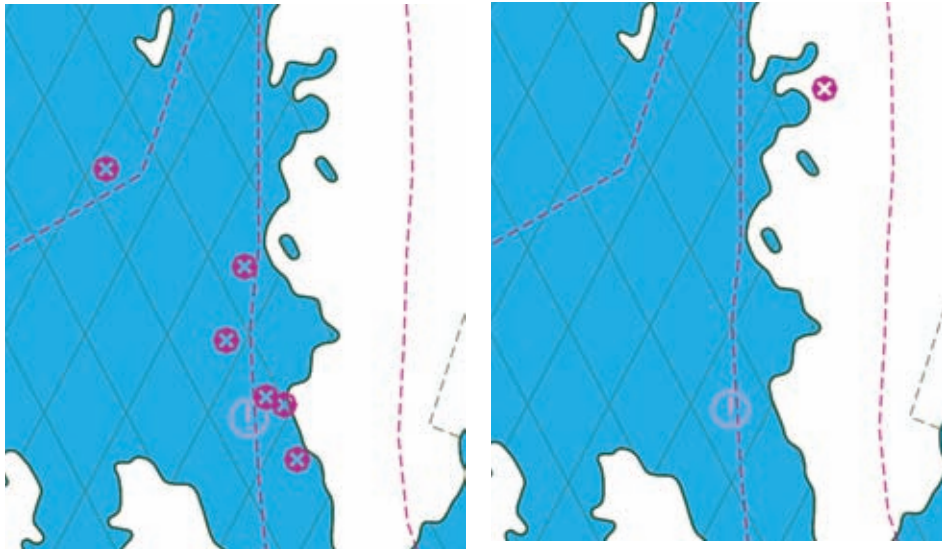


ECDIS – isolated underwater dangers

Understanding the display settings and symbology of a particular ECDIS system is absolutely critical in ensuring safe navigation – Dr Andy Norris looks at some key features to be aware of

There is some concern being expressed about the detailed differences in display that can occur on ECDIS when units from different manufacturers are similarly set.

An important example cited is in the display of underwater dangers, for instance wrecks, rocks and other obstructions, where it is clear that some issues exist for the unwary user.



Two different ECDIS units can show different underwater hazards even though the user has input identical values for the safety contour

Firstly, it is important to realise that the depiction of such dangers is handled quite differently on ECDIS compared to paper charts.

On a paper chart, underwater dangers are shown by specific symbology, giving the type of obstruction and usually also giving the underwater clearance referenced to the chart's vertical datum.

On ECDIS, the display of underwater dangers is intimately connected to the safety contour, which is set by the user.

Such dangers, when their depth is hazardous to own ship, according to the setting of the safety contour, are displayed as a conspicuous magenta image known as the isolated danger symbol.

It looks rather like a screw head, as can be seen in the accompanying illustrations.

Conditional symbology

ECDIS uses a conditional symbology procedure to determine when to display an underwater danger. In areas that lie within the safe waters defined by the safety contour the symbol will be displayed if the underwater obstruction is shallower than the defined contour.

This will happen for any display category selected because it forms part of the Display Base requirement. The symbol is a clear visual indication that the depth in its vicinity is less than the value of the safety contour and is therefore a potential danger to the vessel.

Although not generally necessary, clicking on the object and selecting the Pick Report will give detailed information about it, including its depth and the

type of hazard.

If the isolated danger is deeper than the value of the safety contour it will not be displayed as it has no significance to safety – provided the safety contour has been appropriately selected. This helps to de-clutter the display.

If the display of all hidden underwater obstructions is required – such as to aid position verification by the use of sound-

ings – the display mode All Other Information can be selected.

In this case isolated dangers that are deeper than the safety contour will be displayed in their standard symbology, for instance as a wreck, rather than as the isolated danger symbol.

However, to comply with IMO requirements, those dangers which are less deep than the safety contour and lying within it will remain being depicted by the isolated danger symbol.

It should be noted that some underwater dangers are identified as an area, rather than as an isolated point. The same symbol is used for such cases, with the limits of the area being denoted by a dotted line.

Insufficient depth contours

The concept of selecting a safety contour, together with its effect on isolated dangers within the area defined by it, is embedded within the IMO ECDIS Performance Standards.

These state that if the safety contour specified by the mariner is not available, the used safety contour should default to the next deeper available contour.

In fact, the small number of available contours on many ENC's means that in some situations, such as when entering certain ports, the vessel has to traverse areas that are less deep than the safety contour to which the system has defaulted.

It should be realised that such situations can still be safely negotiated using ECDIS – for instance by using the All Other Information display mode and mak-

ing sure that soundings are turned on.

For such a course of action, ECDIS needs to be used more like a paper chart on a screen, with the mariner taking detailed notice of all the displayed hazards. In this use of ECDIS, underwater dangers would be shown using the symbology of the actual hazard, rather than by the magenta 'screw head' symbol.

However, IHO S-52 ECDIS data presentation standards include an additional feature that is aimed at assisting this particular situation.

It is available on most but not all ECDIS equipment. This is probably because it is not an explicit requirement within the IMO Performance Standards, nor within the IEC equipment standards for ECDIS, known as IEC 61174.

S-52 enhanced safety contour

The IMO Performance Standards only assume a single value for the safety contour. S-52 goes a step further by effectively identifying two separate values for it – that set by the user and that selected by the system, that is the next deeper contour if the user value does not correspond to an available contour.

S-52 uses the value set by the user to determine whether isolated dangers are shown, not the system-selected safety contour.

An ECDIS that implements the full S-52 safety contour procedure can also be set optionally such that the symbol is also displayed for isolated dangers that are less deep than the user-set safety contour in areas between the drying line and the default safety contour.

This is intended to be used when vessels need to use waters less deep than the default safety contour. It is imperative that soundings are also displayed on ECDIS when navigating in such areas.

For this option ECDIS only displays the magenta isolated danger symbol for the Standard Display setting and above, unlike the display of underwater hazards within the area that is deeper than the safety contour, which is always shown.

It is a matter of preference whether the mariner wants to turn on 'show isolated dangers in shallow water' or not.

However, it is imperative for the user to know which mode has been selected. If it is wrongly assumed to be on and the display, for instance, is not set to All Other Information, then such dangers in waters shallower than the default safety contour will be invisible.

Incidentally, IMO also defines a safety

depth, which is quite different to the safety contour. ECDIS uses the safety depth to emphasize soundings equal to or less than the safety depth whenever spot soundings are selected for display.

The safety contour setting affects alarms and conditional symbology but the safety depth only affects the display of soundings.

ECDIS differences

The two illustrations simulate the detail of the same area shown by two different ECDIS displays. The user input safety contour has been set on both to 7 metres. The available safety contour that both systems have defaulted to is 10 metres – the only contour visible in the illustrations.

The left-hand case is for an ECDIS that uses the full S-52 implementation and which is set to the option 'show isolated dangers in shallow water'.

For this example, all such hazards having a clearance of less than 7 metres with respect to the chart's vertical datum and lying both inside and outside the 10 metre contour are identified by the magenta symbol.

In this particular case they all lie within the shallow water area. If the option for showing isolated dangers in shallow waters was not selected, no dangers would be shown at all on this particular area of the chart.

On an ECDIS that does not use the fully implemented S-52 feature a rather different picture results, as can be seen in the right-hand illustration, even though set with the same user input safety contour (7 metres).

Firstly, hazards are now only identified in areas deeper than the 10 metre contour. Secondly, hazards that are charted as being less deep than this contour will be depicted, rather than those that are less deep than the user-set safety contour.

This has resulted in a single isolated underwater danger being depicted, which must have a depth between 7 and 10 metres as it is not visible in the left hand illustration.

The illustrations clearly shows that significant differences in display can occur, even though the user has input identical safety contours.

However, the differences are explainable and both implementations permit safe navigation, providing the user is fully familiar with the generic use of ECDIS for navigation and the actual features and controls available on the particular ECDIS in use.

Despite this, there is no doubt that better commonality between the implementation of the safety contour feature between systems would ease the burden on training **DS**



Dr Andy Norris has been well-known in the maritime navigation industry for a number of years. He has spent much of his time managing high-tech navigation companies but now he is working on broader issues within the navigational world, providing both technical and business consultancy to the industry, governmental bodies and maritime organizations. Email: apnorris@globalnet.co.uk

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