

Digital Ship

October 2012

www.thedigitalship.com

VSAT installed on 60 Teekay tankers

Teekay has recently completed the roll-out of a new Ku-band VSAT system to 60 ships in its tanker fleet, provided by NSSLGlobal

Satellite communications provider NSSLGlobal has completed the in-service installation of 60 VSAT systems for the Teekay Shipping tanker fleet.

The ships will now have access to NSSLGlobal's CruiseIP Ku-band service, which offers data speeds of up to 4 Mbps on a near-global basis.

The installations are the result of a communications project dating back to early 2011, when Teekay began a tender process with the aim of implementing broadband services on 40 of its tanker vessels.

The company's list of criteria in choosing a new system included coverage in various different regions of the world, as well as secure connectivity to integrate with its corporate VPN.

Additional operational applications, such as remote access for maritime diagnostic applications like engine and cargo monitoring, were required, as well as access for seafarers for crew welfare purposes.

Teekay also stipulated that the winning tender would be required to complete installation of the VSAT

systems within six to nine months, without interfering with the vessels' normal operations.

Onboard set-up

The VSAT network implemented onboard the Teekay ships includes an NSSLGlobal Cruise Control Unit and Gateway device, which is used to manage the communications and control access to the system.

The Fleet Manager and Captain are able to control the network themselves, allowing them to implement Teekay's own Corporate IT and Communications policy.

Separate policies are applied to the Corporate and the Crew Welfare networks, with an accelerated and prioritised VPN for corporate traffic.

Secure remote access protocols have been initiated to allow authorised Teekay personnel to remotely connect to the ship to run the diagnostic applications specified during the tender, like the Honeywell e-server system used by Teekay for engine and cargo monitoring.

Remote diagnostics and control of the onboard VSAT system itself is managed by the NSSLGlobal Network Operations Centre.

Beam switching is done automatically onboard, as is least cost switching between alternative satellite bearers, such as Inmarsat's FleetBroadband

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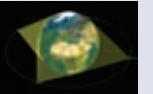


Installation of the VSAT systems was required to be completed within six to nine months under the agreement. Photo: Teekay

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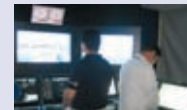
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"Improved Crew Welfare"

Søren G. Krarup-Jensen, General Manager, Crew & Marine HR, Eitzen Chemical

Eitzen Chemical operates, overall, around 80 chemical tankers. Based in Copenhagen, Capt Søren Krarup-Jensen heads up Marine HR.

"Dualog Connection Suite is the corporate platform for communication with our ships. At the same time it provides our crew members with private e-mail accounts without any administration on our part", says Captain Krarup-Jensen.

"Dualog provided the combination of flexibility and control we were looking for - independent of satellite communication systems and airtime vendors", adds Krarup-Jensen.



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which was also provided as part of the contract.

Installation of the systems onboard had to follow a flexible schedule, to cater for last minute changes in vessel itineraries and to cope with occasions when the vessels were only in port for a very short period.

NSSLGlobal notes that, working with Teekay, it managed to complete the roll-out programme on time and on budget, and as a result of this success Teekay decided to extend the project from the initial 40 ships to a total of 60 vessels.

Results

In the time since the first of the systems were installed, Teekay has seen an increased level of communication between the vessels and its customers, vendors and

port authorities, and an improvement in operational efficiency due to the greater access to vessel information it now enjoys.

The performance of remote and online diagnostics has made maintenance and data collection easier, while online access to port information, weather updates and other databases has improved vessel voyage performance.

Crew communication has also changed significantly, with access to internet and social media applications, including Skype, Facebook and YouTube, now typical onboard.

In addition, the companies' seafarers have been able to use the system to complete training online, via web portal or webcam.

"Thanks to people involved in the

process leading up to awarding the contract, Teekay had a very clear idea of what was required for the success of this project," said Zoran Jenlenovic, director of marine and technical assurance for Teekay.

"NSSLGlobal's proven record in providing 'in service' installations alongside 24 hour remote support was one of the key elements in our award of contract."

"During the implementation phase, we quickly developed a close working relationship with the NSSL project team which meant that we were confident that, despite quite aggressive project goals and targets, the challenge of changes to the vessels' programme with often only a day or at most two in port, NSSLGlobal were able to deliver the desired solution on time and on budget."

DS

Globalstar and Arianespace settle differences

www.globalstar.com

Globalstar and launch services provider Arianespace have settled a payment dispute between the companies which will see the fourth launch campaign under the companies' current Launch Services Agreement go ahead.

The companies' settlement covers the additional amounts that Globalstar will pay to cover costs associated with the delays experienced during three prior launch campaigns.

The dispute had thrown the fourth launch into doubt after launch provider Arianespace served notice of a default on payments.

In an August 9 filing to the US Securities and Exchange Commission, Globalstar admitted that this notice had been received, and that it could affect the planned launch, which was expected later this year.

The company's statement said:

"In August 2012, (Globalstar) received notification of payment default from Arianespace. Based on the terms and conditions of the amended and restated contract, Arianespace is entitled to suspend any and all of its activities in preparation of the fourth launch if (Globalstar) does not make payment in full within 15 days."

"If payment is not made within 60 days, Arianespace is entitled to terminate the contract, which would be an event of default under the Facility Agreement."

The Facility Agreement in this case refers to Globalstar's funding arrangements, which could be threatened by a failure to launch the new satellites.

However, with the companies having since reached agreement, the launch is set to go ahead.

Globalstar says that it now anticipates that satellite manufacturer Thales Alenia Space will complete the Pre-Shipments Reviews of the final six spacecraft purchased under the terms of its 2009 contract shortly and that, once completed, the fourth launch campaign can begin.

Due to available launch windows and the upcoming end-of-year holiday season, the company says that the fourth launch is now anticipated in early 2013.

Globalstar has also entered into a further agreement with Thales Alenia Space France for the manufacture and delivery of six additional satellites for the Globalstar second-generation constellation.

The purchase price for the six satellites, certain software upgrades and related services is €149.9 million, payable over 34 months after the first payment based on Thales reaching construction milestones.

Performance under the contract is dependent upon Globalstar obtaining financing for at least 85 per cent of the total contract price, among other conditions.

"We are only months away from completing the fourth launch of our second-generation satellites to re-establish Globalstar's preeminent position within the mobile satellite industry," said Jay Monroe, chairman and chief executive officer of Globalstar.

"With our landline quality voice service, industry leading handset data speeds, high quality innovative M2M data solutions and low cost pricing plans, we are ready to mix it up in the MSS marketplace."



Globalstar is now on course to complete the fourth launch in its second generation constellation.
Photo: Arianespace

Nordic Aurora installs C-Bird

www.maritimebroadband.com

Nordic American Tankers has installed the Maritime Broadband C-Bird VSAT system onboard the MT Nordic Aurora, a 274-metre globally trading Suezmax crude carrier built in 1999, in conjunction with the vessel's technical manager, Hellespont Ship Management.

The installation marks the beginning of a 36-month contract for global C-band satellite services to be provided by Maritime Broadband to the ship.

The C-Bird was delivered as a kit to the vessel, without a shore crane being required. The antenna was then assembled and installed onboard while at anchorage in Fos Sur Mer, France.

Preparation and fabrication of the pedestal took 48 hours, while a further five hours of work was done by the crew of the Nordic Aurora and two Maritime Broadband technicians to assemble the

C-Bird system.

"We were able to install this system ourselves without going to dry-dock or use of floating cranes, as the equipment is not heavy and it is modular," noted Dalibor Jalsovec, electrical superintendent, Hellespont Ship Management.

"The economics and logistics of C-Bird just make sense doing the installation when the vessel is in service, for us as technical managers of a tanker fleet."

Frithjof Bettum, senior vice president - operations, Nordic American Tankers, also commented: "The choice to deploy C-Bird was natural for us. We have always-on internet within our existing budget."

"Coverage is global - which we expect will provide operating benefits, support the crew and eliminate some surprises in our communication bills. The ease and low cost of installation is a great feature."



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Laser communications satellite system launched

www.laserlightcomms.com

Laser Light, a company based in Virginia, US, has announced its intention to launch what it says will be the world's first commercial satellite communications constellation based entirely on optical wave technology.

The planned constellation is to be comprised of 12 satellites, eight primary satellites and four spares, which will be placed in a Medium Earth Orbit at 10,500 km.

The company says that the network will have an operating system capacity of 4.8 Tbps (terabits per second), including satellite-to-satellite optical crosslinks and satellite-to-ground optical up/down links of 200 Gbps.

One of the most interesting aspects of the system is that it will not rely on radio frequency (RF) spectrum, as typically used in maritime satellite communications.

Laser Light may rely on radio frequencies provided by its telemetry, tracking & control provider for initial satellite deployment and check-in, but after satellite initial manoeuvring and acceptance the system will rely solely on optical-wave technology to provide its services.

The network will use optical-wave StarBeam technology from Raytheon to run the Optical Satellite System [OSS], connecting to a global fibre network – terrestrial and undersea – to establish a meshed optical network that Laser Light says will offer connectivity options “previously unattainable by other satellite platforms.”

The all optical-wave transmission inter-

face platform will use Lightway access nodes, optical wave receivers comprising the company's terrestrial ground segment, to enable compatible handoffs to terrestrial optical fibre carriers.

This process will use the same equipment used in today's fibre optic industry so interconnection can take place at global collocation points.

The company notes that the OSS will not convert optical signals to electrical signals at any layer of its network, and that consequently there should be minimal, if any, disruption due to evolution of transport technologies and protocols.

“Laser Light's potential service delivery advantage is made possible by the decades of research conducted by Raytheon Company in the field of free space optical lasers,” said Robert Brumley, senior managing director, Laser Light Communications.

“Laser Light will benefit from Raytheon's technology, engineering expertise and pending patents through an exclusive licensing agreement, enabling the commercial communications market to benefit from the deployment of this next-generation, highly complementary all Optical Satellite System.”

Mr Brumley confirmed to *Digital Ship* that the commercial markets the system could be applied to would also include maritime, and that the communications service could be deployed on oceangoing vessels with an appropriate antenna.

The company believes that its service will be cheaper than current or planned satellite services, as it does not require

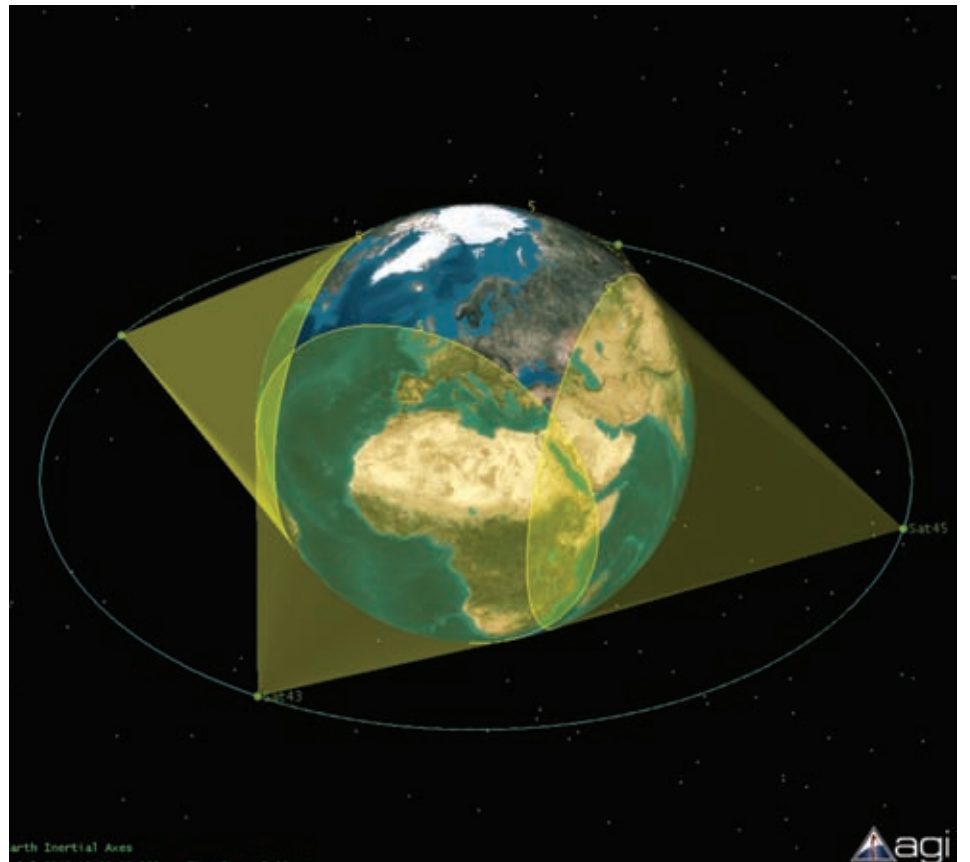
wireless spectrum, regeneration stations, multiple gateway facilities, and other infrastructure associated with RF communications.

Laser Light aims to commence the development of its OSS constellation immediately, with the goal during 2013 and 2014 being to engage in source selection for the spacecraft, launcher, network interconnection, and distribution partners.

In addition, the company says it will also undergo a series of field tests.

Satellite and ground equipment manufacturing, as well as the negotiation of ground facilities, is also expected to take place from 2013 through 2016.

The company says it then anticipates deployment of its OSS in the first quarter of 2017, with service availability expected in mid-2017.



Laser Light's first launch will consist of four satellites. Photo: Laser Light



Globe's new senior VP of sales,
Alex Van Knotsenborg

Globe Wireless has promoted Alex Van Knotsenborg to senior VP of sales, taking on overall management of the Globe Wireless international direct sales force. Mr Van Knotsenborg has been with Globe for 15 years, most recently working as VP of sales, Europe.

www.globewireless.com
www.imtech.eu/marineoffshore
www.intelsat.com

Imtech Marine has opened an office in Santos, Brazil, providing the company with its own presence in the South American market in line with its strategy to extend its service network to all the world's major ports. A new office in Rio de Janeiro is also expected to follow shortly.

James Collett has joined **Intelsat** as director of mobility services product management. Mr Collett was previously 13 years at **Inmarsat**, where he was most recently senior director of maritime business.



James Collett has joined Intelsat

OmniAccess expands coverage

www.omniaccess.com

VSAT provider OmniAccess reports that it has expanded its network coverage in the remote French Polynesian islands in the Pacific Ocean.

As a result, for the first time vessels travelling in the region can use its OmniAccess BroadBEAM ULTRA VSAT service.

The news follows the company's investment into the opening of a high-capacity network on the Intelsat 18 satellite that first became operational in November 2011. This provides the capacity to offer network services via the Ku-

band coverage over French Polynesia.

Connection speeds of up to 20Mbps can now be achieved in the region via the ULTRA service following the coverage extension.

“Our new network on the unique beam of the Intelsat 18 satellite offers unparalleled coverage with unprecedented power and ideal elevation,” said Carlos Carbajal, managing director of yacht services at OmniAccess.

“It provides a significant improvement to the internet connectivity enjoyed by those in French Polynesia and will revolutionise the internet experience of those cruising in the region.”

Hybrid ship PABX from Alphasat

www.alphasatmarine.com

Alphasat Marine has introduced its new Alphaconnect Hybrid system, a telephone PABX with integrated IP facilities designed to be used on board ship.

The Alphaconnect 48/128 has been type approved by DNV, and combines the company's Alphaconnect technology with other IP technologies to reduce the cabling typically required for telephony onboard.

The Hybrid system offers 24 analogue

stations, expandable up to 256, and 24 VoIP telephone ports, expandable up to 500 with POE (Power over Ethernet).

Two VoIP to analogue voice channels, expandable up to eight, are also included, as well as analogue trunking to satellite communications, VoIP trunking to broadband satellite services, and Wi-Fi access for connection of smartphones and for wireless configuration.

A dedicated app is available for configuration of smartphone integration with the network.

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New terminal added to mini-VSAT service

www.kvh.com

KVH has introduced a new onboard terminal for its mini-VSAT Broadband service, the TracPhone V7-IP.

The TracPhone V7-IP features a 3-axis,



The TracPhone V7-IP includes an integrated CommBox for communications management

gyro-stabilised antenna and integrated below decks unit with an ArcLight spread spectrum modem, similar to existing KVH systems, but also features the company's new IP-enabled antenna control unit - the CommBox-ACU.

The CommBox-ACU includes a built-in CommBox Ship/Shore Network Manager, Voice over IP (VoIP) adapter, Ethernet switch, and Wi-Fi adapter, making KVH's CommBox network management solution available to every TracPhone V7-IP customer without the need to invest in additional hardware.

The system offers a web browser-based user interface and access via an iPhone app, as well as onboard services like managed e-mail, secure file delivery, and remote network access.

The system software can be updated over-the-air using either the mini-VSAT Broadband service or cellular service,

using a GPRS modem built into the antenna, allowing technicians working in KVH's GlobalCare support centre to diagnose and troubleshoot any issues.

"The TracPhone V7-IP represents a significant leap forward in delivering fast, affordable, reliable broadband connectivity to maritime customers," explains Martin Kits van Heyningen, KVH's chief executive officer.

"A major upgrade to our pioneering TracPhone V7 system, the TracPhone V7-IP offers a complete end-to-end solution for managing both IT functions and communications on board the vessel. It delivers data at up to 2 Mbps, and has two integrated voice lines that can be expanded to support up to nine simultaneous calls."

"It's the same size and as easy to install as a FleetBroadband FB500 system, but it delivers data five times faster and at one tenth the cost of Inmarsat FleetBroadband."

Satphone assists in vessel rescue

www.inmarsat.com

Eighty-two people have been rescued from a stranded ship near Java after authorities were able to use positional information from the onboard satellite phone to pinpoint its location.

On 9 August, Australia Maritime Safety Authority's (AMSA's) Rescue Coordination Centre (RCC Australia) was contacted by Australian Federal Police after it received a distress call from a vessel requesting assistance, via an Inmarsat IsatPhone Pro on the ship.

"RCC Australia successfully contacted the satellite telephone number and a person on board reported the vessel's engine was not working and there were 82 people on board. At this stage, the vessel's unconfirmed location was south of Java," explained AMSA's spokesperson, Jo Meehan.

RCC Australia sent out a distress broadcast to the area to call for assistance, but there was an initial discrepancy over the vessel's GPS position.

The situation was clarified when Inmarsat was able to confirm, using the satellite phone's positional information, that the vessel was approximately 31nm south of Java.

An AP3 Orion maritime patrol aircraft subsequently spotted the vessel and three merchant ships who had responded to the earlier broadcast were diverted to the scene, followed shortly after by Australian Navy vessels HMAS Glenelg and HMAS Childers.

The MV Clipper Mayflower assisted in the rescue of two injured people from the water, while the remaining 80 people were taken on board the Defence vessels.

The diverted merchant ships were released and the MV Clipper Mayflower took the injured people to Indonesia for medical treatment, with support from an Indonesian rescue boat.

Australian border protection command also made arrangements for the people on board HMAS Glenelg and HMAS Childers to be transferred to Christmas Island.



The satellite phone's positional information was used to clarify the ship's position

85cm Ku/Ka-band VSAT antenna launched

www.jotron.com

Marine VSAT antenna manufacturer Jotron has announced the launch of its next generation VSAT antenna, the combined Ku-band/Ka-band Jotron B85.

The Jotron B85 stabilised antenna has been designed to operate in Ku- as well as in Ka-band, and will form part of a new family of Jotron stabilised antennas. The unit is an 85cm maritime VSAT communication antenna, with the dish and radome optimised for use in both bands.

The system has been developed to allow for onboard conversion from Ku-band to Ka-band operation, with an upgrade kit consisting of a Ka- transceiver and feed module available.

The 8W transceiver is connected directly to the antenna feed, which the company says allows it to offer a high level of RF performance with only a marginal difference in the uplink and downlink performance compared to a typical 1m antenna.

The integrated transceiver can switch between co-pol and x-pol in Ku-band on command, and extended Tx-band and 2 or 4-band RX-IF is also available.

Connection between the below and above deck equipment requires a single cable, and the B85 antenna can be operated without a ship's compass connected.

Jotron has built a remote access tool, the JRAS (Jotron Remote Access Suite), into the system, which allows the antenna to be remotely accessed from anywhere for status checks, diagnosis of any problems, support or upgrading of software.

SCPC, TDMA, Spread Spectrum or Carrier-In-Carrier operation are all supported, and the company says that the Jotron B85 will be compatible and fully integrated and tested with all leading VSAT modem providers.

VSAT expansion for Astrium

www.vizada.com

Astrium Services has agreed a new deal with Intelsat to expand its capacity on Intelsat's Ku-band mobility infrastructure.

Intelsat's new mobility network, which is scheduled for completion in early 2013, will consist of 10 beams on seven satellites.

Customers of Marlink and the new Astrium Services Business Communications division will benefit from additional capacity on the Intelsat 22 satellite to enhance coverage for maritime VSAT services in the Indian Ocean, as well as the Intelsat 21 satellite designed to provide Ku-band coverage in the southern Atlantic Ocean.

The capacity on Intelsat 21 and Intelsat 22 will be accessed via the IntelsatOne Network Broadband product, a global network of VSAT service platforms and teleports integrated with an IP/MPLS back-

bone which will be integrated with Astrium Services' own proprietary global teleport network.

In other news, Astrium Services has also launched a mobile software package to allow mobile devices onboard ship to connect to its Vizada XChange platform.

Available in October 2012, Vizada XChange Mobile will allow dual user groups - crew and officers - to connect via Wi-Fi to the communications system, for increased privacy while using the internet and controlled use of personal apps.

Content stored on board, including news feeds, training information or videos, can also be freely downloaded to personal devices via the mobile platform.

The system has been designed to include additional management functionality, given the increase in the number of unique connections that can be expected via the wireless interface, to allow cost and application usage to be controlled.

Sea Tel spares website launched

www.livewire-connections.com

Livewire Connections has launched a new section on its website, designed to help users locate spare parts for their Sea Tel VSAT and TVRO antenna systems.

The user is able to search by description e.g. belt or LNB, by antenna type, or by the product code. Using any one of these filters a list will appear of all the kits available for that particular antenna.

In addition to a description, pictures have been included for almost every part, to make it easier to identify exactly what is required.

There is a breakdown of the parts in each kit, as well as fitting instructions to assist in replacement.

Additionally, the new website section identifies parts which are suitable for old

as well as new antennas. The company says that this can be useful in sourcing parts for antennas which are out of warranty or where a ship has been sold and specific information has not been transferred.

"Livewire Connections is a main Sea Tel dealer and the company has been working hard to make it easier for our customers to locate information, pricing and availability on the Sea Tel spare parts they need to support their equipment," said David Walker, sales director, Livewire Connections.

"This is proving to be a very effective solution."

Livewire says that the next phase of development of the service will see the company able to offer online ordering and delivery for a substantial number of parts which are held in stock.

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s@tGate Satellite internet services

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MTN expands TV offering

www.mtnsat.com

MTN Satellite Communications (MTN) has announced that its MTN Worldwide TV service is now available to commercial shipping customers.

MTN Worldwide TV offers licensed TV content including news, entertainment and sports for ships at sea, and the company claims it to be the first fully-digital, multi-channel television service for the maritime industry.

The TV package utilises overlapping satellite beams that integrate with a vessel's existing Television Receive-Only (TVRO) antenna and onboard video distribution system.

MTN says it can ensure that viewers at sea will receive uninterrupted service - regardless of location - by managing the satellite network and content.

In addition, the TV service is available in all ocean regions and can supplement existing programming that might be lost when the vessel is at sea.

MTN Worldwide TV has already been in use by the cruise industry for the past four years and currently supports 78 vessels across 20 cruise lines.

"We believe that all seafarers should have access to quality entertainment and current event programming, including

live news, sports and special events like the Olympics, award shows or organisational events," said Brad Briggs, senior vice president and general manager, MTN Commercial Shipping & Energy Services.

"MTN Worldwide TV provides consistent, cost effective content on a global scale, aiding in building crew morale and delivering onboard internal communications, information and entertainment."

"Receiving secured, licensed content aboard a ship or remote platform at sea can be challenging, yet we are able to do this seamlessly, regardless of location, without requiring a vessel to swap out receivers or change service providers."

Programming from eight major US and international television networks, including BBC World News, CNBC, Fox News, MSNBC, Sky News, Sky Sports News, Sport 24 and E! Entertainment Television, is included, as well as special event programming such as the Olympics, Premier League football and onboard events like private broadcasts or training.

In other news, MTN and Wireless Maritime Services (WMS), a joint venture between MTN and AT&T, have announced the availability of the Connect at Sea voice application for mobile communication at sea.

The new service, designed for cruise ships, aims to enable passengers and crew to make phone calls and send text messages from their personal Apple iOS or Android devices while at sea. In addition, intra-ship calling is available to allow those onboard to make plans or keep track of one another. Crew can leverage this feature to call other vessels as well.

The jointly developed MTN and WMS solution works with a vessel's Wi-Fi infrastructure and data/voice prioritisation strategy, while keeping bandwidth usage low. Users do not have to purchase an internet plan to use the application, and can download it from iTunes or the Android store.

"The demands of today's cruisers are increasing and the industry is faced with the opportunity of bringing a solution similar to a land-based calling experience to the middle of the ocean for both passengers and crew," said Brent Horwitz, senior vice president and general manager of cruise and ferry services at MTN.

"Passengers expect to be able to make calls from anywhere in the world without issue and crew require a service that allows them to stay connected with family and friends while at sea. This joint solution between MTN and WMS fulfils this important communications requirement."

IPTV for Intership

www.selexmarine.com

The UK Marine business of SELEX Elsag, a Finmeccanica company, is to supply an Internet Protocol Television (IPTV) based entertainment solution to the Lancelot accommodation work barge operated by Intership Ltd of Singapore.

The system, manufactured by SnapTV, provides television and 20,000 hours of video on demand to over 140 cabins on the barge. SELEX Elsag IPTV system engineers carried out the installation in Batam in Indonesia.

This is the second SELEX Elsag deployment of IPTV for Intership, with the first carried out onboard the world's largest construction accommodation work barge, the Camelot, in 2010.

"Having worked offshore as an engineer for many years, I understand the importance of excellent cabin TV and movies to morale and the benefits this can offer to both welfare and crew retention," said Ryan Dawe, commercial sales manager, SELEX Elsag.

In other news, SELEX Elsag has also been appointed as an Inmarsat XpressLink dealer, and will offer the service via its UK-based export team in Basildon.

Free port Wi-Fi from Three

www.three.co.uk

Mobile network operator Three is to provide seafarers visiting ports across the UK with free mobile internet as part of a national scheme being run in collaboration with the UK Merchant Navy Welfare Board, which aims to connect international seafarers with their families using internet communications tools.

Three UK has provided 32 mobile Wi-Fi hotspots to the national charity, with each device to be loaded with 15 GB of data per month.

Three estimates that this should be enough to make 1,500 10-minute Skype calls per month (with Skype calls to landlines or mobile numbers using around 1 MB for one minute of calling) or send around 75,000 e-mails.

The MiFi devices use HSPA+ technology, which the company says provides a faster mobile internet experience than

standard 3G.

The donation is part of Three's Community Fund, which launched in January and allows employees to nominate a different charity to benefit every month.

"Working at sea can be very dangerous and isolating. Many contracts will last a minimum of six months and seafarers are expected to work long hours, seven days a week," said the Merchant Navy Welfare Board's port welfare manager, Carolyn Lewis.

"The lack of communication between seafarers and their families can add to the stress of working at sea."

"Many seafarers visiting UK ports have smartphones but no connectivity while at sea, and when on land, international roaming can be very expensive. With this initiative, ship welfare visitors are able to help seafarers get connected and keep in touch with their families and friends even if they're only in port for a few hours."

Inmarsat pre-pay now available in the US

www.inmarsat.com

Inmarsat has announced that it can now offer global pre-paid satellite services for both voice and data with the introduction of support for voice calls originating in the US and its territories.

Through an agreement with Freedom Wireless Holdings Inc, Inmarsat says it is now the first mobile satellite provider in the world licensed to offer pre-paid voice services from the US.

Pre-pay voice has been available from 1st September 2012 for all existing Inmarsat land and maritime services including FleetBroadband, IsatPhone Pro, and FleetPhone.

"Many customers use satellite services

across multiple markets and have been frustrated by being unable to use pre-paid services while in the US and its territorial waters," said Jim Parm, president of Inmarsat Solutions.

"We are proud to be the first company to deliver a global service. This announcement exemplifies our commitment to meeting our customers' needs. With this breakthrough announcement we are simplifying communications for our users."

"IsatPhone Pro users can now be contacted using a single phone number wherever they are located and use just one device for their global communications, while FleetBroadband customers can now travel in and out of US territorial waters on pre-paid plans."

Hughes adds new capabilities

http://broadband.hughes.com

Hughes Network Systems has added new features to its flagship HN and HX Systems, with the aim of enabling higher bandwidth efficiency as well as support for IPv6.

The Hughes TurboPage with ActiveCompression functionality aims to provide up to 50 per cent compression gain of transmitted HTTP traffic by compressing both text and image data.

The company says that its ActiveCompression technology is a "lossless" compression algorithm that preserves the original quality of both text and images.

Hughes has also designed a dual stack IPv4/IPv6 capability which enables the simultaneous support of both protocols. Implementing IPv6 is likely to become an

increasingly important issue as IPv4 address space continues to run out.

"These new features future-proof our customers' networks," said Adrian Morris, executive vice president, engineering at Hughes.

"The internet's growth creates an almost endless demand for new bandwidth. Growth is also causing the internet to outstrip its own protocols."

"By providing network operators with higher compression rates for more efficient bandwidth use and dual-stack support to ease the transition to IPv6, we've given them the tools to ride out the internet's growing pains without disrupting service to their customers."

These new features are available on both HN and HX Systems.



The MNWB's Carolyn Lewis (right) test's the new system with a port chaplain



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New TV and SAR products from Thrane

www.thrane.com

Thrane & Thrane has launched a number of new technology products, including a satellite TV antenna and an AIS search and rescue system.

Based on the SAILOR 900 VSAT platform, the SAILOR 100 Satellite TV antenna offers multi-polarisation and a programmable LNB, and can be installed using a single cable. It features a 103 cm dish and 3-axis structure, as well as a rotary joint to eliminate cable wrapping when the vessel turns.

A touch screen terminal is included to handle all setup, service and management.

Thrane & Thrane has also launched a new Automatic Identification System-Search and Rescue Transmitter (AIS-SART), the SAILOR 5051 AIS-SART.

The company says that the unit offers a number of improvements, such as increased detection range, over traditional SART technology, which uses radar to direct SAR vessels and aircraft to a life craft.

Using AIS, the SAILOR 5051 AIS-SART can provide surface vessels with its position at a range of approximately five miles whilst aircraft can locate the beacon at over 30 miles, depending on conditions.

The new unit provides over 96 hours of operation and uses a built-in GPS feature that continuously updates and calculates latitude and longitude bearing to distance of the target survival craft. It also offers better identification for SAR vessels and aircraft, because it has a unique 9 digit identification code.

Any activated SAILOR 5051 AIS-SART will show up with position and bearing on a vessel's ECDIS or chart-plotter as a red cross in a circle, meaning it can immediately be identified as a life craft in distress.

Future product releases also announced by Thrane include a stand-alone AIS Class A transceiver for merchant and offshore vessels, the SAILOR 6280 AIS System. The unit will be of the 'black box' type and will be operated via a new 7-inch touch display.

A new SAILOR 6390 Navtex unit will also come to market in Q2 2013 and has been developed to be used as a standalone navigation aid or a component in any GMDSS installation.

In other news, Thrane reports that it is to supply its SAILOR FleetBroadband terminals to Thome Ship Management, as part of AND Group's previously announced contract to provide FleetBroadband services to the Thome fleet.

Thome, an international shipping service supplier that manages a diverse fleet in excess of 180 vessels, will be provided with a combination of SAILOR 250 FleetBroadband and SAILOR 500 FleetBroadband antennas, bundled with airtime packages.

AND Group's contract with Thome was announced at the end of February 2012 and includes a combination of pricing packages, including Inmarsat's Very Large Allowance (VLA) offering.

"This project involves a large number of vessels from different ship owners, so we need to be sure that the system we

have chosen is easy to install and offers a good balance between cost and performance," said Ryan Dalgado, procurement & supply chain manager, Thome Ship Management.

"SAILOR FleetBroadband clearly offers this so we are more than happy to put these incredibly reliable terminals on vessels under our management."

Both the SAILOR 250 and SAILOR 500 feature the new Inmarsat Multi-voice

service, allowing up to nine simultaneous voice lines on the system without the need to add an external IPPBX.

"Thome is a leading shipping services supplier, representing a large number of high quality vessels and ship owners, so we are delighted that they have chosen SAILOR FleetBroadband to ensure reliable, global connectivity and voice calling," said Casper Jensen, VP maritime business unit, Thrane & Thrane.

Two new comms products from Gentay

www.gentay.co.uk

Gentay is launching two new products for communication between ship and shore, DataWAVE and SoundWAVE.

SoundWAVE aims to adapt technologies from the terrestrial environment, such as ultra-low bandwidth VoIP, to deliver call costs of US\$0.04 per minute to 57 global destinations, according to the company. Other global destinations can also benefit from low rates, though not at the \$0.04 level.

Gentay says that SoundWAVE will also offer free unlimited calls between vessels and the office on shore, as well as billing increments of only 6 seconds.

DataWAVE integrates Gentay's Global Roaming SIM Card to reduce the cost of sending and receiving data between ship and shore, while also using terrestrial cellular networks to improve data transmission speeds. The system can be deployed

within an hour by the crew on board.

"Data transmission and collaborative cooperation based on high speed network connectivity is a prerequisite of running a competitive enterprise in the 21st century. DataWAVE addresses these issues by reducing the reliance on expensive and slow transmission satellite communications," said Martin Nygate, director of Gentay.

"In addition, we all use the phone constantly to collaborate with our colleagues and stakeholders. Low cost calls are essential to conducting business and, with mariners away from home for months on end, crew welfare and the ability for the company to provide very low cost calls for their crew is highly appreciated and contributes significantly to crew retention rates."

"SoundWAVE facilitates low cost - or no cost - ship/shore communications with investment of below US\$500."

Satcom deals for Marlink

www.marlink.com

German tanker owner and manager Ernst Jacob is to install VSAT and FleetBroadband across its fleet of 15 tankers, following an agreement with Marlink, while Polarcus is to implement Marlink's Sealink VSAT services aboard two new seismic vessels.

Ernst Jacob will have Marlink's WaveCall standardised VSAT product and Thrane & Thrane SAILOR FleetBroadband 500 systems installed on its tankers, which are operated for several major oil companies.

The company will primarily use the system for operational purposes, including management of onboard IT networks remotely from shore and automated content delivery, such as reporting and forms. Communication and connectivity options for crew will also be made available.

Additionally, Ernst Jacob will implement the Vizada XChange communications management platform, which allows the satcoms to be controlled either onboard or from shore.

Vizada XChange will integrate the VSAT and FleetBroadband services, to ensure that Ernst Jacob vessels benefit from reliable voice calling and internet

wherever they are sailing.

"We are committed to the continuous modernisation of our fleet ... to meet the challenges of ensuring operational excellence and in order to provide the highest quality service for our customers," said Oliver Hennes, director fleet management, Ernst Jacob.

"Marlink's WaveCall solution supports this commitment as it helps us to enhance our communication facilities across the board and, by ensuring our vessels are always connected, we can manage our fleet and offices in the most operationally and environmentally efficient ways possible."

Polarcus meanwhile will implement Sealink VSAT on its two new X-bow design seismic vessels, Amani and Adira, which are currently under construction at Ulstein Verft in Norway.

The Dubai-based marine geophysical company has also signed a deal to extend the use of Sealink VSAT already in use aboard five existing Polarcus X-bow design seismic vessels, for a further three years. The vessels focus on environmentally friendly operations in Polar regions.

The system includes dual C-band antennas with automatic switchover, dedicated full-duplex bandwidth through a Single Channel Per Carrier (SCPC) satellite link, including several

LAN networks on board, and eight simultaneous voice lines.

It also enables GSM services when in range and features Iridium Pilot as a back-up, to ensure continuous global connectivity.

"We have worked closely with Marlink and they have shown great flexibility and support to ensure that the connectivity meets our needs," explains Magnus Oberg, vice president information technol-

ogy at Polarcus.

"Although the primary use for our connectivity is operational, it's also vital that we provide crew with a way to communicate with friends and family, and engineers on board to work remotely with experts on land."

"The Sealink service allows us to manage exactly how the connectivity is used, which supports our seismic operations and IT organisation."



Polarcus will install Sealink VSAT on two newbuilds, including the Polarcus Adira.
Photo: Polarcus Limited



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Unlimited FleetBroadband set for launch

After the well-publicised disagreements that followed a price restructuring programme earlier this year, Inmarsat is making another shift in the pricing for its FleetBroadband service – but this time making changes which it hopes will receive a more favourable reaction, with the introduction of ‘unlimited’ packages

Have suffered a barrage of criticism after the introduction of a host of changes to the pricing structure for its existing and evolved (E&E) and FleetBroadband services earlier this year, Inmarsat is hoping to give its customers something to smile about with the introduction of another set of adjustments that will see the data available on a number of FleetBroadband packages increase at no extra cost.

As Frank Coles, president of Inmarsat Maritime, notes, the new pricing structure should help some of the heavier users of the FleetBroadband network to derive greater value from their investment in the service.

“We know there was some unhappiness earlier this year about some of the adjustments we made at the lower end of the market, to try and provide more value for those customers who commit to data volumes as opposed to using the Pay As You Go plans,” he said, speaking at an Inmarsat event during the SMM exhibition in Germany.

“Starting in the fourth quarter of this year we are going to make some additional rationalisation of the FleetBroadband plans to the market.”

“At the lower end of the plans we will not be making any changes, however we are providing some adjustment at the top end to bring much more value to the customer to fit with their needs and their demands for an ability to provide some form of a crew solution and an operational solution using FleetBroadband.”

These changes will affect users of the FleetBroadband service that are committed to contracts for at least 1 GB of Inmarsat traffic, Mr Coles explained.

“We will be taking the 1 GB and 3 GB plans and doubling the volumes of data available to the customer for the same price – in other words adding much more value for the same price and enabling the customer to use these plans in a much more cost effective manner.”

“The most exciting innovation is



The fair usage policy will be no different to those available on Pharostar, KVH and other VSAT services’ – Frank Coles, Inmarsat Maritime

the introduction of the Inmarsat FleetBroadband unlimited service. We’ll be taking away the 10 GB and the 15 GB plan and be introducing the unlimited service.”

The new unlimited FleetBroadband service will be available on the FleetBroadband 250 and the FleetBroadband 500, though not on the FleetBroadband 150. The recommended retail price for the package will be approximately US\$2,700 per month.

The ‘unlimited’ amount of data available will be subject to a fair access policy (FAP), which will limit the kind of traffic that is allowed, though Mr Coles notes that this policy will be in line with similar FAPs currently on offer from VSAT providers with packages in the same price range.

“(The FAP) will certainly be no different, having examined all of the fair usage policies that are available on Pharostar, KVH, and all of the various other VSAT services. We will manage the network to make sure that everyone gets a fair crack at the whip, in the same way as we did with the 10 GB and 15 GB plans,” he said.

“We aren’t suggesting that we will have the ability or the desire for people to do video on the FleetBroadband service, and that’s one of the reasons why the Global Xpress programme and XpressLink exist. You have to have a solution that fits the desires and fits the needs that you wish to accommodate, and that’s one of the reasons why all the VSAT services, or communications services whether they’re in your home or over a satellite, operate a fair user policy.”

“Anybody who overuses any particular system is throttled back. There are checks and balances in place. So if a ship is outgrowing the service to which they are subscribing then the discussion will be that they need to have a higher level service, or perhaps they need to move to Global Xpress, which will have that capacity and that speed to enable you to do all those fancy things.”

Mr Coles says that Inmarsat’s partners should get information on what is included in the FAP by the middle of October, and that the same FAP will apply across the board.

“We’re trying to push it out by the end of this year,” he said.

“Because it’s a price decrease we don’t need to give the normal 90 days (notice), and there will be no changes within our system. All we’re doing is bringing more value into the current plans.”

“The result is a plan that allows you to address all of the crew browsing needs at the bottom end of the market and in the mid-range of the market, and will be much more accessible to customers who don’t want or don’t need or don’t have the capacity to deal with an additional terminal. It also increases your available opera-



*Jumbo will equip its entire fleet of 12 heavy lift vessels with XpressLink.
Photo: Danny Cornelissen, Portpictures*

tional traffic and provides fixed usage fees, and because of the reliability of our third party manufacturers it is a low maintenance solution.”

XpressLink

Mr Coles is keen to point out that this unlimited plan is not designed to be a replacement for the company’s XpressLink hybrid Ku-band/L-band product, which promises unlimited usage for a similar monthly fee.

“We believe that XpressLink still has an extremely important role to play going forwards as a bridge to Global Xpress. After all, we now have just over 450 XpressLink ships, already installed or to be installed, committed to upgrade to Global Xpress when that service is up and running,” he said.

“XpressLink is completely different to the FleetBroadband unlimited plan. Obviously you need an additional terminal, but XpressLink comes with higher committed information rates that are advertised in the market – something that the competition fails to mention.”

“I see this (unlimited FB plan) as a long term offering for customers who are happy with a service which obviously doesn’t provide a CIR and where they don’t have the ability or the scale to have a second terminal. XpressLink is the short term product, which is there as the gateway and the upgrade path to Global Xpress. I think the FleetBroadband unlimited package will exist alongside Global Xpress going forward, because they are two completely different services aimed at two completely different markets.”

Another difference between XpressLink and the unlimited FleetBroadband product is the lack of a contracted CIR (committed information rate) on the L-band service.

“FleetBroadband doesn’t actually talk

about a CIR, though we do actually have one at the bottom end,” said Mr Coles.

“It will be a managed service, our best effort as we manage the network, that’s one thing that we dynamically do at Inmarsat anyway.”

“Some of the VSAT services that are out there don’t talk about a CIR, and some of them do. That’s just a question of the customer making sure they read the fine print.”

To illustrate its commitment to the XpressLink product, Inmarsat is able to point to three recently agreed deals with a variety of shipping companies to install the hybrid service.

Chief among these new customers for the product is Copenhagen-based TORM A/S, which has agreed a fleet-wide deal, while Harms Bergung in Germany and Netherlands-based heavy lift shipping company Jumbo will also implement the service on their ships.

TORM is to deploy the XpressLink communications system across its owned bulk carrier and tanker fleets, with roll out to commence on 17 ships before the remainder of the TORM-owned fleet is equipped over the next three years.

“Reliable high speed communication is essential to TORM’s efforts to streamline our shipping operation and optimise resource utilisation while reducing costs,” said Allan Rasmussen, vice president, fleet and newbuilding support at TORM.

“The fully managed XpressLink solution from Inmarsat lets us focus on our core business, which is running our ships efficiently while providing superior customer value. We will be able to balance land-based and on-board resources through the high speed communication link as well as access technical and operational support resources.”

“Additionally we were looking to move from C-band based satellite communication to Ku-band. In this respect

How did KVH become No. 1 in maritime VSAT?*

*Euroconsult Report, March 2012 and NSR, May 2012

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XpressLink was a good fit. Furthermore, with its upgrade path to Global Xpress we get a future proof solution too."

Harms Bergung, a transport and heavy lifting maritime services company, is to equip its anchor handling tug fleet with the integrated Ku-band and L-band service, which will support always-on data speeds of 768 kbps, and, when the VSAT service is active, a committed information rate of 192 kbps.

The agreement with Harms Bergung was reached in conjunction with German maritime communications company DH-INTERCOM, one of the first Inmarsat-approved XpressLink distributors. This is the second XpressLink contract agreed by DH-INTERCOM in Germany.

"We had considered using VSAT for our offshore anchor handling tug fleet, but no existing VSAT provider was able to offer a fully managed Ku-/L-band system at a fixed rate," said Thomas Rogalla, managing director of Harms Bergung.

"We believe the equipment on board our fleet must be of the highest quality and we selected Inmarsat's XpressLink because our IT specialists were confident that the combined package of VSAT and FleetBroadband will deliver continuous, global and reliable coverage."

"Naturally the ability to double our VSAT bandwidth at the same fixed monthly cost when Global Xpress becomes commercially available in 2014 makes strong business sense."

Jumbo will also equip its entire fleet of 12 specialised heavy lift vessels. These ships have a lifting capacity from 500t up to 1,800t, which will be added to, starting in 2013, by a new generation of vessels with record breaking lifting capacity of 3,000t.

"During the initial tender phase we selected different parties," said Marco Cevat, IT manager for Jumbo.

"The choice for Inmarsat was based on the fact that it delivers a fully managed Ku-/L-band system at a fixed rate."

"We were also impressed with the level of consultative thinking from Inmarsat. The demand for more bandwidth is increasing on a monthly basis and with this solution we are confident that Inmarsat's combined package of VSAT and FleetBroadband will deliver us a reliable future proof connection."

Global Xpress

In addition to the changes to its FleetBroadband services and the developments with XpressLink, Inmarsat also announced some new developments in its next generation Global Xpress programme.

The company confirmed that the Telemar Group and Florida-based GMPCS Personal Communications have been named as the first Value Added Resellers (VAR) for the product, while JRC has signed up to provide a range of connectivity solutions for the service.

"The Telemar solution is particularly attractive to us because of their model of combining airtime, navigation equipment, maintenance and providing a turn-key solution to the industry," said Mr Coles.

"We have several other agreements which are not yet closed, and I can assure you that there are more VAR agreements imminent and very close to closure. So we're on track in that regard."

Inmarsat says that it intends to have eight to ten VARs eventually in place to distribute Global Xpress, also including its own direct distribution arm, the former Stratos business unit.

The deal with JRC, a company which has a longstanding relationship with Inmarsat through multiple generations of services, will see the Japanese manufacturer develop a 60cm Global Xpress Ka-band antenna, while also expanding into offering airtime and support.



Inmarsat believes that the availability of the Global Xpress service in adverse weather will be within a 'couple of hundreds of a per cent' of the availability on Ku-band today

"The development of Inmarsat products has always been closely integrated with quality hardware and antenna manufacturers to arrive at superb connectivity solutions," said Mr Coles.

"Our fourth generation satellite service, the FleetBroadband platform, has rested heavily on reliable providers like JRC. As the launch of Global Xpress draws closer, Inmarsat is focused on continuing to integrate this new generation of high throughput services (HTS) with reliable and proven hardware solutions into easy to use products for the shipping market."

"In our effort to create attractive, bundled products we see that the strategic partnership with JRC will be extremely important. They are also going to be selling GX airtime and combining that with all of their navigation equipment into a maintenance contract - an integrated platform and an integrated service. We're on track in terms of providing a distribution path into Global Xpress, with an IT-centric focus which combines all of the systems onboard ships with the communications pipe as a facilitator."

Rain fade

The issue of rain fade and the susceptibility of the Ka-band frequency to interference during adverse weather conditions was also addressed, with Leo Mondale, manag-

ing director of the Global Xpress programme, insisting that the company has done extensive research and development on the issue and that he is confident that the service will meet industry expectations.

"This is a topic that we dug into quite deeply prior to making the decision to adopt Ka-band for Global Xpress," he said.

"There are today about two million very small terminals deployed in the US market alone for consumer broadband, so the data available on Ka- performance and rain fade is well established."

"The physics are settled, we know exactly how Ka- performs and it's very similar to Ku- in the downlink direction, and somewhat more susceptible to rain fade in the uplink direction. There are a couple of technologies that have been deployed, both in other Ka- networks and will be deployed in Global Xpress, the key one being Adaptive Coding and Modulation."

Adaptive Coding and Modulation technology allows the connection between the antenna and the satellite to be adjusted to reflect the attenuation to the signal caused by the rain.

This, and other technological enhancements, will put availability of the Global Xpress service within range of that available with current Ku-band systems, according to Mr Mondale.

"We have an 80 page collection of data and analysis showing what the availability will be on a statistical average basis, and the conclusion is that we're within a couple of hundreds of a percentage of availability to Ku- performance today," he said.

"Really, for all practical purposes, you're going to see availability and performance from the Global Xpress system that is comparable to Ku- today - which means it's not perfect, it's in the upper 90s in terms of availability, which is one of the reasons for the maritime market that we intend to sell an integrated service involving Ka-band Global Xpress virtually all the time, with very high performance at a much more attractive unit price than can be afforded over Ku-band."

"Ka-band has a significantly larger amount of bandwidth available to it, it is a cheaper way to deliver data than Ku-band. It will always stay that way, the physics dictate it. To ensure availability, at no less than the standard of FleetBroadband, they will be bundled together, so if there's an availability issue of any kind with Ka-band the service will automatically fall back to FleetBroadband."

Mr Coles added to this by saying that he has no concerns about the ability of the Ka-band product to deliver what has been promised.

"I don't want to be glib and say 'do you really think we'd be doing this if we thought we were going to have problems?', but I have ultimate confidence in the fact that the engineering has been very carefully considered," he said.

"I've watched lots of TV on Ka-, I've used Ka- as a data service in remote parts of the world and I have no reason to believe that it will be any worse than existing satellite systems today."

"Sunspots, rain, other weather factors - these have interfered with radio communications since the day we discovered how to use it, and I'm sure we'll have problems

some times but that's no different than any other radio-based services, and certainly no worse."

Competition

Even if the performance of the Global Xpress service manages to justify the faith that Mr Coles and Mr Mondale, and the rest of Inmarsat, have placed in it, it will still need to compete with expanding capacity and increased competition in the VSAT market, in various frequency bands.

In this regard, Mr Mondale is also confident that Inmarsat has made the right bet with its investment in Ka-band technology, and that it will be able to offer a more compelling proposition to customers than that from competitors like Intelsat and its forthcoming EpicNG platform.

"The main competitive reaction we have seen has been Intelsat's announcement of a spot beam Ku- system, and from what we can tell from very general public announcements, which I believe is all there is, is gratifying in one sense, that they basically concluded that the VSAT market, and the maritime market in particular, is now ready for spot beam satellites. That's something we already knew and have done for a long time, and Global Xpress is of course a spot beam satellite," he said.

"The essence of it though is that it's still Ku-band. If you look on the table of allocations from the International Telecommunications Union, you'll see that Ku-band's allocated about two times 250 MHz of total frequency. Ka-band is nearly seven times that, if you consider the government Ka-band in addition to the commercial."

"We're all aware that in radio communications bandwidth is directly linked to both capacity and performance. So the outcome of this Epic battle is not really in doubt - the guy with seven times the bandwidth is going to have higher capacity and higher performance."

All that remains for this 'Epic battle' to begin is for both sides to get their spacecraft into orbit. On the Global Xpress side, Mr Mondale notes that so far everything is running according to schedule and that Inmarsat is on course to conduct its first launch as planned in 2013.

"We're now more than two years beyond having announced the activation of an army of people at Boeing and subcontractors to build these satellites, and I can tell you that, as of today, they actually look like satellites. The first satellite has a frame, has a payload, has solar arrays, has all of the pieces that are going to be required. It's going into final assembly and integration and tests. The second satellite is taking shape next to it, with the third satellite a bit behind it," he said.

"We're actually now less than a year from launching the first satellite, the Indian Ocean region satellite. It will take five or six months to get it to its operating orbit after launch and to test the network, so we're less than 18 months from when we intend to offer regional service in that part of the world. That will be followed by the Atlantic Ocean region and the Pacific Ocean region."

"We have large teams both working on it and monitoring that work and making corrections, so that work is very much on track."

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Vizada no more as Astrium rises

Astrium Services has made the first significant restructuring move since its purchase of Vizada, eliminating the Vizada brand and creating a new business unit called Astrium Services Business Communications

Astrium Services, part of the EADS Group and the parent company of Vizada following its 2011 acquisition of the maritime communications provider, is to restructure the company and discontinue the Vizada brand.

Vizada will be absorbed into a new Astrium Services Business Communications entity from October 2012, which will host all commercial satcom activities of Astrium Services, serving three main markets – maritime, enterprises and aero.

In the maritime market, the company will continue providing services using the existing Vizada infrastructure of indirect sales through its service provider channel, while also maintaining a direct sales channel via Marlink. The Marlink brand will remain in place for these purposes following the restructuring.

Vizada CEO, Erik Ceuppens will head-up Astrium Services Business Communications, with responsibility for all activities across the maritime, land and aeronautical markets, while Tore Morten Olsen, Marlink CEO, will manage the maritime division of the Astrium Services Business Communications entity.

“The integration into Astrium Services is well underway, and we are already seeing a number of positive effects for our service provider channel and customers,” said Mr Ceuppens.

“We are committed to expanding our maritime services portfolio and are already better positioned to meet our customers’ evolving needs, while, as a new entity of Astrium Services, continuing our dedication to our well-founded channel and customers.”

The company is keen to point out that, from a customer stand point, it will be “business as usual” following this restructuring and that there will be no noticeable changes in service at the user level.

Developments

This restructuring of the Vizada group is one of the first major changes initiated by Astrium since its US\$960 million acquisition of the company from Apax Partners last year.

Given the size of the deal involved, the transaction got tongues wagging as the market began to assess what Astrium’s master plan might be after completing the purchase of the company.

As part of the enormous EADS Group, which also comprises Airbus, Cassidian and Eurocopter, there was speculation at the time of the takeover that Astrium might be in a position to build its own satellites and offer satellite communication services where it controlled the entire vertical chain right down to the end user.

This was based on the fact that EADS has significant experience in satellite construction, having been responsible for the construction of the three Inmarsat-4 satellites that act as the backbone of the FleetBroadband network, among a number of satellite projects.

However, for the time being at least, Eric Béranger, CEO of Astrium Services, says that the company has no intention of pursuing such a strategy.

“Today, no, this is not part of our plans. Should this become part of our plans you will know very quickly,” he told *Digital Ship*.

“On the commercial side so far we have not done this for a very simple reason, because today there is capacity up there that we can use. As long as we can use it in a way which, from a business point of view, makes sense – which is economic, which is satisfactory – there’s no reason for us to substitute something which already exists.”

“If some day that was changing we’d have to reconsider, but today we have what we need.”

While this is not a priority at present on the commercial side, Mr Béranger notes that the company’s capabilities already extend to owning and operating its own satellites as part of its military business, which includes the Skynet X-band satellite fleet.

“We are going to launch Skynet 5D, for instance, at the end of the year in December. We will own some observation satellites because we [have launched] SPOT 6 in India. We have ordered the satellites, we have specified the satellites, we are going to operate them – just as SNOs (satellite network operators) are doing in the commercial world,” he said.

“On the military side we didn’t have what we need, so we did it, on the Earth observation side we considered that we needed to create a very specific infrastructure which we did not have access to, so we did it.”

“In the commercial world today we are the number one partner to a number of satellite network operators, and as long as they are able to provide us with what we need it is ok.”

Mr Béranger instead sees the acquisition of Vizada as a way of Astrium expanding its commercial portfolio, and expanding its reach into new sectors.

“Maritime is obviously one of those, aeronautical is in its infancy as nobody today has found a business model that really works,” he said.

“You look at all of the companies in aeronautics and today there isn’t a good model for passenger communications. In the enterprise market there are a number of verticals we are developing which are very promising, and there are some areas that you will never reach through fibre where we see big growth.”

“It’s across the sectors, but focused on the verticals which we think will be promising.”

In that regard, Mr Béranger says that the company is looking to use the experience that Vizada has in maritime, with maritime representing approximately 70 per cent of the overall activity of Astrium Business Communications, to develop similar positions in some of these market verticals, but in a focused way rather than trying to do ‘everything, everywhere’.

“We bring together the capabilities, the products, the portfolio that we have developed on our side, on the military side on the governmental side, and that [Vizada] had on the commercial side, and we see the complementarities and how we can cross-fertilise each other,” he said.

“At the same time, we have brought together what was government in the former Vizada with what was government in Astrium Services. We see already some new customers that we would not have acquired before.”

“As an example, today, in terms of

bandwidth, we are managing 4 GHz of bandwidth, which is much more than each of us was doing before. You can imagine that that enlarges the relationships with the SNOs and gives us weight in terms of purchasing.”

Global Xpress

A significant portion of the maritime experience that Astrium is looking to leverage with Vizada comes via its relationship with Inmarsat, as the single largest external distribution partner for the satellite operator’s services.

However, despite this established partnership, eyebrows were raised when Inmarsat recently announced the appointment of the first value added resellers (VAR) for its forthcoming Global Xpress Ka-band service – with Vizada not among the initial group (see story on page 12).

Both parties have already been involved in talks on the possibility of working together on Global Xpress, though *Digital Ship* understands that there have been disagreements over the form such an agreement should take.

When asked if tensions between the two sides was holding up an agreement, Mr Ceuppens was keen point to commonalities between the parties instead, and said that he believes that a deal would go ahead.

“This tension is not absolutely necessary. I think we are much more aligned, looking at Inmarsat and looking at what we want to do in our maritime segment – we should focus on alignment and not on the differences, in those discussions,” he told us.

“Clearly, what we are trying to do is establish a strategic agreement with Inmarsat on Global Xpress. To come to a strategic agreement obviously both parties need to agree, which is always a process to go through – and we are currently going through that process.”

“What is key for us is to be able to build a sustainable business model for Global Xpress in the future, not only for Astrium, as such, but also for our partners. A major part of our business is still through our distribution channel, so we are not only negotiating for Astrium, we are negotiating for our distribution channel.”

Mr Béranger agreed that, in his opinion, a deal was likely to eventually go through, and hoped that there would be developments in the negotiations before too long.

“I think in this type of environment, generally, the sooner the better. But you need two to tango, and indeed, quality is more important than speed,” he said.

“We cannot disclose exactly what we are discussing, but what is for sure is that I think none of us have any interest in delaying this process.”

“So I think that the genuine interest of



“Today, it is not part of our plans to build our own satellites for commercial maritime communications” – Eric Béranger, Astrium Services



'Inmarsat is looking at the Global Xpress tie-in of value added services to one connectivity technology. We have, clearly, a different view' – Erik Ceuppens, Astrium Services Business Communications

both parties is to proactively engage to converge as soon as possible. Again, quality is more important than time."

One of the key sticking points in the negotiations is thought to be the ability to create and provide proprietary value added solutions and applications to customers for use with the Global Xpress satellite system.

Resellers can use these products as a way of differentiating themselves from the competition and providing additional value to customers to convince them that

the package they provide is better than those available from their rivals.

With Global Xpress however, *Digital Ship* understands that Inmarsat aims to 'lock-down' the communications environment to some extent, and gain more control over how third parties interact with the system – in a way that could be likened to Apple's control over access to the technological ecosystem running its Macs, iPhones and iPads.

"Inmarsat is looking at the Global Xpress tie-in of value added services to

one connectivity technology. We have, clearly, a different view – there are connectivity technologies but the solution layer we are building should be, in a certain way, independent of the connectivity provided," said Mr Ceuppens.

"This is probably where we have a different view, for example, than Inmarsat. We strongly believe in diversity. I think it's also of benefit to Inmarsat, because if there's no diversity the only differentiator will be price and I think that's not really healthy for the industry."

"What's important is that, in the Global Xpress framework, elements are there that will allow companies to compete on the difference in their value propositions to the customers, and not only to compete on price. For us, indeed, it's critical that there is a differentiation possibility based on the services that we will be able to add."

In the interest of maintaining balance, *Digital Ship* invited Inmarsat to provide its own take on the development of these negotiations, though the company did not wish to respond beyond a short statement from president of Inmarsat Maritime, Frank Coles, saying that: "We are very supportive of our partners and are enthusiastic for their success. We continue to be engaged with Vizada and anticipate them being a GX partner."

Whether it is through Global Xpress or other services, Astrium is sure that Ka-band technology will play a significant role in the evolution of the maritime satellite communications market in the next few years.

"We believe indeed that there will be a Ka-band future for the maritime market, which is why we are talking with Inmarsat about Global Xpress," said Mr Ceuppens.

"It's very difficult to say today, but besides Ka- there will also be Ku-. We take a multi-technology approach, being able to offer both services."

"It's difficult to predict today where the crossover will be between Ka-band and Ku- five years from now, nobody has a crystal ball. But we believe with our multi-technology approach we will be best placed to serve our customers, it's not about Ka-band or Ku-band, it's about being able to offer the best broadband solution to the customers independent of the frequency."

Astrium notes that this approach will include other Ka-band services beyond Global Xpress, such as the regional service that will be available on Telenor's Thor-7 satellite and for which Marlink has already agreed a contract option.

Of course, as far as the Global Xpress issue goes, there could be one simple way to bring discussions to a close.

With Astrium parent company EADS having an estimated €11 billion cash surplus, as reported at the time of the Vizada acquisition, *Digital Ship* asked Mr Béranger if the company might not be able to avoid further disagreement by simply buying Inmarsat itself.

Smiling, he responded that: "Generally, we never make any statements in terms of potential acquisitions. So – it's a 'no comment'."

DS



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Making the move to broadband

Faced with a changing IT environment requiring real-time e-mail and broadband-supported applications, Reederei Werner Bockstiegel realised that it needed to choose a new satcom system for its ships. Albert Bokelmann, Reederei Bockstiegel, told *Digital Ship* about the key criteria in making this choice and the company's early experiences with the new system

Maritime broadband solutions have developed rapidly over the last few years, and in order to attract and retain their shipping company customers satellite communication providers are continuously striving to improve their solutions.

When German shipping company Reederei Werner Bockstiegel recently decided to implement a new communication solution, it selected the newly launched Iridium Pilot system, Iridium's latest enhancement to its satellite broadband platform.

The company had been persuaded to rethink its satellite communication system by the potential it saw to utilise an increasing number of broadband-supported applications, as well as the realisation that experienced crew is more easily retained when modern communication options can be offered.

One of the key reasons that a change was necessary, according to the company, was the fact that real-time data exchange was not practical with its previous solution, which included Vizada's Skyfile Mail application and FleetBroadband 150 antennas.

In addition, the shipping company had realised that a higher volume of traffic would be generated through the implementation of new software applications that it required in order to support the connection of technical systems.

Based on the existing relationship it had developed over the course of the previous seven years, including the provision of e-mail systems on board of its vessels, Reederei Bockstiegel decided to partner with Globecom Maritime for the project.

And so, in July 2011, the companies signed an agreement to implement the new satellite communications solution on the shipping company's fleet of 65 vessels, as part of an upgraded Telaurus se@COMM communications package.

The agreement contained the hardware and software as well as the broadband package, complete with installation and the connection, says Albert Bokelmann, fleet manager, Reederei Werner Bockstiegel.

Mr Bokelmann notes that the broadband package, installation and spare parts are part of a package which Reederei Werner Bockstiegel has negotiated with a fixed flat rate, which offers a maximum of 50 MB on smaller vessels and up to 200 MB on larger ships.

"The monthly fee for the broadband package is comparatively low, which is also extremely important for us," explains Mr Bokelmann.

"We have not agreed on a flexible data rate or the option to balance the used air-time over our entire fleet, because the

monthly fee is so small that the manpower needed to carry out these calculations would exceed the monthly fee and, therefore, be more costly."

Iridium Pilot, Iridium's second-generation maritime broadband platform, was launched in February 2012. The system utilises the Iridium OpenPort service, and is offered via a small, lightweight antenna.

Coverage is available on a global basis, with Reederei Bockstiegel noting that the ability to provide worldwide satellite communication coverage to its vessels,



Reederei Werner Bockstiegel has installed Iridium Pilot across its fleet

which are sailing all over the world, was a key element in its choice.

A further important factor in its decision, explains Mr Bokelmann, was the availability of three independent phone lines, all of which work simultaneously, and data at speeds up to 134 kbps.

"The fact that the platform offers a built-in firewall for traffic management and a bulk configuration capability to assist in managing large volumes of units was very welcome to us, as it enabled us to control the data traffic effectively," adds Mr Bokelmann.

Another pressing issue for Reederei Bockstiegel was the wish to change from the intermittent transmission of e-mails under its previous set-up to a real-time messaging system.

"One of the key reasons for the decision to install the Iridium equipment," says Mr Bokelmann, "was that now we have no delay in sending e-mail messages."

Ultimately, Mr Bokelmann explains that the Iridium solution also provided the benefit of having no moving parts, which should offer benefits in maintaining the equipment.

"A solid antenna, containing no moving parts is more stable and consequently more reliable. We feel there is a huge advantage," he says.

On-time installation

The agreement between Reederei Werner Bockstiegel and Globecom includes antenna installation on all of the vessels. Since the roll-out of the system began in January 2012, the solution has so far been installed on 40 of the shipping company's 65-strong fleet.

vessels are sailing and if we can arrange for the antennas to be sent there, as well as if easy access for the technicians can be provided."

"So far, we are very pleased to announce that we are bang on our revised schedule. There have been no noticeable delays and everything has worked out fine."

The hardware deployment has been carried out without incurring downtime for the respective vessels.

The antennas and other hardware are sent to designated ports, where the vessels are scheduled to berth. Before the main phase of the installation begins, the vessel crew will have carried out the rough cable laying, a process designed to save both time and resources.

"Laying the cable is a very simple process," explains Mr Bokelmann.

"The equipment consists of only one main cable connection, and the crew on our vessels is competent enough to execute the installation. Since the installation is so simple and easily done, our crew is not hampered in the execution of their routine tasks."

Upon arrival of the antennas at the designated port, the commissioning engineers from Globecom Maritime board the Bockstiegel vessels and do the final commissioning of the antennas.

"It was very important for us to organise the implementation in a fashion where no downtime is incurred for our vessels," Mr Bokelmann notes.

"We have successfully done this and never lost time or fallen behind schedule because of the hardware installation."

The Telaurus Se@COMM communications package implemented with the Pilot antennas also includes the installation of new software, and to date Reederei Bockstiegel has found the system to be very reliable.

"The price of the basic software already includes a lot of features, which we found significant," says Mr Bokelmann.

"And although other maritime IT software providers offer these kinds of features as well, we get them practically for free."

Crew retention

Having equipped more than half of the fleet with the new satellite communications solution, Reederei Werner Bockstiegel has drawn some conclusions on the additional value gained from its investment.

So far, the expected increase in average data traffic per month has proven to be in line with expectations.

Whereas the shipping company's vessels generally did not exceed 50 MB under the old satellite communication system, already some of the ships that have imple-

mented the Iridium solution are seeing traffic of between 40 and 50 MB, on the smaller vessels, and a minimum of 100 MB of usage on the larger vessels.

The shipping company says that it is planning on using most of its satellite communication volume for data traffic, with exchanges between ship and office to be mainly conducted via e-mail.

Only in urgent matters, where e-mail communication would cause a significant delay, is the vessel contacted via telephone, notes Mr Bokelmann.

With the installation of the Iridium Pilot solution, the shipping company has also been able to accomplish one of the key goals of the implementation by initiating real-time e-mail exchange.

In addition, Reederei Werner Bockstiegel has recently acquired a new software package that requires satellite broadband connectivity to be available to support remote maintenance.

This is therefore another objective reached, says Mr Bokelmann, and the company is very pleased with the outcome.

Technical systems, such as the main and auxiliary engines, have been connected, via a special server, to the Iridium system. The first such systems have now been installed, but the roll-out is ongoing and Reederei Bockstiegel plans to have finished the implementation by the beginning of 2013.

"As of late," explains Mr Bokelmann, "we are operating new order and maintenance software on the vessels, which we remotely control from shore."

"We can afford to do this remotely because the communication is so cheap. Real-time connectivity enables us to further look into remote maintenance, which will be a strong focus of ours in the near future."

Remote maintenance is mainly managed by the Reederei Werner Bockstiegel IT department, though in some cases the

remote control of machinery equipment is carried out by the supplier, Mr Bokelmann notes.

In addition to utilising its new satellite communications package for operational data traffic, Reederei Werner Bockstiegel is now using three separate voice lines. Although voice is not the primary means of communication, the shipping company is glad to have the option available.

"The distribution of our satellite communication traffic is very clear. A minimum of 80 per cent is spent on data traffic. This is extremely important to us. The remaining 20 per cent are spent on voice traffic. These phone calls are mostly comprised of crew communication and the occasional emergency call," says Mr Bokelmann.

"Voice lines are not new to us. We used to have them under the old solution as well. However, the newly implemented satellite communication system provides us with different dedicated voice lines."

"Although communication via voice lines is not the most important communication feature and we almost exclusively use voice lines for crew communication, we're happy about the fact that there are no special requirements for voice communication. We are further pleased with the quality we receive with the Iridium package. Both the captains on our vessels and the staff in the office have deemed it to be sufficient."

Reederei Werner Bockstiegel has now installed extra equipment for crew communication on its vessels within the framework of the new Iridium-backed network.

"The new crew calling and communication features," explains Mr Bokelmann, "are not affecting the business communication on board, because we have installed extra phone systems connected to the Iridium platform, which enable us to offer

parallel crew and ship traffic."

The shipping company offers satellite services to its crew via scratch cards. So far, only voice communication and e-mail is provided.

Surfing the internet has not been on offer up to now, because, as Mr Bokelmann explains, new PC systems are needed first. However, the shipping company is planning to install the required hardware on its vessels from the beginning of 2013.

In the wake of the satellite communications revamp, Reederei Bockstiegel anticipates crew retention rates to increase.

"We have had extremely positive feedback from our crew," says Mr Bokelmann.

"Our seafarers can utilise the dedicated voice lines 24/7 and have experienced the voice communication from ship to shore to be both reasonably priced and readily available. In addition, our crew appreciates the simplicity of the system."

The shipping company is further pleased to be able to offer Wi-Fi services to the crew, with wireless access points allowing crews to connect to the communications services from their own cabins, affording them a comparatively high level of privacy.

The opportunity to communicate with family members in private, Mr Bokelmann says, is appreciated by the seafarers, and it is hoped to provide an additional incentive to attract crews that are becoming increasingly difficult to obtain.

Cost control

Despite having agreed on fixed data packages, Reederei Werner Bockstiegel has nevertheless put control systems in place to ensure cost containment.

In order to make sure that satcom access does not get out of control and lead to unexpected bills, the shipping company internally checks the monthly communi-

cation bills of all its vessels. In the course of this process, the data usage is analysed and assessed.

If additional costs are incurred, explains Mr Bokelmann, a special department at Reederei Bockstiegel tries to establish the root cause of the excess costs and assists the crew in keeping to the limit in future.

With the Iridium Pilot system in place the company has also been able to reduce costs through easy access to the vessels' technical equipment, limiting the number of man hours spent on maintenance as well as reducing travel costs.

"Especially for our big heavy lifters, we now have ready access to all the relevant data regarding all the technical equipment as often per day as we like," Mr Bokelmann explains.

"We find this solution to be very helpful and economical."

The shipping company estimates that it has so far been able to save about 40 per cent on travel costs overall since the implementation of Iridium Pilot. Remote access, on heavy lifters especially, is utilised to monitor all relevant data, such as the main engine, auxiliary engines, nautical equipment, cranes and others.

Overall, Mr Bokelmann notes, Reederei Werner Bockstiegel has been able to achieve a significant cost reduction through the implementation of Iridium Pilot.

"Our cost savings," he says, "began on the very first day of the installation."

Ultimately, Mr Bokelmann says, shipping companies looking at acquiring a new satellite communication solution should pay attention to a number of key concerns. Apart from the ever-present cost considerations, he particularly emphasises the importance of reliable equipment.

Only then, he points out, can effective and timely data transfer be ensured. **DS**

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SRO launches onboard services division

www.srosolutions.net

SRO Solutions in the UK has launched a new marine onboard services division that will provide marine engineers to help customers ensure their onboard systems are operating at maximum efficiency.

The company says that this new division builds on the successful completion of similar projects carried out for major shipping companies in the US and Europe.

The original team of four consultants has been doubled, as SRO managing director Steve Driver explained.

"Based on our understanding of the needs of our customers we have developed a process and programme for training staff to the high standards expected within the maritime industry. This means that they will be accepted by the customers to go onboard their vessels and be productive immediately and able to work closely with the onboard personnel," he said.

"Not only is the logistics of flying people to sit on lengthy onshore training courses very complicated, quite often the costs involved become restrictive, so much so that it becomes impractical to do so. By put-

ting the trainer on the ship, not only does this ensure a very efficient and focussed way of working but it also ensures the overall costs are kept to a minimum."

"So far the feedback from the ships has been excellent with most people much preferring to be trained in their own environment, by like-minded engineers, using their own systems and data."

The new division is able to offer services including CMMS training, asset management commissioning, inventory optimisation services and other training options for onboard personnel.

"In addition to providing our existing customers with continued regular onboard IBM Maximo and AMOS services, training and resources, we recently started a new service providing onboard inventory services for a US based tanker operator of over 20 ships," added Mr Driver.

"For the past few months we have worked closely with this customer to scope and design the process and familiarise our team with their requirements. The project will run for 12 months with the first SRO marine onboard services team due to join the first two ships by the end of September."

Fuel reduction technologies from ABB

www.abb.com

Power and automation technology group ABB has introduced a number of new software applications for the marine market aimed at assisting in reducing fuel consumption.

These 'Advisory Systems' include the latest versions of ABB's energy management system for marine applications (EMMA) and Amarcon's Octopus solution, following ABB's recent acquisition of Amarcon.

"By aggregating Amarcon systems into ABB's solutions, we are now able to provide the widest portfolio of optimisation tools available on the market," says Heikki Soljama, head of the marine and cranes business unit.

"With these solutions, we are better equipped to help ship operators reduce fuel consumption efficiently and provide added-value technology to all ship owners."

The ABB package incorporates vessel information and control technology that allows ship operators to monitor and calculate the optimum utilisation of power onboard, which the company suggests could help to reduce fuel usage by up to 20 per cent.

Some of its systems have already been introduced by German shipping company Rickmers Group, which will use the advisory systems for dynamic trim optimisation and fleet management for five multi-purpose vessels.

In other news, ABB has recently won another order from STX in Finland to supply an automation package and energy management system for a new 99,300 GT cruise vessel currently being built by STX Finland Oy and owned by TUI Cruises.

The cruise ship will be added to the TUI Cruises GmbH fleet, a joint venture between German tourism company TUI AG and Royal Caribbean Cruise Line, after delivery in 2014.

ABB systems will be used to help the new ship to regulate fuel and power consumption, and provide operational information for all onboard systems.

The delivery will include an integrated vessel management system (VMS), as well as a range of other energy management technologies. This ship will also be the first cruise vessel in the world to utilise the Ethernet based IEC61850 protocol in switchboard to power management system communication.

MESPAS upgrades software package

www.mespas.com

MESPAS reports that it has released version 5.14 of its fleet management software, mespas R5, containing a redesigned procurement software module.

The company says that this new module has been designed to leverage the potential of cloud computing, to more easily adapt to the changing and evolving requirements of the shipping industry.

The software will feature what MESPAS calls a 'workbench concept', which allows office staff to carry out all purchasing related activities on a single screen, adjustable by the individual user's requirements.

Users can follow a workflow oriented approach, whereby the various tasks are carried out step-by-step, or use an activities oriented approach.

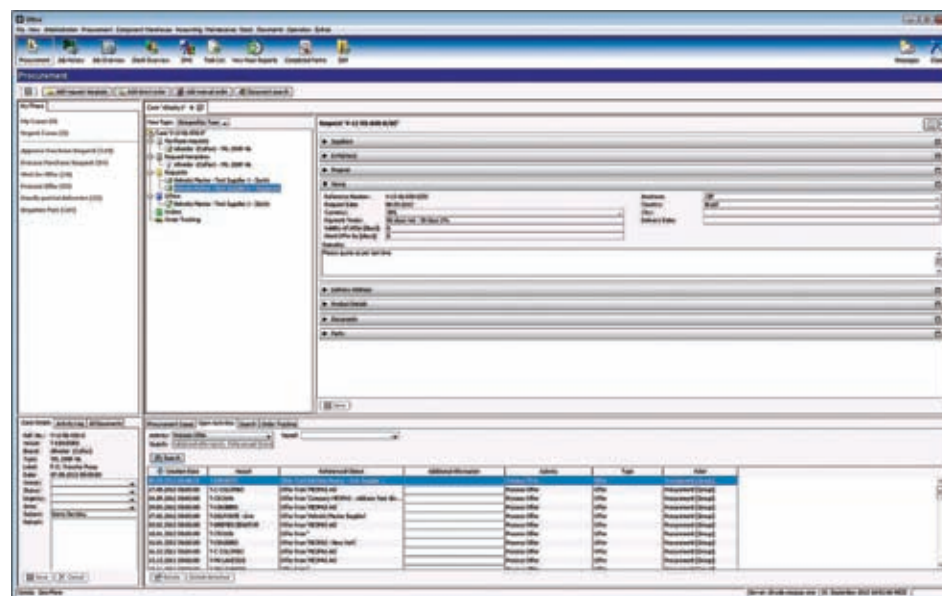
At the system architecture level, MES-

PAS says that it is now easier to integrate mespas R5 with third party systems, such as accounting software solutions, and that suppliers to shipowners and ship management companies can download and access the mespas R5 supplier software for free for integration purposes.

The updated version of the software includes improved supplier company profile settings to facilitate in global sourcing of suppliers.

In related news, MESPAS has also announced that World Tankers Management of Singapore is to implement the mespas R5 technical fleet management software package.

World Tankers Management manages a fleet of 18 tanker vessels, and has chosen to install the full range of software modules including asset management and procurement, both onboard the vessels as well as in shore offices.



Procurement has been redesigned in the new version of the software

Seagull reports that it has secured approval from Liberia for its Security training package, adding to a similar approval recently granted by the Norwegian Maritime Authority.

Tero Marine has had type approval for its TM Master Fleet Management Suite renewed by DNV. The software package, together with its user guides, are now approved by DNV until 2015, and also hold approvals from **Bureau Veritas**, **Germanischer Lloyd**, **Nippon Kaiji Kyokai** and **Lloyd's Register**.

Chris Clucas has been appointed to the main board at **Witherby Publishing Group**, as a non-executive director. Mr Clucas has worked within the **Bernard Schulte Group** since 1990, where he is commercial director at its shipmanagement office on the Isle of Man.



Chris Clucas has joined the Witherby board

www.seagull.no
www.teromarine.no
www.witherbyseamanship.com

Korean Register moves global HQ

www.krs.co.kr

The Korean Register of Shipping (KR) has opened a new global headquarters building in Busan, South Korea.

The new headquarters building was officially opened by Dr Oh Kong Gyun, chairman and CEO of KR, in front of approximately 400 representatives from ship owning companies, shipyards, classification societies and governments, both Korean and international.

The new offices take over from the previous headquarters in the central Korean city of Daejeon, and will also control KR's 59 branch offices located across the globe and its three regional headquarters, in Athens (covering Europe), Shanghai (covering China) and Singapore (covering Asia Pacific).

"The opening of our new international

headquarters is the culmination of many years planning and represents a significant step forward for our growing organisation," said Dr Oh.

"It is another milestone on the path to achieving our 2020 vision and I would like to thank all those who have worked so hard to make it a reality."

Approximately 350 staff have moved from Daejeon and are now working in the new facility. KR's R&D centre, along with other, non-merchant marine related functions, will remain in Daejeon.

The new 18 storey building in Busan has an integrated management system that automates many of the internal services to save energy. Solar cells are incorporated to reduce energy use and rain water is collected and re-used.

A permanent window on an international fleet





Randall Miller received the message just after the board meeting. MV Hemingway was forced to change course, due to an emergency in the next port of call. Recently Randall had selected Imtech Marine as their connectivity supplier. The promise of hassle-free solutions was delivered right away. Thanks to the global VSAT connection he could set up a crystal clear video conference with the captain, the cargo owner and port authorities. An alternative route was quickly agreed, the delay limited to mere hours.

Imtech Marine's connectivity solutions excel by their global coverage and value added services. Find out more at www.imtechmarine.com/connectivity.

■ Imtech Marine

SIS partners with StormGeo

www.sismarine.com

Star Information Systems (SIS) has signed an agreement with StormGeo that will see both companies work together to develop a range of software solutions for the offshore and shipping industries.

StormGeo, a provider of meteorological decision systems to the offshore industry, has taken a 15 per cent stake in SIS as part of the agreement, with an option to increase this in the future, which will also provide SIS with extra funding.

The companies aim to begin providing the first new products under their partnership to the market within the next twelve months, combining the weather data available from StormGeo with SIS fleet management software systems.

"For some time we have been searching for a partner that can help us to both develop our international presence and expand our product portfolio," said Per Anders Koien, CEO at Star Information Systems.

"In StormGeo we found potential synergies in products, technology, organisation, customers and geographical locations. With StormGeo as a business part-

ner and shareholder we believe we will manage to develop together game-changing software solutions to our target markets."

"We see that our customers are facing new and more demanding requirements for safe operation from the authorities and their own customers. We also see that their activity is increasing in more demanding locations, such as in arctic areas. By combining machinery and operational performance information with weather forecasting we can help our customers to build a safer and more cost-efficient operation."

In related news, Antwerp-based Scaldis Salvage and Marine Contractors has agreed a deal with Dutch company MirTac to implement the Star IPS fleet management system from Star Information Systems.

Scaldis Salvage and Marine Contractors performs projects involving marine-based heavy lifts, ranging from engineering, design and diving up to heavy-lifting, with a fleet consisting of the multipurpose sea-going heavy lift vessel Rambiz and the multipurpose sheerleg Norma.

"We were looking for an easy-to-use but



Scaldis' heavy lift vessel Rambiz will benefit from the new software system

complete software solution to meet our requirements for Quality, Environment, Health, Maintenance, Document and Purchase Management," said Jules Schelkens, superintendent at Scaldis.

"The Star solution, combined with MirTac's expertise, excelled in transparency, user friendliness and an outstanding

knowledge of our business. With MirTac we will improve our maintenance and purchase processes and continue to comply with both our own and customer quality standards."

In addition to its existing vessels, Scaldis also expects a new heavy-lift vessel to be delivered in 2014.

Autoship CAD for Focus Marine

www.autoship.com

Autoship Systems Corporation (ASC) is to supply its PC-based marine design software package to Dubai-based Focus Marine LLC, a provider of services to the United Arab Emirates shipbuilding industry.

Focus Marine will use the Autoship System design application to assist its naval architect and marine engineer team in handling a variety of marine vessel design projects as its main marine engineering platform.

"The Autoship System was chosen by our engineering group for several reasons - the main one being its integrated suite

offers us a lean-engineering approach," said Mihailo Maksimovic, technical director at Focus Marine.

"When we can output NC files from Production Manager based on a vessel model originally developed in the Autoship hull design program, then we are benefiting from the power of a true CAD/CAM system."

"If there is a change to the vessel model, even when we have all the internal structural design completed, we go back into Autoship, widen the beam, for example, then go back into Autostructure and simply click on a button to regenerate the affected parts. That's the power of this system."

Software links purchasing to recipes

www.wrist.com

Wrist Ship Supply has launched a new software program called Xena, which aims to streamline the purchasing process for consumable ship supplies by linking purchasing to recipes and nutrition advice.

Xena is a menu-planning tool and electronic cookbook that is linked with inventory control. Recipes in the application provide cost per meal information and reconcile this against existing food stock.

The software allows for the management of ordering and stock and menu planning, and takes into account regulations around seafarer catering stipulated in the Maritime

Labour Convention (MLC) 2006.

"Transparency and budget control are key priorities for our customers, and in the current market ensuring optimum efficiency is a challenge," said Robert Steen Kledal, managing director, Wrist Ship Supply.

"Add to this the reality of regulation such as the Maritime Labour Convention 2006, and we see a real need for a software program that can deliver a solution for both of these issues."

"Xena has been developed to provide an intuitive and interactive procurement process and we are pleased to launch this software at a time when efficiency is at a premium."

Globe Wireless offers CrewCash and ShipMoney

www.globewireless.com

Globe Wireless has launched a new prepaid Visa card programme for captains and crew members, to reduce the need to send cash to ships by increasing the use of electronic transfers.

The new service is the result of an exclusive worldwide sales and marketing rela-



Globe Wireless CrewCash cards can be issued without a bank account

tionship with CrewCash, a payments company offering prepaid solutions to the commercial maritime industry.

The CrewCash and ShipMoney products aim to reduce the costs associated with delivering currency to vessels, which Globe estimates at about five per cent.

CrewCash works like any other Visa debit card anywhere in the world, and allows crew members to receive their pay, send money to family or friends, withdraw local currency at ATMs, or make purchases using their card at stores, restaurants or online.

The card also aims to make it less expensive for seafarers to convert their wages to their home currency, compared with being paid in cash.

CrewCash cardholders do not need a bank account and there is no credit check involved.

Globe notes that this product may

prove particularly useful in assisting companies in compliance with crew remittance regulations contained in the Maritime Labour Convention.

Title 2, Regulation 2.2 states that: "Each Member shall require that ship owners take measures...to provide seafarers with a means to transmit all or part of their earnings to their families or dependents or legal beneficiaries...and...a system for enabling seafarers, at the time of their entering employment or during it to allot...a proportion of their wages for remittance."

In this regard, CrewCash cards can be issued to a seafarer's family members at home, and part of the seafarer's wages transferred to that card to make the process of sending money home much simpler.

ShipMoney meanwhile is a prepaid Visa purchasing card for captains, for use in the procurement of provisions, in emer-

gencies or for other ship expenses.

ShipMoney can be loaded and unloaded with funds at any time, and can be configured to include or exclude ATM access, as well as restricting merchants by merchant category codes.

This means, for example, that ShipMoney cards could be restricted from being used at casinos, massage parlours and other places captains should not be spending company funds.

The package also includes real-time and downloadable expense reporting.

"As a leading provider of communications, operational and IT solutions to the maritime industry, Globe Wireless is perfectly positioned to introduce CrewCash and ShipMoney," said David Kagan, president of Globe Wireless.

"We are very excited to introduce a new benefit to crew members while saving commercial maritime companies money."

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Volaris buys SpecTec

www.volarisgroup.com
www.spectec.net
www.dnv.com

Maritime software company SpecTec has been acquired by the Volaris Group, a company that specialises in acquiring and growing vertical market technology companies.

Volaris, part of Constellation Software Inc, has purchased 100 per cent of the shares of the SpecTec Group under the deal, and aims to extend Volaris' market reach into a new marine vertical.

"SpecTec is considered a market leader in marine-focused and remote asset management solutions, making them an ideal acquisition as we move into this vertical market," said Mark Miller, CEO, Volaris Group.

"We look forward to supporting the SpecTec team as they continue to grow and strengthen their business in this market."

SpecTec will continue to be led by CEO Giampiero Soncini and will operate as a separate entity, continuing to serve its customers under the SpecTec brand and keeping its management team in place.

"We're very happy to be a part of the Volaris Group as they bring extensive experience building and growing software businesses, and in particular, businesses that provide industry-focused asset management and logistics solutions," commented Mr Soncini.

"Volaris invests in businesses for the long-term, so we know we have found a good home with them. With Volaris support, we can grow SpecTec further into its main market verticals in the marine, oil & gas, defence and remote asset management areas."

In other news, SpecTec and DNV have together launched an all-in-one planned inspection and maintenance system for ship structures, combining SpecTec's AMOS software with DNV's Hull Integrity Management system.

The new combined application uses the DNV vessel-specific hull inspection forms and procedures that come as part of the Hull Integrity Management (HIM) system, and includes 3D inspection and reporting functionality for the early detection of defects.

These capabilities will be added to the AMOS planned maintenance system, which supports tasks such as maintenance, spare parts logistics management and the production of quality and safety documentation.

A vessel structure model established in the AMOS component hierarchy will be combined with HIM's vessel-specific hull inspection information and any diagrams showing areas that require special attention.

Hull inspection data is automatically synchronised by AMOS data communication processes so that it is available to crew, managers, charterers, inspectors and specialists, and can be used for ISM, TSMA, OVMSA, OCIMF and vetting requirements.

"Over the last 30 years, AMOS has become the de facto standard in shipping for technical management," said Mr Soncini.

"Our cooperation with DNV adds the ability to provide structure related maintenance and monitoring so that the ship management can track structural and coating condition including repairs with



"Volaris invests in businesses for the long term, so we know we have found a good home with them" – Giampiero Soncini, SpecTec

statistics that can be benchmarked from vessel to fleet."

SpecTec has also recently announced the signing of two new contracts, one in the Middle East, with Mubarak Marine LLC to implement the AMOS2 software system, and the other with Vancouver-based Grieg Star.

The deal with Mubarak Marine includes one office installation at the company's headquarters in Dubai and five offshore tug vessel installations.

The system will be used to improve the company's Planned Maintenance System, and aims to help decrease the costs of procurement and provide IT support in dry dock operations.

Mubarak says it also intends to gradually extend the implementation of the AMOS2 Enterprise Suite to include the Crew Management, Payroll, and Quality & Safety modules, and eventually cover its entire fleet of 33 vessels.

Database consultancy will be provided by SpecTec technical staff in the Middle East for the project.

For Grieg Star, SpecTec will build a new AMOS ship database, importing a Shipdex dataset for new crane equipment delivered by MacGregor.

The cranes are to be installed on 10 new Grieg Star L-class vessels currently under construction and expected to be delivered between 2012 and 2014.

The contract will see the first AMOS ship database built from Shipdex data delivered before the end of September, covering the MacGregor crane equipment only.

The first step of the project involves the validation of the MacGregor Shipdex dataset, which will be followed by mapping of related SFI Codes. The data will then be imported into the AMOS database before a final check of the database completes the project.

"This is the Grieg Star's first step into a new 'documentation era', where the technical manuals are supplied in a standardised electronic format by the most important manufacturers," said Marco Vatteroni, SpecTec ILS manager and author of the Shipdex protocol.

"The same Shipdex data can be used to create the so-called Company Common Source Database (CSDB) that becomes the most important technical repository."

Veson launches IMOS7

www.veson.com

Veson Nautical has announced the launch of IMOS7, the latest version of the company's Integrated Maritime Operations System.

Compared with v6, the new version offers a number of additional features in each of the core modules - Chartering, Trading, Operations and Financials - that can be added to existing installations through the use of Veson's platform installer.

The new Trading and Chartering Module features include Benchmark Pricing to enable dynamic selection of minimum or maximum exposure based on daily market conditions, and Cargo Matching to assist in identifying the best vessels for a cargo and the best cargos for a vessel.

In the Operations and Financials Module, new features include P&L Variance Reporting, which provides daily variance reports that highlight voy-

age P&L deviations based on user specified tolerances, and Voyage Accrual Options that provide new accrual calculation models.

Also added to this module are North America ECA Zones, adding support for low sulphur zones to assist voyage planning and operation, and LNG Bunker Curves and Consumption Tracking for modelling and tracking of LNG fuel consumption

IMOS7 is already in use in over forty major installations, the company says.

"Until now, we've looked at how to automate current maritime business practices. IMOS7 begins to answer the question 'How will we need to work tomorrow?'" said John Veson, president of Veson Nautical.

"We believe that the answer involves an active and supportive user community within each customer's organisation, where people constantly share real-time information. IMOS7 is designed for exactly this type of collaboration."

Videotel launches next generation

www.videotel.com

Videotel has introduced new versions of its computer based training systems with the launch of VOD G2 (Videotel On Demand G2) and NVOD G2 (Networked Videotel On Demand G2).

"Our G2 second generation operating system really does bring 21st century user benefits," says Nigel Cleave, CEO of Videotel Marine International.

"We now offer our complete training package in one brilliantly fast, user friendly, stable and state-of-art operating environment. Cloud based technology allows VOD G2 and NVOD G2 to access online services via our webFTA portal, the onshore records management program which enables access to all training records on all ships along with customised data assessments."

"There's no better way to demonstrate to Port State Control Officers, ISM

Auditors, Vetting Inspectors and other shore based authorities a more committed training structure."

Videotel says it will use this new system to launch the latest version of its ECDIS Training Course, updated to follow the new STCW Manila amendments and IMO guidelines.

NVOD is a networked version of the product which provides access to Videotel's videos, courses and interactive computer based training across a ship's network, enabling multiple users to watch different programmes simultaneously.

The G2 technology provides menu options in 10 different languages, as well as access to recently viewed items and favourites.

Individual company training programmes can be uploaded and used alongside Videotel training and the system can be integrated with existing crew Safety Management Systems.



The VOD G2 can link with cloud technology to access online services



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www.CrewCash.com

Fleet Decision Support System launched by AWT

www.awtworldwide.com

Applied Weather Technology (AWT) has launched its Fleet Decision Support System (FleetDSS), which aims to allow shipping companies to more easily manage a range of vessel voyage and performance data across entire fleets.

Ships are displayed in a Global Mercator projection map, and can be filtered according to a variety of parameters

via a dashboard, to allow companies with large fleets to focus on the few vessels that need the most attention for safety or performance reasons.

Operators can view alerts when any issue comes up with the voyage, ensuring that their attention is focused where it is needed most. These alerts are customer-controlled and customisable to meet the needs of each specific voyage, and reports can be exported to an Excel

spreadsheet.

Pro forma graphs allow the company to compare the vessel's expected performance with its actual performance while en route, with alerts available to notify operators when a ship deviates from the pro forma voyage plan.

This can enable offices on shore to spot vessels that are over consuming fuel and address the problem during the voyage to minimise excessive consumption.

At the end of the voyage, operators can use a summary report to compare the ship's performance with past voyages in a graphical display and compare vessels on the same trade run to each other and to their pro forma requirements.

In addition to the customised alerts, FleetDSS includes several safety alerts.

Operators can see alerts when there has been a recent pirate attack within the vicinity, if vessels are entering a war risk area, and if there are any hazards nearby.

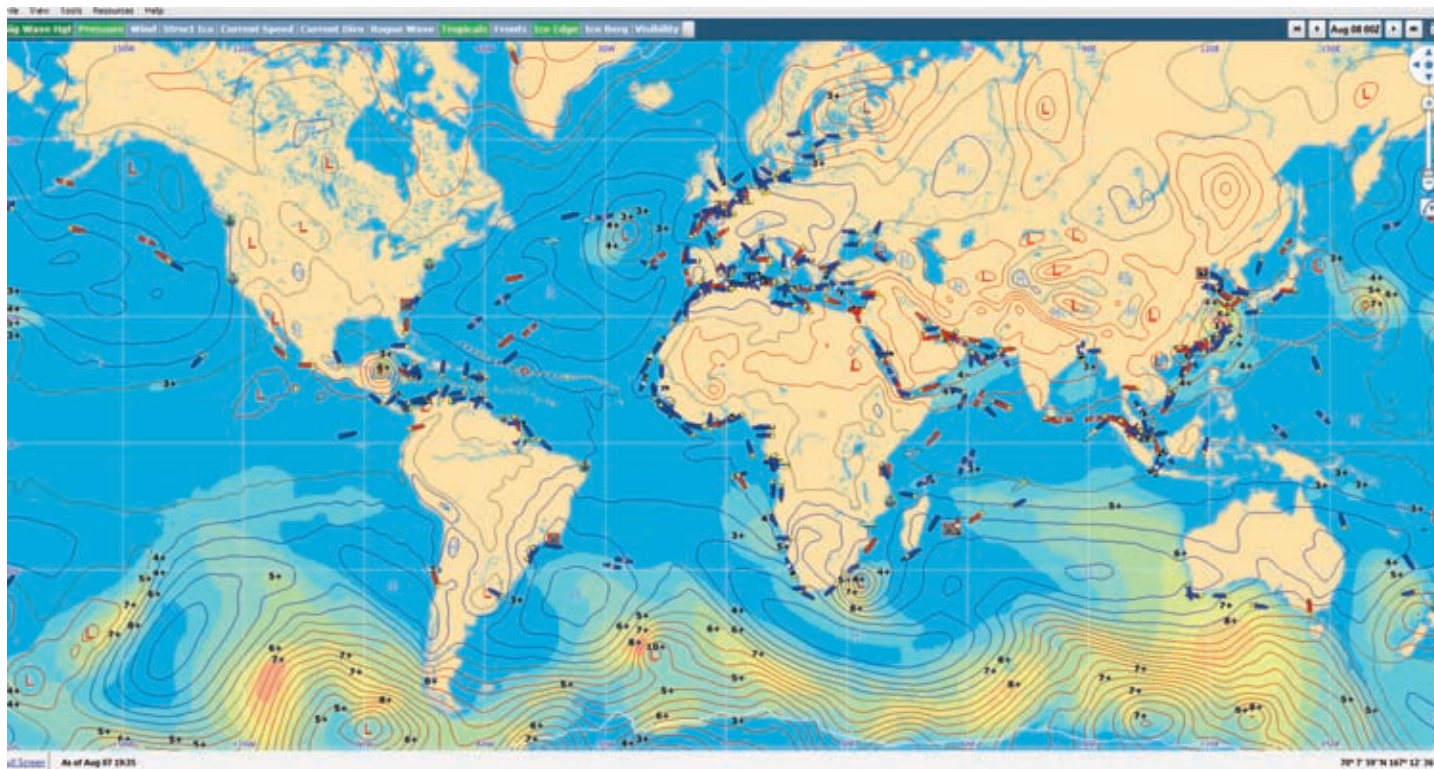
Dangerous weather conditions such as rogue wave risk areas, iceberg areas, significant wave height or tropical cyclones can also be displayed.

CMA CGM has been the first company to use the new service, having been heavily involved in its development.

"Working with AWT's knowledgeable development team to customise the Fleet Decision Support System has been very rewarding," said Captain Michel Cochennec, deputy director, Fleet Navigation Centre, CMA CGM.

"With FleetDSS, we can now compare actual vessel performance to our pro forma that results in quick, proactive management during the voyage. We can easily determine confidence levels of a route, and with the alarm dashboard we can assess risks such as pirate attacks in time to properly manage them."

"Coupled with AWT's exceptional routing service, CMA CGM is better able to manage its fleet to improve efficiency and safety."



The FleetDSS system allows companies with large fleets to quickly identify vessels that need attention

Seagull acquisition deal

www.seagull.no

GMT Communications Partners (GMT), a European media and communications focused private equity group, has invested in maritime e-learning provider Seagull, the companies report.

Founded in 1996 by its chairman, Oscar Johansen, and financial partner Bjørn L.G. Braathen, Seagull systems are currently in use at more than 8,000 locations, the majority of which are seagoing vessels.

The company has its headquarters in Norway, with offices in Germany, Greece, Japan, Poland, Singapore and the UK.

A news report from Growth Business in the UK has suggested that the deal could be worth approximately €50 million, though this is yet to be confirmed.

GMT has teamed up with the management and chairman of Seagull to acquire the shareholdings of certain of Seagull's existing shareholders, a deal which will see Natalie Tydeman, partner at GMT, join the board of the company following the transaction.

"We are excited to join Oscar (Johansen) and Roger (Ringstad) as shareholders in Seagull," she said.

"Seagull is led by an excellent management team and is highly regarded within

an industry where the importance of training and certification continues to increase."

"We have together developed an exciting plan to extend investment in training content and customer support, and to continue to grow the business within shipping and other specialist sectors."

Oscar Johansen, chairman of Seagull, also commented: "We are delighted to have found an investor with the skills, experience and financial resources required to help us take Seagull to the next stage of its growth."

"GMT's access to international networks, expertise and support in the coming years will allow us to continue to develop our market-leading technology platform and focus on our commitment to service excellence."

"By combining our resources we will be able to ramp up our product development, sales and marketing and world-wide support for our clients."

News of this acquisition followed soon after an announcement that Anangel Maritime Services in Greece is to implement the Seagull Training System for use across its entire fleet of ships and in its main office on shore.

Anangel Maritime Services is the bulk carrier unit of the Angelicoussis Shipping Group Limited, and operates a fleet of

more than 40 bulk carriers.

Its sister companies, Maran Gas Maritime and Maran Tankers Management, have also used the Seagull Training System on their vessels since 2008 and 2010, respectively.

The Seagull Training System (STS) can be delivered as a laptop or desktop com-

puter which is pre-loaded with a package of available tools, including core components such as the Computer Based Training (CBT) library and the Seagull Training Administrator.

The complete STS package is also available online to create an integrated onboard and online software solution.

ClassNK begins ship efficiency project

www.classnk.or.jp

ClassNK reports that it has started full scale ship tests to develop a feedback scheme on the impact of ship design on vessel performance in actual sea conditions.

The joint research programme will be carried out in collaboration with Imabari Shipbuilding and Sayonas Shipbuilding.

During this project, an energy saving operation support system called ClassNK-NAPA GREEN, developed by ClassNK and Napa, will be installed on the ships constructed by each of the above mentioned yards. The partners will then attempt to verify the effectiveness of the energy saving

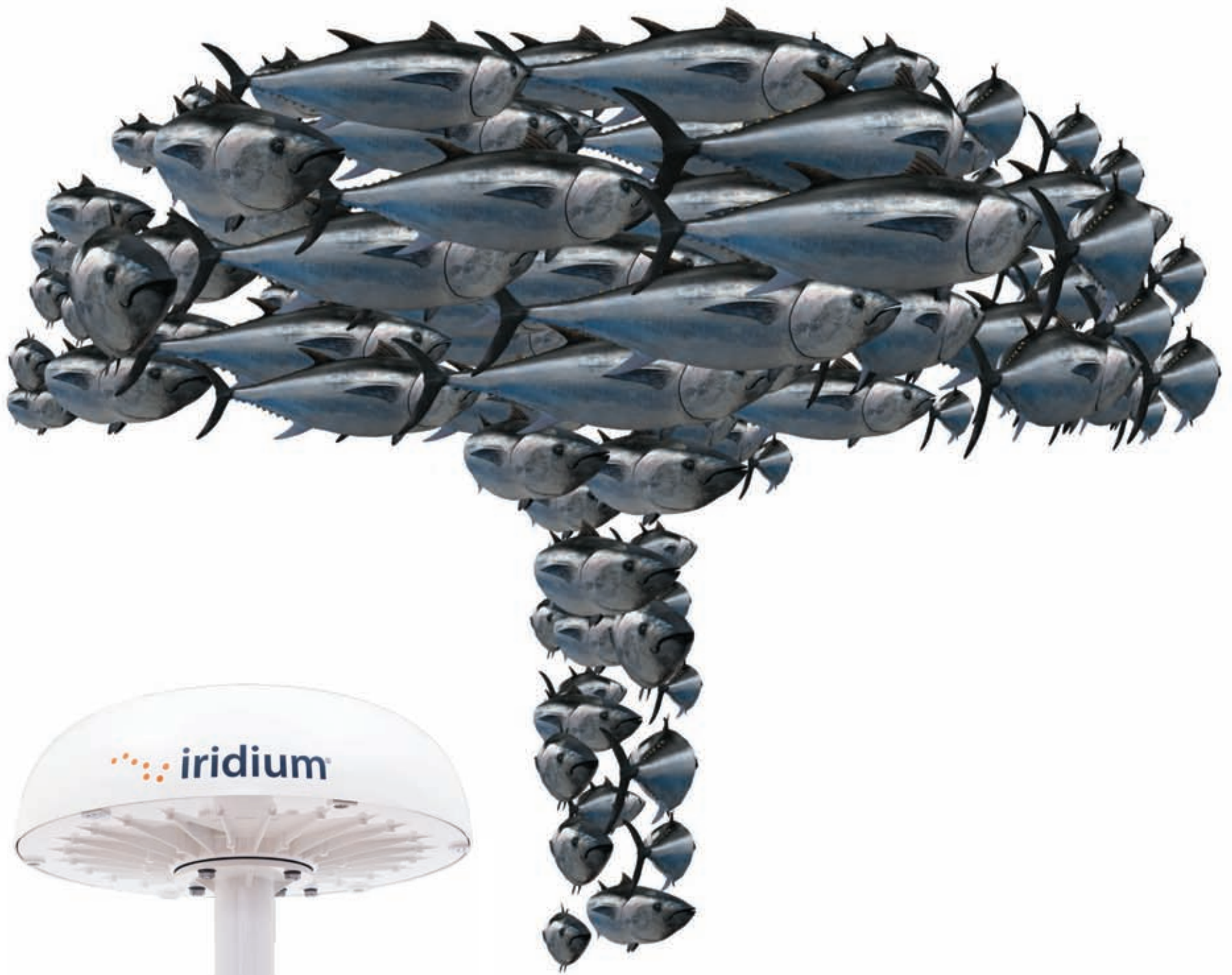
system in operation.

ClassNK says that the objective is to contribute to total optimisation of performance with regard to fuel efficiency, both in calm seas and actual sea conditions, with the feedback obtained from gathering and analysing the information obtained from the test ships.

This will be used to measure the relationship between draft, trim, main engine output, vessel speed, marine weather information, and other parameters.

Shipyards can confirm ships' performance in calm seas during the sea trials of newly built ships, but it remains difficult to correctly understand performance in real sea and draft conditions after entry into service, ClassNK says.

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Euroceanica and Lighthouse implement crew software system

www.crewinspector.com

Euroceanica Ltd in the UK and Lighthouse Pte Ltd of Singapore are to implement crew management systems from CrewInspector.

The systems will include an online crew management database, with an integrated online application for seafarers and crew payroll software functionality.

Euroceanica will use the system to run its fleet of eight chemical tankers.

CrewInspector says it has already successfully completed data migration from Euroceanica's legacy crew management system using ABS Nautical Systems' NS5

software, and begun the changeover to the new crewing platform at the company's offices in London and Riga.

Access to the system will be available via several different devices, over regular PC, mobile phone or tablet.

"After an extensive search amongst several software providers for a web-hosted solution, I chose CrewInspector for two main reasons, its simplicity in use and its adaptability to our own internal needs," said Allan Dutton, group operations and fleet manager at Euroceanica UK Ltd.

"The tectonic shift to migrate all current data to the new system and get the 'buy in'

of all employees to use the new system was accomplished in a very short period of time. Work processes are now much more efficient and the support has been outstanding."

Lighthouse will use the CrewInspector system to integrate crewing procedures amongst Lighthouse offices in Singapore, Indonesia, Ukraine and Myanmar, and will assist in ensuring compliance with crewing regulations to be introduced by MLC 2006.

The consolidation of seafarer employment contracts into a single system is expected to reduce manual operations by 50 per cent. A crew payroll function that

will automate seafarer wage calculation based on vessel planning and crew rotation will also be implemented.

The software's integrated client invoicing functionality should allow Lighthouse to perform financial management and preparation of invoices for rendered services from within the application, and provide its customers with access to designated vessel and crew data in real time.

"After longer discussions CrewInspector was able to tailor the program to our needs," commented Capt Reinhard Dombrowski, managing director, Lighthouse Pte Ltd.

Social networking site for seafarers launched

www.crewtoo.com

Crewtoo, a social networking site for seafarers operated by Headland Media, has been launched.

Similar to other popular social networks, such as Facebook or Twitter, seafarers can create their own profile, search for other seafarers by ship, rank or company and post updates to their wall, as well as having a platform to chat with other seafarers and participate in Crewtoo-led polls, games and quizzes.

However, the site does have a major difference in that members who don't yet have full internet access on board are able to post updates to their Crewtoo page by e-mail from their ship, and receive a weekly round-up of activity on their page by e-mail.

Headland Media, which also operates NewsLink, Walport and Crew Media Player, began work on Crewtoo in November 2011 when the team began to pose questions directly to crew via a small text-based advert in the daily NewsLink newspapers.

Participating crew members were asked to share their thoughts on issues ranging from their favourite type of music to what they saw as the downsides of working at sea. The results were printed the following week and a weightier round-up of responses was delivered to members' e-mail addresses.

Crewtoo is currently an e-mail community of over 1,700 members with a growth rate of 7 new members per day, and with 10 per cent participating in weekly polls.

"Seafarers work hard and spend a lot of

time alone at sea, yet are by and large ignored both by mainstream media and business," said Mark Woodhead, MD at Headland Media.

"We believe these seafarers need more attention, more services, and an increased ability to communicate with each other. We have developed Crewtoo to be both 'a club' and 'a service provider' to seafarers, with the internet and e-mail being the key to this."

The company is aiming to attract more than 6,000 members by the end of 2012.

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Is big always beautiful?

The economic realities of modern shipping have led to the construction of ultra large vessels carrying enormous numbers of containers. Managing the movement of these containers means dealing with massive amounts of data – a process that can only be handled efficiently through the use of modern software systems, writes Lars Fischer, Softship

Box ships are getting bigger. The average containership has grown in carrying capacity by an average of 24 per cent since 2008. On the Asia-Europe trade, the size of the average workhorse vessel is around 8,500 teu and that is forecast to increase by almost 50 per cent to 12,500 teu over the next year or two.

A number of lines are operating ultra large container vessels (ULCV) of 15,000 teu or more and Maersk's 'Triple E' fleet of 18,000 teu vessels will begin entering service from next year.

According to industry commentators, larger and more efficient vessels are required for almost all the world's major trade lanes. Carriers have little control over their revenues in terms of pricing and so they must concentrate on controlling costs.

Freight rates have been driven downwards by the double whammy of flat demand and a tonnage over-supply, regardless of whatever actions a carrier might undertake to gain pricing power, and so a focus on costs has now become vital for survival.

In the long run, that will manifest itself in even bigger and more efficient ships – and we are already seeing that trend.

But larger ships bring unintended consequences which the carrier must address if they are to continue to remain profitable and deliver a high standard of customer service.

The pressure on back-office activities associated with larger vessels will soon begin to escalate. Booking clerks will be required to 'close' a larger vessel within the same time-period associated with smaller ships although they will, perhaps, have 50 per cent more consignments to process.

This means that an already over-stretched office will be required to process many more bookings, documents, invoices, container releases and customs declarations within a very tight time-frame.

This is already impacting negatively on customer service according to a recent industry survey, where accuracy of invoices and the issuing of timely bills of lading were pinpointed as recurring problems.

To manage this additional work-load the carrier has a stark choice – employ more staff or introduce efficiencies into the system.

Ever mindful of the necessity to manage costs, many lines are reducing head-count and so it makes absolute sense for a carrier to build a level of intelligent automation into their back-office function to assist with the increased activity.

But sometimes this is not as easy as it sounds. In general, it is the larger carriers

that are operating the larger vessels and these companies are often reliant on heavily entrenched, bespoke and outdated software systems.

Many of these systems were installed before packaged software was available and, because of the large initial outlay coupled with a reluctance to interrupt business, these carriers feel compelled to stick with existing systems.



Maersk's Triple E ships illustrate the trend towards bigger container vessels.
Photo: Maersk

However, core technology development appears to run in cycles of between five and ten years, which means that software languages and hardware platforms date quickly and often become obsolete and unsupported.

Because of this, some large operators are struggling to maintain their in-house systems, struggling to meet the hefty maintenance bills and struggling to get their software to perform to modern day requirements.

Off the shelf

Instead of commissioning expensive software, some operators are starting to buy off-the-shelf from specialist shipping software houses.

With a price tag that can be up to 50 times less expensive than commissioning a bespoke application, it is not difficult to understand why this is the growing trend. In-built 'software switches' allow individual customisation and regular software and platform upgrades ensure operators never get stuck with old technology.

But moving away from existing systems to embrace new technology can be a painful step, particularly when software applications are controlling key areas of

the business. The trick is to prove the software before purchase, which is perfectly feasible with off-the-shelf solutions.

Operators should seek out software houses that have a proven track-record in their sector and who can demonstrate their solutions in simulated business environments. This eliminates many of the teething problems that cause downtime for bug fixing and other maintenance

lading and invoice are considered then a further 60,000 pieces of data need to be relayed for the export process and another 20,000 (notice of arrival and delivery order) for the import process.

That is 140,000 transactions created around one ULCV voyage. If one transaction can be actioned in just 3 minutes, the entire process would take around 7,000 hours or more than 875 working days.

Automating this process would greatly reduce the workload and result in some significant savings. What's more, automation generally reduces errors and omissions that inevitably creep in when manually processing such large amounts of data.

Valuable validation protocols can also be built-in as updates are being made. For example, a modern software package that facilitates this sort of automation will constantly be asking questions as data is exchanged.

Questions such as "is this my container?", "is this container really on my vessel?", and "does the bill of lading and booking information match the information held on my system?" are vital if efficiency and accuracy are to be achieved.

The software will also generate prompts to ensure the terminal receives the required information on time – this prevents unwanted penalties that are often awarded by terminals for late reporting.

From a customer perspective, automation enhances their service experience as modern systems can offer complete and up-to-the-minute visibility over actual cargo movements.

Technology can also be harnessed to provide customers with added-value services such as internet bookings, tracking and scheduling, as well as creating more transparency between the operator, agent and customer. Increasingly, these services are expected by today's more sophisticated customer.

Larger vessels will inevitably result in more frantic back-office activity but this needn't cause the owner a headache and certainly shouldn't undermine customer service.

For many operators, it could easily become the catalyst that prompts them to move from outdated systems to more modern, versatile and flexible software that delivers much sought after cost efficiencies.

If that were the case, then big really would be beautiful.

DS

activities, and clearly shows the advantages of the software.

Packaged software is modular, which means that an operator can install as many or as few applications as required, safe in the knowledge that each module will communicate with the others. This ensures an efficient flow of data across the company because information is only entered once and is then gathered from various modules to achieve specific tasks.

Data overload

The volume of information that needs to be processed is staggering. Taking a ULCV of 15,000 teu as an example, more than 60,000 pieces of information need to be exchanged between ship and terminal to govern the six standard moves for each box – these are gate out depot, gate in terminal, load terminal, discharge terminal, gate out terminal and gate in depot.

However, if the pre-arrival notice, release order, booking confirmation, bill of



About the author

Lars Fischer is managing director of Softship Data Processing Ltd, Singapore, a wholly-owned subsidiary of Softship AG, a provider of software solutions to the international liner shipping sector.

Jeppesen latest to enter PAYS market

www.jeppesen.com/marine

Jeppesen has announced that it is set to release its new OpenENC service, the company's take on Pay As You Sail (PAYS) licensing for electronic navigational charts.

Jeppesen OpenENC PAYS provides free worldwide coverage of ENC charts on the ECDIS for route planning purposes. When a ship sails, a tracking service or device reports the ship's continual position and the customer is then invoiced for the charts along the route in the two best scales available.

The company says that this might prove particularly useful for vessels that do not regularly sail on any fixed route, because the vessel always has all charts available and can plan and sail a new route at a moment's notice.

The new service will add to Jeppesen's Dynamic Licensing and Direct Licensing options for chart licensing.

These different licensing methods distribute ENCs using Jeppesen's SENC format approved by DNV (Det Norske Veritas), which requires no verification or compilation of data onboard.

"While PAYS options may seem like the simplest option for buying ENCs, this may not be the case in many situations," said Paul Elgar, Jeppesen OEM strategic business manager.

"By providing a choice of flexible ENC licensing services, we can help customers find their own best and most affordable solutions. Seamlessly combining different licensing options is also a help in areas where hydrographic offices do not accept PAYS."

New compass systems launched

www.navico.com

Navico has introduced two new Simrad brand IMO-compliant GPS and DGPS compasses, the Simrad HS80 GPS Compass and the Simrad MX575C DGPS Compass.

Each system is designed to provide heading, Rate of Turn (ROT) and position information to the Simrad autopilot range and the Simrad MX Series of navigation and AIS transponder systems.

The new compasses are built on the existing technology from the MX Marine brand, which has now been incorporated into the Simrad Professional Series of products.

Each compass has dual IMO compliance certification for both navigation and heading functions, eliminating the requirement for a separate navigation

antenna, and offers pitch, roll and heave (in NMEA 0183 format) as a standard output with 1 - 20Hz position and heading updates.

Three integrated sensors (gyro and two tilt sensors) are included to reduce the Real-Time Kinematic (RTK) search volume when computing GPS satellite positioning data.

The company says that a heading accuracy of less than 0.5° RMS is achievable, together with less than 1.0m DGPS positioning accuracy.

The Simrad HS80 is supplied with NMEA 2000 as the standard interface, but can be used as an NMEA 0183 device with an optional cable. Alternatively, the standard interface available on the MX575C is NMEA 0183, but can also be used as an NMEA 2000 device with an optional adaptor.

The Netherlands' **Rijkswaterstaat** has awarded a contract to supply, maintain, repair and demobilise racons on both its North Sea buoys and in inland waters to **Tideland Signal**. The contract runs up to and including 2015.

Ralf Lehnert has been appointed as the new managing director of **Transas Marine International**. Mr Lehnert



Ralf Lehnert, new managing director at Transas Marine International

joined Transas as a sales manager in 1999, and has been director of the simulation business unit since 2010. He succeeds Carl-Olof Carlsson, who has moved to the position of managing director of Transas Marine Limited.

Seagull has released two new CBT modules designed, in conjunction with **MARIS** and **Consilium Marine & Safety**, to train navigators in the practical use of the MARIS ECDIS900 and Consilium ECDIS, and satisfy the manufacturer approved training requirement for 'Equipment Specific ECDIS Training' under IMO guidelines.

Ocean Signal has appointed **MS Service**, based in St Petersburg, as its Russian distributor. The announcement follows the Ocean Signal range of SafeSea products gaining full type approval for use on Russian vessels.

www.tidelandsignal.com
www.seagull.no
www.transas.com
www.oceansignal.com

Condition monitoring kit introduced

www.skf.com

SKF has introduced its new SKF Marine Condition Monitoring Kit, which can be used to carry out simplified condition monitoring onboard ship.

The Kit contains a handheld monitoring device, the SKF Microlog Advisor Pro, as well as SKF marine library models and work instructions for setting up and operating the system.

An ARM (Analysis and Reporting) software package for reporting and trending is also available as an optional extra.

The marine-specific software includes typical equipment models which are loaded into the handheld device, and is

preconfigured to convert the measured data into colour-coded results.

Additional analysis of the data can then be performed, based on FFT (Fast Fourier Transform) frequency band analysis, to detect the most likely root cause of the fault, such as unbalanced equipment, bearing failures, gear failures, electrical failure in motors, or hydraulic and aerodynamic problems.

"The SKF Marine Condition Monitoring Kit is easy to set up, use and understand and can give early indication of possible problems," said Anders Welin, business engineer, SKF marine segment.

"It simplifies maintenance and reduces maintenance costs."

Maritime Security Charts from UKHO

www.ukho.gov.uk/security

The United Kingdom Hydrographic Office (UKHO) has introduced two new Admiralty Maritime Security Charts to cover The Mediterranean (Q6111) and The Persian Gulf (Q6110).

The two new paper charts are supported by additional digital services, with a new online update option as well as a free dedicated website offering Security-Related Information to Mariners (SRIM).

Information that represents a risk to the security of navigation is available via the system, including data on piracy, terrorism, mine warfare, embargo, illegal fishing and exclusion zones, as well as routing and reporting requirements implemented by military or security forces.

SRIM provides only official information which has been validated at government level. It is collated by the UKHO through its work with NATO and government-to-government organisations.

"Security threats are an on-going risk to the shipping industry, so it's vital that mariners and shipping companies have access to the latest validated navigational information," said Stein Olav Hagalid, head of NCAGS/NATO Shipping Centre.

"The Admiralty Maritime Security Charts combined with the SRIM service, as well as relevant information on the NATO Shipping Centre website, will help users collate the most up-to-date official security information available, ensuring passage planning can be made simpler and voyage routes more secure."

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Transas expands simulator technology

www.transas.com

Transas Marine has developed a ship model of a 400,000 dwt Very Large Ore Carrier (VLOC), the largest bulk carrier in the world, for Bernhard Schulte Shipmanagement (BSM).

The simulation model was created for the BSM Training Centre for Advanced Learning, located in India, using the visualisation engine in Transas' Navigational Simulator and modelling effects from Transas' Virtual Ship Yard modelling software.

The behaviour of the VLOC model is based on an extensive set of actual manoeuvring data provided by BSM.

"Training with this VLOC model will vastly improve understanding and confidence of the officers who plan to serve on this category of ships," said Ravi Budhraj, BSM Training Centre for Advanced Learning.

In June 2011 Transas Marine was chosen by Telaccount Overseas as a partner for BSM's ECDIS retrofit programme, and is now creating dedicated virtual exercise areas for BSM training purposes.

Indonesian installation

This expansion of its simulation technology was followed by news that Transas has also installed a new set of marine simulators at the BP2IP Tangerang Merchant Marine School in Indonesia, in cooperation with PT Multiintegra, its distributor in the country.

An integrated full mission tug handling simulator, part task Navigation Cubicle Bridge, cargo handling, GMDSS and ECDIS simulators were supplied, which were added to the Full Mission Engine Room and Ship Handling Bridge simulators previously provided to the school by Transas.

"Indonesia, as a large marine country, needs the qualified seafarers; therefore it is crucial to provide proper educational and training centres with modern world-class facilities that fulfil the international maritime standards as ISO, IMO, SOLAS and STCW 2010," said Capt Marihot Simanjuntak, head of the Merchant

Marine School.

"We're proud to have Transas products in our school and we're sure that its simulators should serve as appropriate instruments for other marine schools and academies in Indonesia."

In related news, Transas has also launched a new ECDIS simulator, built on its Navi-Trainer Professional 5000 (NTPRO 5000) simulator platform which it says is fully compliant with the new STCW 2010 requirements.

The new simulator is based on the Navi-Sailor ECDIS Multifunction Display MFD 4000 with inbuilt Navi-Planner voyage planning software, and incorporates a Chart Delivery Server Emulator for chart delivery, chart updates and licence updates in automatic mode.

Among other new options are a generic area database, new training chart folios and weather forecast functionality.

The simulator operates in two configurations: Classroom/Lab Simulator and Mini Simulator.

The ECDIS Classroom/Lab simulator allows training to be conducted at a management level, including procurement management, licensing and updating of chart data and system software, and creating and maintaining system configuration, backup files and route plan files.

The configuration consists of an Instructor Station with instructor software, a Chart server and video logger/playback; Trainee workplaces with MFD master and backup stations, visual channel, conning and Navi-Planner; and a server with NTPRO software and Areas and Ship Models databases.

The ECDIS Mini simulator configuration is used to train in knowledge of navigation at the operational level, such as understanding of Electronic Navigational Chart (ENC) data, data accuracy, presentation rules, display options, and safe monitoring and adjustment of information.

This simulator is similarly set-up with an Instructor Station and server, as well as Trainee workplaces with ECDIS/ECS, Radar and Conning (plus a Video logger as an optional extra).

PMIS

Apart from simulator technology, Transas Marine has also recently launched a new Port Management Information Systems (PMIS) product for real-time port management.

Transas PMIS comprises a set of web-enabled applications to automate vessel and cargo operations and related business processes, including vessel calls manage-

ment, chartering, allocation of cargo handling equipment, invoicing and management/statistical reporting.

In addition, the PMIS is integrated with VTMS software to provide functionality for managing and monitoring vessel movements within a port. Coupled with VTS, the PMIS can receive real-time information about each vessel arriving in port and monitor its location in operational areas.

Integration of PMIS with 3D VTS functionality allows the user to visualise the navigational situation in a port and to provide the VTS operator with 3D views.

Transas says that the PMIS should help in the move towards paperless administration by improving communication between port users through electronic data exchange and optimisation of logistical processes.

A statistical module is also included with the product to provide port authorities and interested parties with KPI data, which can be used to assess overall port performance.

PMIS can be customised to the specific needs of the port, and is built on an open architecture to support interfaces to external databases and additional software such as financial or accounting packages.



A simulation model of a Bernhard Schulte VLOC has been created for training purposes



PMIS will allow port information to be managed in real time

Consilium and ChartWorld partner on ECDIS

www.chartworld.com
www.consilium.se

Consilium and ChartWorld International are to partner in the provision of a new ECDIS package, featuring the Consilium S-ECDIS equipped with ChartWorld's type approved eGlobe service.

The S-ECDIS will come prefilled with the Advanced ChartWorld ENC Service (ACES), which provides charts mainly in SENC format. Other ChartWorld certified data services for official ENCs and Admiralty data products are also provided.

Consilium will also offer eCert, ChartWorld's training package for both generic and type-specific training using a combination of traditional class-based training and web-based e-learning programs.

Consilium will offer this new package via its worldwide network of subsidiaries and agents in more than 50 countries, including all major ports around the world.

"We are proud to be partnering with Consilium as we bring this new service model to the ECDIS market," said Oliver Schwarz, ChartWorld International's business development director.

"Consilium customers significantly will get greater value combined with real world wide service. Our alliance is focused on building the best user experience."

In related news, ChartWorld reports that the United States Coast Guard, via the US Department of Homeland Security, has now issued approval for the eGlobe ECDIS service.

Cruise ships to feature laser emissions monitoring

www.emsysmarine.com

Mitsubishi Heavy Industries (MHI) in Japan is to install Emsys laser emissions monitoring equipment from WR Systems onboard two newbuild vessels under construction for Carnival cruise line's AIDA Cruise brand.

The continuous emissions monitoring system to be implemented on the two 125,000-ton passenger vessels, the largest ever constructed for AIDA Cruises, will feature laser-based emissions sensors, allowing measurement of up to 10 exhaust stacks.

The system also has the capability to measure smoke (opacity) and particulate matter (PM). The standard configuration

measures NO_x, SO_x and CO₂, and has been awarded type approval by ABS.

WRSystems says it can also be configured to report carbon monoxide (CO) and methane (CH₄) emissions, though these latter gases are not yet covered by IMO regulations.

"These vessels will be constructed to the highest environmental standards and feature many new technologies to reduce emissions and improve efficiency," said Simon Brown, international maritime business director.

"The implementation of Emsys will provide real-world verification of the vessels' emissions footprint and allow optimisation of operating performance through continuous emissions monitoring."



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ECDIS software information to be published

www.imo.org

Following an agreement at a meeting hosted by the IMO Secretariat, the manufacturers of ECDIS are set to publicly publish information on the latest versions of the software used to operate their equipment with the aim of ensuring the systems are kept up to date.

The move has been motivated by a desire to help clarify certain anomalies that had been identified with some older systems, which came to light following a survey conducted by the International Hydrographic Organization (IHO) in October 2011.

The information from the manufactur-

ers is to be posted on the IHO website, and will include links to enable ships to download the latest versions of the operating software, if necessary.

The ECDIS manufacturers have also agreed to work with national Maritime Administrations to make sure that this issue is satisfactorily addressed in the long term.

This is the latest in a number of steps taken by IMO, IHO, Original Equipment Manufacturers (OEMs) and others to address the concerns raised by the IHO survey, and IMO notes that the participation of the eighteen OEMs attending this meeting highlighted "the willingness of the manufacturers to address proactively the issues involved."

Furuno type specific ECDIS training in China

www.furuno.com

Furuno Shanghai reports that it has begun providing Furuno type specific ECDIS training for the Chinese market, the sixth training facility to join the Furuno NavSkills training network.

The type specific ECDIS training will be provided by instructors trained at Furuno's INS Training Centre in Denmark, to match the requirements for training under the NavSkills framework.

"Training and crew competences are important to us," says Rick Chen, vice general manager of Furuno Shanghai.

"China is one of the very important ship building nations, and as such we believe that it is important to be able to provide our high quality training to the Chinese crews."

"At the same time we can offer overseas ship owners building vessels in China to have the crew trained inside China on their way to go onboard the new buildings."

Azerbaijan ECDIS deal for PC Maritime

www.pcmaritime.co.uk

CASPAR Shipping, the Azerbaijan State Caspian Shipping Company in Baku, has agreed a deal with PC Maritime to supply ECDIS to its fleet.

The agreement is for the initial supply of systems to 13 vessels, with the option of a second order at the end of 2012.

PC Maritime's Navmaster ECDIS 800 is now in version 7, and offers various hardware options to suit different bridge layouts.

These include a slim-line processor incorporating a solid state hard drive that

can be fitted horizontally or vertically, and monitor sizes ranging from 19" to 24" widescreen. An external break-out box gathers all NMEA signal in/out ports into one unit.

This retrofit deal was agreed by Marine Technics, PC Maritime's representative in Azerbaijan, and includes the provision of Jeppesen SENC-format electronic charts and installation of the ECDIS systems onboard.

ECDIS type-specific training will be provided by PC Maritime's training and certification program supplied on DVD.



The 2004-built tanker President Heydar Aliyev will be supplied with the system

Retrofit ECDIS from Raytheon

www.raytheon-anschuetz.com

Raytheon Anschütz has announced the launch of ECDIS 24, a new ECDIS which has been specifically designed for retrofit installations.

The new system was officially unveiled at SMM 2012 in Hamburg, Germany.

Based on existing Raytheon Anschütz ECDIS software, the ECDIS 24 comes with an off-the-shelf 24 inch TFT Panel-PC display, so it does not require a separate PC. The standard package includes an interface-box, with cabling, and a stainless steel trackball.

All serial interfaces required by ECDIS performance standards are present, such as IEC61174 for echo sounder, speed log, GPS / DGPS, AIS, gyro, and ARPA target integration.

Connection for AC (main) and DC (emergency) power supplies is included, with automatic switch-over to remove the need for an uninterrupted power supply (UPS). If double ECDIS is required, exchange of data, routes and charts is possible via a LAN interface.

As a standard ECDIS, the new system displays data from navigation sensors on board, integrates AIS targets, offers con-

ventional route planning functions and provides a 24h log of data.

In addition to these basic functions, ECDIS 24 offers features for route and voyage management, with automatic route planning, a voyage calculator, integrated environmental databases of tides and currents and optional weather chart integration.

Functions are available through shortcuts, and a configurable Conning panel can display relevant navigation and track information.

In related news, Raytheon Anschütz also reports that it is to supply its NautoSteer Advanced Steering Gear Control Systems to two prototype cruise ships being built at Fincantieri's Monfalcone shipyard for the British-American Carnival Corporation.

Carnival will operate the new 141,000 gross ton cruise ships under its Princess Cruises brand as the flagships in the fleet.

Being designed as prototypes, these will be the largest ships ever built at Fincantieri shipyard. The delivery of the first ship, named Royal Princess, is planned for spring 2013, while the second newbuild is expected to follow one year later.

Raytheon Anschütz will supply a redundant Standard 22 gyro compass system, the new NautoSteer AS Steering Gear Control, and the autopilot NautoPilot 5300, which offers a colour touch display and fuel saving tools such as weather adaptive technology and a heading and

rudder plotter.

The NautoSteer AS steering gear control system onboard the cruise ships includes integrated steering failure monitoring, wire-break monitoring and data integrity monitoring.

A simplified steering mode selector switch is also included, with two independent steering positions – a 'Direct NFU' tiller that controls the steering gear directly without use of electronics and a 'Main' steering position for all other controls based on redundant CAN-bus technology.

"Safety was the main aspect for the development of the NautoSteer AS Steering Gear Control System," said Olav Denker, product manager at Raytheon Anschütz.

"In addition we focused on a user-oriented operating concept. NautoSteer AS prevents from switching from a defective steering control to another defective steering control position. In case of an evasive action or emergency, when time is crucial, this architecture supports the crew in their fast and safe decision making."

In other news, Raytheon Anschütz's Croatian representative Crocon has reached the milestone of selling its 100th Integrated Bridge System.

The 100th contract covers a newbuild Heavy Lift Carrier under construction for Dutch company Jumbo Shipping at Brodosplit shipyard in Split. The IBS will be from Raytheon's Synapsis Bridge Control series.



ECDIS 24 has been specifically designed for retrofit

Wallem installs new bridge simulator

www.nautissim.com

Wallem Shipmanagement has installed a new VSTEP NAUTIS full mission Bridge Simulator at the Wallem Maritime Training Centre Philippines (WMTCP).

The move coincided with the entry into force of the 2010 Manila Amendments of the Standards of Training, Certification and Watchkeeping (STCW Convention), with the new simulator to assist in ensuring compliance with the new regulations.

"We want to train our officers on actual sea work, not only to navigate but to confront them with any possible scenario that could be encountered, thereby improving the efficiency and effectiveness of our Filipino officers in team work on the navigation bridge," said Jan van der Wee, general manager of the WMTCP.

"We selected the NAUTIS Full Mission Bridge Simulator for our training centre because it is fully certified by DNV, allows for future expansion by adding overlays and offers high quality updated training at an affordable price."

"The graphics in the simulator look very natural and real, which in combination with the realistic bridge mock-up allows for very realistic and true-to-life maritime simulation."

PC Maritime, as the software developer and licence provider, and VSTEP, as hardware and system developer, have supplied the systems, the latest model of

NAUTIS, via DelNet International, both companies' representative in the Philippines.

This latest generation of the technology includes expanded memory, faster processing and improved graphics compared to previous incarnations, and can be expanded with additional overlays.

Wallem Shipmanagement is PC Maritime / VSTEP's first customer in the Philippines.

In related news, VSTEP reports that it has also developed a software interface for IMO Type Approved radar and chart radar systems, for training purposes.

The company says that this should allow for radar and ECDIS training on real radar and ECDIS systems instead of emulated systems, and should also allow for radar quality enhancements on all simulator types.

For example, for ECDIS training in a classroom set-up, one instructor can provide a large number of trainee radar systems with radar video and NMEA data input, while showing the outside view and navigation instruments on a projection screen.

VSTEP says that the software interface also allows 'no-brand' radar simulators to be replaced with real Type Approved radar systems, still running on a standard PC, without any need for special interface hardware.

Some of VSTEP's Full Mission Bridge



The bridge simulator has been installed at Wallem's training centre in the Philippines

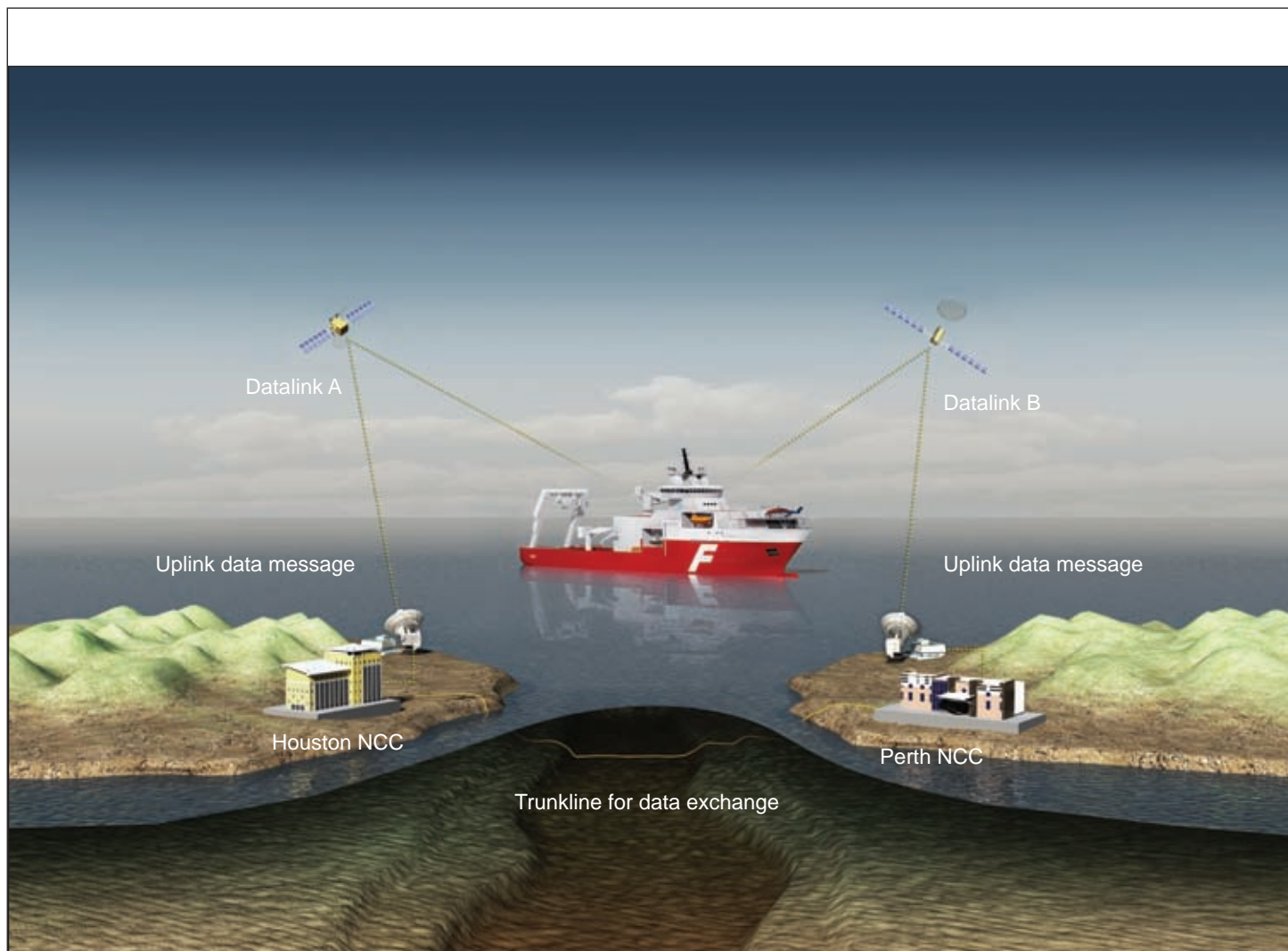
Simulator clients have already been upgraded with Type Approved radar systems from Kelvin Hughes and MARIS, to benefit from this new system.

The Kelvin Hughes and MARIS ECDIS systems can show the NAUTIS radar video as an overlay on the chart view, satisfying a recommendation from the IMO in the new ECDIS Model Course 1.27, published in July 2012.

"We wanted to provide our customers with a high quality yet affordable solution for all their radar/ARPA and ECDIS training requirements, running on standard PCs which can be bought anywhere in the world," said Pjotr van Schothorst, VSTEP's CTO.

"We have been working on this solution for over two years, and there is a lot of clever software behind all this, yet it is all made available with a very simple Windows style user interface. The radar video is created in NAUTIS using a realistic radar ray-casting simulation process. All land objects like hills, buildings and port cranes, and all vessels show up on the radar at exactly the same place as in the 3D outside view environment of NAUTIS."

"New vessels and new port environments can soon be created by clients themselves using the NAUTIS Port Creator software, and will also show up automatically on the radar video image."



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Imtech deals for three newbuilds

www.imtech.eu

Imtech Marine has agreed two contracts with Flensburger Schiffbau-Gesellschaft (FSG) to supply a range of ship technology to a Ro-Pax ferry for Caledonian Maritime Assets of Scottish Limited (CMAL) and for two offshore vessels for another seismic company.

FSG is responsible for the development and construction of the 116m Ro-Pax ferry for CMAL, which will enter into service in summer 2014.

Imtech Marine will provide technical coordination and project management for systems including automation, switchgear, power distribution, lighting, and the entire cable network. In addition, Imtech will plan, supply and install drive components such as converters, electric motors for thrusters and power

management.

On the ICT side, internal and external communication via FleetBroadband, VSAT and GMDSS, as well as X-and S-band radar, ECDIS, compass, GPS and VDR will also be provided by Imtech.

The two 127 metre long offshore vessels are also scheduled for delivery in 2014 and will be used globally to discover and exploit oil and gas deposits beneath the seabed.

For these seismic vessels Imtech will similarly be in charge of engineering, technical coordination, project management, supply and commissioning of the onboard technology systems, including cable networks, internal and external communications and navigation.

"In this challenging project innovative solutions and experience in the construction of seismic vessels is needed, in partic-



A CMAL Ro-Pax ferry will be one of the vessels supplied under the contract

ular for the very special and unique needs of the electronic chart system and the autopilot," said Thomas Wolf, project

manager at Imtech Marine Germany.

"Through various past projects in this area, we are well prepared for this task."

NAVTOR agrees UKHO deal

www.navtor.no

NAVTOR has signed a distribution agreement with the UKHO (United Kingdom Hydrographic Office) for the supply of the Admiralty Vector Chart Service, which will allow the company to supply ENC's for the global professional maritime market.

NAVTOR will also offer the total package of Admiralty Digital Publications as a part of the agreement.

"NAVTOR employees have extensive experience in serving the maritime market with electronic charts and understand that, in the future, ENC's will be the only option for the shipping industry to meet the requirement of using authorised electronic charts," said NAVTOR managing director, Tor Svanes.

"When we launched our innovative ENC service in the first quarter of 2012, it was a major contributor to the simplification of ordering, licensing, updating and, importantly, administration of the ENC chart portfolio."

"Up to now, the market has been slow to begin to use ENC's, primarily due to today's cumbersome solutions. However,

as soon as we had proved how easy the ENC's were for the navigators to handle, we experienced a swift uptake of our service. Once the mandatory use of ECDIS comes into force during the coming years, I am sure that NAVTOR's services will be a valuable solution for navigators on the bridge."

NAVTOR believes that this distribution agreement with the UKHO will improve its ability to serve the international market and assist in allowing the company to offer global ENC coverage to the shipping industry as part of its ENC service.

NAVTOR says that it also hopes to work with a number of other "major players" in the ENC and ECDIS market to jointly develop and supply a fully-automated electronic maritime navigation service.

"Being able to cooperate with the UKHO and jointly serve the shipping industry with state of the art solutions will be a major contribution to the fulfilment of the e-navigation concept; to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment," said Mr Svanes.



"In the future, ENC's will be the only option for the shipping industry" - Tor Svanes, NAVTOR

GMDSS for the Solomon Islands

www.gmdss.com.au

The Asian Development Bank has commissioned GMDSS company Dunstan and Associates, and its local partner company Cruz Communications, to supply and install a new GMDSS marine radio station for the Solomon Islands Maritime Safety Authority.

The station is located at the Rescue Coordination Centre in Honiara and provides communication for vessels operating in the Solomon Islands region using Barrett Communication 2050 MF/HF radio communications systems and the TransOceana Digital Selective Calling (DSC) system.

"We use four Barrett 2050 radios as HF Digital Selective Calling receivers, a fifth Barrett 2050 as the Digital Selective Calling transmitter and a sixth Barrett 2050 for radiotelephone operation," said managing director of Dunstan and Associates, Glenn Dunstan.

As part of the installation, five operators attended a training course on the principles of GMDSS and operation of the new system.

Dunstan and Associates says it has already used similar Barrett HF configurations for projects in Thailand, Papua New Guinea and Iraq.

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ECDIS Ltd extends Kelvin Hughes training

www.ecdis.org

ECDIS training and consultancy company ECDIS Ltd has signed a new agreement with Kelvin Hughes to offer training on Kelvin Hughes MantaDigital systems, on a global basis.

The new agreement will allow Kelvin Hughes distributors worldwide to book Generic and Type Specific ECDIS courses directly with ECDIS Ltd for training on MantaDigital software.

"We have already been providing both five-day 1.27 Generic and Type Specific courses on MantaDigital worldwide," said Natalie Robson, an instructor at ECDIS Ltd.

"Considerable time and effort has gone into the development of our Kelvin Hughes ECDIS courses to ensure that they are of the highest quality, and to fully prepare the instructors for all possible questions about the system. This is vitally

important as students wish to explore specific aspects and functions in great depth, or any particular issues they have faced in the past."

"Getting an answer to a system specific question from a knowledgeable instructor that does not appear in the user guide is an obvious advantage over Computer Based Training (CBT)."

In other news, ECDIS Ltd reports that it has been included on a UK government list of approved training providers for ECDIS in the country.

The list, compiled by the UK MCA (Maritime and Coastguard Agency), is a response to the ECDIS carriage requirement and the need for the deck officers of fitted ships to be trained in the use of the equipment.

The MCA's complete list of approved training providers is available at <http://goo.gl/NmFZg>.



Training on Kelvin Hughes' MantaDigital systems is now available from ECDIS Ltd

UK VMS contract awarded

www.blutraker.com
www.theastgroup.com

A UK vessel monitoring system (VMS) contract has been awarded to a consortium of UK system integrator AST Marine Sciences Ltd and EMA Group, a Slovenia headquartered satellite tracking systems research and development company.

The UK Department for Environment, Food and Rural Affairs (DEFRA) contract for the expansion of existing VMS services requires the supply and installation of 300 EMA BlueTraker terminals to UK fishing vessels of 12m to 15m length before the end of 2012.

The BlueTraker VMS terminal provides positional data outputs and bidirectional communication, with integrated antennas, GPS receiver, GPRS and satellite communication channels, as well as a back-up rechargeable battery.

All EU VMS reporting data is transmitted via the Iridium satellite short burst data service (SBD), with the GPRS channel primarily used for near-shore reporting

and formatted to conform to national and inshore requirements.

The terminal also offers dynamic reporting, enabled through the Iridium SBD service. Up to 100 geographical areas (polygons and associated rules) in the form of geofences can be remotely uploaded, edited and activated/ deactivated on each and every BlueTraker terminal.

Pre-defined National and EU control area co-ordinates (geofences) are uploaded from land-based servers over the Iridium network.

EU geofence crossing and VMS positions are also transmitted through Iridium, while National geofence entering or exiting and VMS positions are transmitted either through Iridium or GPRS communication channels - depending upon the rules set for each terminal.

A fail-safe Assistance Button is included, which enables crew members to send distress alerts directly from the terminal, as well as the ability to transmit UK Electronic Logbook Reports.

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NG Explorer updates software on ECDIS concerns

www.adveto.com

The vessel National Geographic Explorer has had its ECDIS software upgraded during a recent visit to Scandinavia, in the wake of recent IHO concerns over display issues with ECDIS systems.

The vessel uses the ADVETO ECDIS-4000 onboard, and has now installed software release v10.237 on the equipment. ADVETO says it will inform all of its customers about the availability of this latest release.

This version has been introduced with particular reference to the IHO circular 'Update Report on IHO Action concerning ECDIS Software Issues', which confirmed that IHO had checked the performance of systems from 15 out of 25 recognised manufacturers of type-approved ECDIS, and

that only one third of the systems scrutinised functioned as expected.

"We have put our systems through the most stringent of tests set by the IHO and submitted our report to them along with the test and support documentation as well as screen dumps required in the latest circular," says Kent Sylvén, general manager ADVETO.

"The previous generation ECDIS-4000 did not match the exhaustive criteria set out in the IHO report in some minor areas, however none of the shortcomings were critical."

"The new version of ECDIS-4000 is a result of extensive work at Adveto and its partners which accept a new software version also required changing the SevenCs kernel version plus an update of Adveto's ECDIS certificate MED-B-5858 handled by DNV."



The NG Explorer has updated the software on its onboard ECDIS

New container ship design to save \$3m in fuel

www.dnv.com

www.hhi.co.kr

Ten ultra large container ships under construction at Hyundai Heavy Industries for APL are to feature a new design that aims to make them 20 per cent more fuel efficient per TEU compared with existing models.

The new design is the result of a collaboration project involving APL, Hyundai Heavy Industries (HHI) and DNV, to create ships optimised for an operating profile along the Far East to Europe trade route involving nine speed and draught combinations.

The companies say that the installed propulsive power could be reduced by

about 16 per cent compared to the initial hullform optimised for one draft and speed condition, and could result in fuel savings worth about US\$3 million per ship, per year.

The first of the new 13,800 TEU vessels is already under construction at HHI and will be delivered next year.

"In the current challenging market environment it is extremely important for APL to introduce efficient and flexible container ships, which help us to reduce slot costs," said Cedric Foo, group deputy president and CFO of APL's mother company, Singapore-based Neptune Orient Lines (NOL).

"These ships will be the most fuel-efficient ships ever built to the Asia-

Europe container trade."

"APL has decided to advance the delivery of the newbuildings, which have been ordered in 2011, using their superior fuel efficiency to make a contribution to cutting emissions as soon as possible."

Container ships often operate in 'off-design' conditions which increase hull resistance and reduce propeller and engine efficiency. In the case of these new vessels, the ships will operate at speeds typically ranging from 15 to 19.5 knots but with a maximum speed of about 23 knots.

Using a sophisticated software system and virtual sea trials, the three partners say that they were able to analyse the proposed trading pattern of the ships and optimise accordingly.

"This is a new way of cooperation between the partners in a newbuilding project," explains Ha Gyung Jin, executive vice president of the Basic Design Office in the Shipbuilding Division of HHI.

"Due to a concentrated and professional effort from all three parties within their respective roles we managed not only to keep the tight design schedule, but also to unlock an amazing potential for fuel savings."



The new design aims to make the ships 20 per cent more fuel efficient

Performance optimisation from Lloyd's Register

www.lr.org

Lloyd's Register has created a performance optimisation service that aims to support shipowners, builders and designers who are looking to develop solutions that offer more efficient performance for new and existing designs, and retrofits for ships in service.

The new service uses computational fluid dynamics (CFD) as its central technological capability, combined with other data sources for performance analysis.

The CFD team is led by Dr Dejan Radosavljevic, who has nearly 30 years' experience in the field.

"Our track record of combining CFD with in-service measurements and observations to deal with issues related to propulsion hydrodynamics puts us in a great position to apply this problem-solving knowledge to finding and verifying new ways to improve operational efficiency," said Dr Radosavljevic.

"The large body of work and in-service data we've built up over the years has helped us to fine tune our processes and validate our full-scale CFD analyses, so we can always seek solutions from computerised models of full-scale ships operating in real conditions."

The goal of the service is to reduce fuel oil consumption, and Lloyd's Register believes that independent technical analysis and verification of performance is key in achieving this across the industry.

"We are looking at the whole ship and its operational requirements," says Luis Benito, Lloyd's Register's Singapore-based marketing manager.

"The market needs to know what's feasible for existing ships as well as for new designs."

"When looking at new ideas and innovation either for retrofit or newbuilds, we can marry sophisticated CFD tools with other skills that we have in Lloyd's Register. Working with the technical insight of our energy-management experts, we can help to generate and analyse the solutions needed to create more efficient ships."

Elcome to provide electronics for ship conversion project

www.elcome.com

Elcome International has been awarded a contract by a shipyard in UAE to supply the complete electrical, electronics and ship control package for a cable-handling ship conversion project.

The 140m ro-ro vessel covered by the deal is being converted into a 125m cable-laying vessel for an unnamed submarine cable installation, maintenance and repair organisation.

Elcome is supplying the ship's main and emergency switchboards, power distribution and management systems, integrated automation system to UMS class

notation, hydrographic reference systems, cable laying, security and safety systems, external and internal lighting, loading management software and tank gauging.

On the navigation side an integrated bridge system, draft measurement system and dynamic positioning system will be delivered, while the company will also provide internal and external communications for the ship, as well as a LAN and Wi-Fi networking.

"This project is a good example of the range of technical services and capabilities Elcome can provide for a complex ship conversion project," said Jimmy Grewal, executive director of

Elcome International.

"We will work closely with the shipyard and owner to support all aspects of design, documentation, installation, system integration, testing, commissioning and sea trial acceptance."

In other news, Elcome has also introduced a new ELSYS family of marine electrical switchboard and power management systems, featuring a modular design and switch-gear components to reduce the size and weight of the switchboards.

The systems are designed and manufactured in the company's switchboard production facility in Dubai by its own electrical design team.

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Harnessing technology

ECDIS offers a wide range of benefits to modern navigators, but needs to be supplemented by other information for optimal situational awareness. Optical information could be an ideal complement to existing systems, but technology in this area is currently lacking, writes Dr Andy Norris

One of the great things about ECDIS is the ease and immediacy of knowing the position of own ship relative to the planned route, together with the ready assimilation of any nearby charted hazards that must be avoided if forced to deviate from the route.

This ease of monitoring is a significant benefit to the navigation of a vessel and forms part of the overall safety benefit that ECDIS is designed to provide.

Perhaps it is now starting to become clear that the easy availability of the planned route and the actual track from ECDIS to accident investigators after an accident will increase the 'official' emphasis on route maintenance – why did you deviate from the plan?

This also increases the emphasis on good route planning – why did you plan a route so close to a hazard?

This is no bad thing as ECDIS can superficially hide a sloppy approach to planning, such as over-relying on an available list of way points, perhaps with inadequate assessment against the latest information or without checking that all legs are appropriate to the actual ship and its loading.

But an increased emphasis on maintaining the planned route – and the apparent ease of doing so with ECDIS – has its own very obvious dangers.

The first is that the ship's GNSS position may be in error and so may not be safely on the pre-planned route, as apparently clearly displayed on the ECDIS.

The second is that the planned route cannot take into account the presence of other vessels or floating debris and the consequential actions needed to prevent collisions.

The third is that freak conditions or very special circumstances may require a marked deviation from the route.

Positional issues have been covered here and elsewhere many times before. Advanced low frequency terrestrial positioning services can resolve them but the political consensus to enable a solution remains elusive.

We may have to wait for alternative technology to be developed – and the wait could be potentially quite lengthy.

Optical technology

In the meantime we also need to reconsider the tools available to assist collision avoidance – do they match the potential clarity of ECDIS for route monitoring?

We presently use the bridge windows and radar as the main information sources to enable this task.

The windows are extremely useful for ensuring a good mental involvement with the real world and hence greatly enhance situational awareness. Even in zero visibility, the link with reality is valuable in maintaining an appropriate mindset.

In good conditions targets are generally very visible from the windows, at least in the forwards direction, and good collision

avoidance decisions can normally be made directly, supported by radar and AIS data to give further information and confidence.

As visibility deteriorates, reliance on radar/AIS data has to increase, but optical information remains important.

What is surprising is the relative difficulty of using the optical information. The instruments available to the navigator are very basic and normally lack any integration with other equipment.

Optical bearings are typically taken from an instrument situated well away



With all of the modern technology available from today's bridges, the view from the windows is important in maintaining a link with 'reality'

from the conning position and can have a surprisingly limited angular view. Input of its readings into a radar or ECDIS display are normally tedious and error prone.

Binoculars are regularly used to help identify targets but have zero integration facilities.

With today's available technology, why do we typically not have an advanced electronic optical viewing facility, based on a rotating camera or cameras, which puts information onto a main display with a number of viewing options – and also shares data easily with other bridge equipment?

The cameras would have a high zoom capability, a night-time mode and an infrared facility for use in difficult viewing conditions. Image stabilisation would be a standard feature.

As well as conventional TV-like pictures, a possible viewing option would be to show optically detected objects as bright points either on a graduated bearing line or circle.

Selection of any indicated object would generate a close-up view to help identification and give an accurate bearing measurement.

Such a system would allow the quick and easy correlation with radar, AIS and ENC data and even permit semi or fully automatic checks on own-ship's position when used on charted objects.

In poor optical conditions the system could be set such that it supplements the view from the bridge windows, using its night-time and infrared facilities to gain additional viewing range.

The possibilities of using more advanced optical technology seem immense, but they

appear to have been generally ignored by the maritime community.

Advanced radar technology

When visibility decreases the raw optical data deteriorates, eventually becoming of virtually zero value – total reliance on radar and AIS becomes necessary. The ensuing conduct of the vessel obviously has to take this into account.

A modern radar is highly sophisticated. However, the performance of a good mag-

netron based system.

It allows the transmitter to be transistor based, which is compatible with the transmission of the complex and highly controlled modulation needed on each transmitted pulse.

On reception a demodulation process, known as pulse compression, effectively generates a very short equivalent pulse with increased energy.

Perhaps surprisingly, the whole process is very similar to that used in modern digital telecommunications. This is what has made the necessary components available at an affordable cost, at least currently at S-band.

Affordable X-band radars will undoubtedly also be available in the not-too-distant future.

Doppler processing

It is the coherency of the signal that gives such radars the possibility to exploit the highly useful target radial velocity data – its Doppler shift – which is not discernible by a conventional magnetron radar.

By using sophisticated signal processing techniques this information can be used to better extract targets from clutter because of their dissimilar Doppler characteristics.

Today's marine coherent radar systems are likely already to give better detection in clutter, but significant improvements can undoubtedly be made in the future as signal processing becomes ever more powerful.

It will almost certainly result in future coherent marine radars that are able to consistently detect all targets of interest, including very small craft and floating debris, even under adverse weather conditions.

This surely is the true user requirement for radar, which we should strive to achieve.

When this level of development is realised, radar should then become the primary source of collision avoidance information, appropriately assisted by AIS and advanced optical systems, with the view from the bridge windows continuing to provide the reality to assist the complete situation awareness of the OOW.

However, despite the inherent Doppler processing possibilities of coherent radar technology, it is extremely difficult to foresee the timescales for IMO radar performance standards to demand such an enhanced clutter performance.

Unfortunately, a radar exhibiting such a performance is unlikely to be a major selling point – end users do not make the purchasing decisions. This puts a damper on further development.

But without better clutter performance being readily demonstrated on affordable systems, further safety-led legislation is hindered – a Catch-22 situation.

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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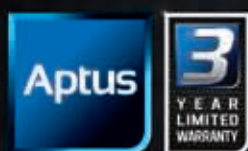
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