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www.thedigitalship.com

Technology can cause costly distractions – London P&I Club

In its latest bulletin, the London P&I Club has warned how the use of modern technologies onboard ship is leading to new claims where ships' officers are being distracted by the latest gadgets

The London P&I Club has warned that improvements in telecommunications technology onboard ships can create unwelcome distractions, leading to casualties.

In its latest StopLoss Bulletin, the club notes that an alleged causative factor in a recent pollution incident involved the duty officer attempting to make a Skype call on his laptop during his watch.

A VDR playback revealed that the officer of the watch (OOW) was listening to a news bulletin from his home country which was being streamed through a laptop computer.

The officer appears to have missed a radar target and a VHF warning call while listening to the breaking news from home.

The club says, "Onboard communication has improved significantly over the last few years, with technological advances enabling crew to use mobile phones and laptops to stay in contact with family and friends ashore. However, the use of such equipment at inappropriate moments may distract crew from the navigation or operation of the ship."

"Another issue is the risk of being exposed to excessive information and simply being unable to process it all. Bridge equipment is increasingly sophisticated and it can provide the crew with access to extensive information regarding the relative positions of other ships."

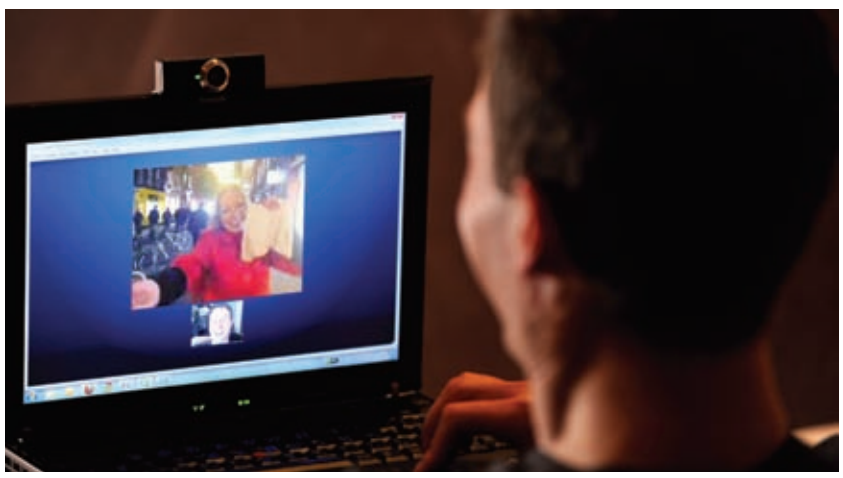
"But, unless it is used in a focused manner, it can confuse, rather than clarify, and ultimately prove counter-productive."

In another case cited by the club, the OOW decided to use the Automatic Radar Plotting Aid to track 99 different ships whilst transiting a congested anchorage and to overlay the radar image with Automatic Identification System data.

With so much information being displayed, he failed to notice that one of the targets had both a minimal closest point of approach (CPA) and time to CPA and, ultimately, there was a collision.

The club says, "It is worth giving careful thought to how such equipment can best be used without risking information overload."

"An important principle of keeping a safe navigational watch is that the OOW ensures that an efficient look-out is maintained at all times and the Collision Regulations are complied with. It is therefore essential that any distractions from those duties are as far as possible minimised or eliminated."



An alleged causative factor in a recent incident involved the duty officer using Skype during his watch

Chart problems

This latest communication from London P&I is not the first time the club has expressed its misgivings about how the use of technology in modern shipping can lead to undesirable consequences.

In a 2010 edition of its StopLoss Bulletin the Club highlighted a variety of incidents it had encountered where

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navigators had been using incorrect and out-of-date chart data, citing this issue as a contributing factor in a number of claim cases.

One of the incidents described in that bulletin relates to a claim made by a telecommunications company which had alleged that a submarine cable had been damaged by a ship's anchor.

The report says, "The first assumption was that, if the anchor had contacted the cable, then it must have been because it was dragging and the ship had not been able to recover the anchor in due time."

"However, the Club-appointed surveyor quickly established that the ship had, in fact, anchored directly over the cable but that the bridge team had been completely unaware of the hazard beneath them. The surveyor identified that the ship had used an old edition of the chart, which predated the laying of the cable."

"Apparently, on preparing the passage plan, the second officer had not checked that he had the current edition of the chart."

Another case featured a ship which had been damaged as it struck a hazardous wreck.

Investigators of the incident subsequently discovered that the current edition of the chart was in use but that it had not been properly corrected – even though a chart correction displaying the wreck had been issued approximately three years previously.

Sadly, as regular readers of *Digital Ship* will be aware, incidents and accidents where improper or incompetent use of technology is cited as a contributing factor are all too common.

The tools that are available no doubt have the potential to significantly enhance safety and efficiency in the shipping industry – be they advances in communications, electronic navigation or sophisticated software applications – but it is clear that these systems are not 'foolproof'.

Training, company policies and procedures, and continued vigilance all play a major part in ensuring that these technologies act as 'aids' to living and working onboard ship – and not as distractions that will have the opposite effect. DS

New Ku-band VSAT antenna from MT

www.marine-technologies.com

Marine Technologies (MT) has introduced its newest Ku-band VSAT antenna,the MT-BB100, which features a redesigned parabolic dish and feed and incorporates computer simulation software used in the aerospace industry.

Building on the technology of the previous BB90 version, the MT-BB100 gathers locking information from an internal tuner, the satellite modem and the AGC (automatic gain control) level.

The antenna is constructed of carbon fibre and weighs less than 55 kg, and is designed to minimise stress on belts and motors for extended operational life and minimum maintenance.

MT also says that the carbon fibre construction makes the antenna immune to salt, oxidation, thermal excursions and humidity.

The company also claims that this new antenna is one of the first VSAT antennas in the world to be constructed with all electronic components integrated into the dome, including the modem.

It comes pre-commissioned from Marine Technologies and is ready to connect automatically to the satellite network without the help of specialised technicians.

The MT-BB100 configuration interface is entirely web-based and can be accessed locally or remotely through the satellite link or other backup connections. Reconfiguring the antenna for deployment on different missions can be done remotely, without the need for a local technician.

The antenna is OpenAMIP certified and offers automatic beam switching (ABS), selecting the best satellite source for the coverage area. Dual antenna configuration is supported as well, using an additional intelligent switchbox.

This component provides hitless switching between same type or different manufacturer antennas using a switching logic that can be configured by shadow areas or signal level.

MT says that no network loss should be noticed by the customer during switching events.

MT also claims that the MT-BB100 is the only antenna currently on the market equipped with an embedded computer alerting the user of signal downtime caused by heavy rain, vessel position, lack of power or sea status.

The antenna remote controller unit (ARCU) chooses the best available medium for data transfer, and acts as a satellite backup or out-of-bandwidth maintenance link integrating a 3G UMTS (Universal Mobile Telecommunications System) modem with a multi-SIM card reader and a WiFi module with diversity antennas.

Downtime information is stored in an onboard log that is available locally or remotely via a web interface. The system also informs the NOC (network operations centre) of any downtime. NOC operators can be notified via an SMS (short message service) message via the cellular network.

MT's carbon fibre antenna weighs less than 55kg

Diagnostics, of either a single antenna or the entire fleet, is available via a web-based server that collects real-time and historical performance data from all ships. Event logging and remote diagnostics are documented automatically by the ARCU which sends a short report to the NOC every five minutes, along with a complete event log each day.

Other existing functions carried over from the BB90 include the ability to switch the LNB (low noise block-down converter) between co-polar and cross-polar modes, wideband and narrowband tuners, or ABS.

The internal tuner has been upgraded to DVB-S2 (Digital Video Broadcasting – Satellite – Second Generation) and is capable of coherent locking to a tracking carrier or monitoring the AGC level.

The MT-BB100 is compliant with standards required by satellite operators Anatel, Intelsat and Eutelsat.

Customer network management from Harris CapRock

www.harriscaprock.com/assuredcare

Harris CapRock Communications reports that it has finalised development of AssuredCare, its customer service and network management programme.

The AssuredCare programme will allow Harris CapRock customers to have improved real-time visibility into their global communications through a combination of customer service personnel, a support infrastructure, proactive monitoring systems and a customer portal.

The company says that AssuredCare integrates best practices and capabilities from the four organisations combined to form Harris CapRock in April 2011.

"While the particulars of customer missions vary across the three vertical markets Harris CapRock serves – energy, government and maritime – we consistently hear one need: customers must have confidence in their communications so they can stay focused on their core missions," said Tom Eaton, president, Harris CapRock Communications.

"AssuredCare provides field-deployed personnel and headquarter offices with complete peace of mind in their remote communications, making it an extension of Harris CapRock's mission to be the industry's most trusted communications provider."

Harris CapRock notes that customers will also benefit from network optimisation services under the programme, including network performance diagnostics, in-depth recommendations and implementation of performance optimisations.

A monitoring system is used to automatically detect more than 80 per cent of potential network issues for immediate resolution, while the customer portal combines various management systems and operational tools to provide near real-time visibility for users of the service.

The portal provides a single point of access to these various tools, as well as automatic notifications.

Live testing of the programme began with selected customers in October, and Harris Caprock says it is now working to port all customers' services over to the expanded system ahead of an official launch for all customers in the first quarter of 2012.

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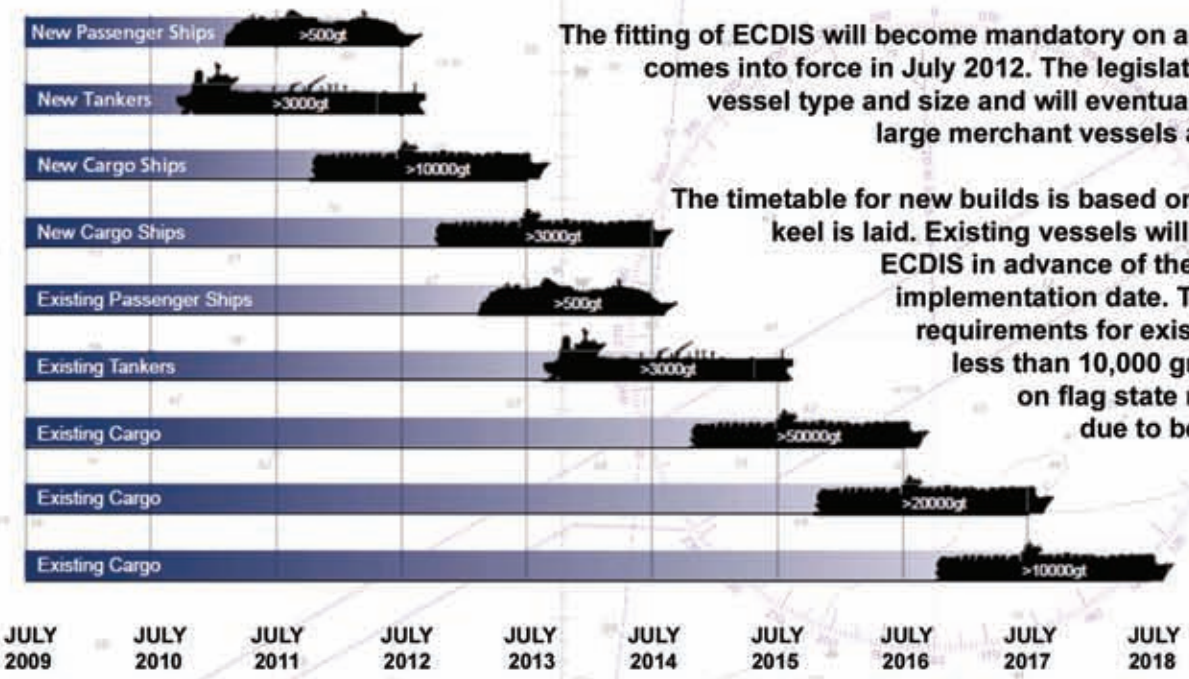

The fitting of ECDIS will become mandatory on a rolling timetable that comes into force in July 2012. The legislation will be phased by vessel type and size and will eventually apply to almost all large merchant vessels and passenger ships.

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

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Sea Tel introduces Global Xpress antenna and new FB line

www.cobham.com

Sea Tel has made two significant new announcements, introducing its Ku- to Ka-band upgradable antenna, the first approved antenna for use with Inmarsat's forthcoming Global Xpress (GX) service, while also launching a range of FleetBroadband antennas.

The Sea Tel Model 4012, a one metre Ku-band to Ka-band upgradable marine-stabilised antenna system, is now expected to be available ahead of schedule, with sales set to commence during the first quarter of 2012.

Cobham (Sea Tel's parent company) says it will be beta testing the product during the fourth quarter of 2011.

Based on the Sea Tel 4009 antenna pedestal, the company says that the Model 4012 system will be GX ready at launch, with a "simple and intuitive" Ku- to Ka-upgrade path that can be performed in the field in one or two steps by a Cobham trained technician.

The Model 4012 architecture is being designed for one-step commissioning, using a web user interface with secured socket layer (SSL) password protection, built-in remote management capabilities, and integration into network management systems through a media exchange point (MXP).

"I am confident that the Model 4012 will be the next industry standard just as the 4009 antenna system is today," said Fred Cahill, vice president of Cobham Antenna Systems.

Model 4012 will be upgradeable to Ka-band when Global Xpress is launched

"The 4012 will have the mechanical superiority of the 4009, easy to use web user interface and monolithic software architecture. The system will also be field upgradable to the Global Xpress network."

On the FleetBroadband side, Cobham has announced plans to have a Sea Tel FX line of FleetBroadband products available in March 2012.

The Sea Tel FX line will consist of a complete range of FleetBroadband terminals, with the Sea Tel FX 500 being the first to enter the market, followed by the FX 250 and FX 150 in due course.

The addition of this line of FleetBroadband products to its VSAT portfolio will also allow Sea Tel to offer all of the hardware for Ku-band and L-band hybrid services, as well as Global Xpress and L-band solutions in the future.

The company says that the combined offering of both systems will be made available through accredited dealers for Sea Tel's products.

"The unique combination of Cobham's unrivalled expertise in building best antenna systems, together with Inmarsat's undoubted leadership in the global maritime L-band sector, brings a strong value proposition to the world's maritime and shipping markets," said Mr Cahill.

"We were a key hardware provider at the inception of Inmarsat in 1979 with our Sea Tel products and the new FX product line marks Cobham's continued development in this extensive market. This is an exciting development, in particular because it enables maritime customers to harness the full range of service opportunities offered by Inmarsat."

Addvalue Technologies' wholly-owned subsidiary, Addvalue Innovation, has been selected by Sea Tel for the design and supply of the FX FleetBroadband line.

Sea Tel's FleetBroadband line will be used to supplement its VSAT antennas

Otesat launches s@tGate

www.otesat-maritel.com

Otesat-Maritel has introduced its s@tGate service, for management and optimisation of maritime broadband data for both business and crew usage.

Otesat is a provider of Inmarsat, Iridium and VSAT services, and s@tGate can be used to control usage of all of these systems onboard.

The service includes s@tGate hardware, specifically developed for maritime use, and a web interface for remote and onboard management.

Other features of the service include crew pre-paid and operational post-paid internet access, data compression and caching and a single rate plan for business and crew.

The service is provided via Otesat-Maritel's network, meaning that a hub is not required at the customer's premises.

Installation and configuration includes the creation of user accounts, which can be refilled with vouchers. These accounts can also migrate from vessel to vessel within the same fleet, and units can be transferred from user account to user account.

One Horizon Group subsidiary **SatCom Global** has added a point of presence (PoP) in Sydney, Australia, which will enable customers to terminate Inmarsat FleetBroadband IP traffic locally and reduce both latency and cost.

Orange Business Services has been certified as a Silver Partner under **Inmarsat's** Connect Accreditation Programme. Silver-level service providers are required to pass examinations to test knowledge of the Inmarsat network and services, as well as related hardware and telecom technologies.

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www.orange-business.com
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iCGlobal – worldwide C-band VSAT for $3,300 p/month

www.telemargroup.com
www.orbit-cs.com
www.milanoteleport.com

Telemar, in partnership with antenna manufacturer Orbit Communication Systems and Milano Teleport, has announced the launch of its new iCGlobal C-band VSAT service.

The service includes Orbit's compact OrBand C-band VSAT antenna and other necessary equipment as part of a recommended package that features unlimited global airtime with a committed information rate (CIR) of 128kbps at a cost of $3,300 per month.

The OrBand antenna is designed to be significantly smaller than traditional maritime C-band services, with the companies saying that it takes up 40 per cent less deck space than industry-standard models, and is over 30 per cent lighter.

The equipment can be shipped as a single, fully assembled and tested unit in a standard 20-foot container, to reduce installation time and allow the system to be connected while ships are on routine port calls rather than waiting for dry dock.

"iCGlobal is available in a wide range of pricing models and leasing packages which render it highly competitive in pricing while providing unlimited capacity, committed information rate (CIR) and superior performance than solutions such as hybrid Ku/FBB and future Ka," said Giorgio Santantonio, general manager of Telemar Compagnia Generale.

"With this solution, ocean-going vessels can achieve true global connectivity today, and rest assured that the quality of service will be constant anywhere and under any weather."

Chinese Petroleum subsidiary continues VSAT rollout

www.marlink.com

Chinese National Petroleum Cooperation subsidiary, BGP, is rolling out VSAT communications systems from Marlink for its fleet of seismic vessels.

The latest vessel to join the fleet is the 100m BGP Prospector, recently delivered from a Korean shipyard and equipped with Marlink's Sealink C-Band, SCPC VSAT.

The BGP Prospector has a 1 MB full duplex dedicated satellite communication service, which will be used to support a range of applications on board.

BGP operates seismic vessels on a global basis, providing marine seismic data acquisition services. The vessels are operating in the Gulf of Mexico, South America, West Africa, the North Sea, the Red Sea, the Bay of Bengal and South-East Asia.

"Our long term relationship with BGP is testament to our position as the premier provider of high quality and cost effective services, backed by local customer support and a commitment to our important region," said Gunnar Valle, director for Marlink in Asia.

"Marlink has a dedicated sales and service team based in Singapore which is likely to expand further in support of our growing customer base in Asia. By offering a comprehensive portfolio of both VSAT and MSS solutions, Marlink is able to satisfy any customer requirement for connectivity by customising a service package to satisfy specific vessel needs."

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Globecomm launches combined Ku/L-band package

www.globecommsystems.com/maritime

Globecomm Maritime has launched se@FLEX, a new maritime VSAT package combining Ku-band coverage with L-band back-up services, while also announcing the first customer for the service, Global Seatrade, a unit of the Hartman Marine Group.

se@FLEX is a combination of services from the Globecomm Maritime companies Telaurus, Evosat, C2C and Mach6, and is offered using flat rate monthly pricing, with options including hardware leasing and unlimited Ku-band usage and L-band airtime starting at US$2,850 per month.

The se@FLEX service will manage automatic switching between Ku-band beams and L-band services.

Global Seatrade's vessel Atlantic will be one of the ships to implement the new service

Globecomm also notes that se@FLEX will include options to convert to Ka-band service platforms as they become available in the future.

"We think that se@FLEX has the capability to be a game-changer in the maritime market, which is moving progressively towards higher bandwidth VSAT solutions," said Malcolm McMaster, VP Globecomm Maritime.

"With a high quality global Ku-band service at its core, se@FLEX offers the best available coverage and throughput speeds at very competitive prices. Globecomm Maritime offers guaranteed service levels and dedicated bandwidth, delivering our customers significant long term cost savings."

Global Seatrade's implementation of the service includes QOS systems to prioritise mission-critical traffic, ensuring that vessel management, navigation and safety applications get priority over crew welfare communications.

It also supports VoIP, which Globecomm says will significantly lower voice costs compared with legacy maritime voice solutions.

ITC completes Broadpoint acquisition

www.itcglobal.net
www.broadpointinc.com

ITC Global (ITC) has announced it has successfully completed the acquisition of the satellite operations of Broadpoint LLC.

ITC manages a global VSAT network across approximately 25 satellite beams and nine teleports. Broadpoint customers will now be able to access ITC's worldwide service, technology advisors and managed support.

Broadpoint will retain its core cellular telecommunications business, which operates a cellular voice and data network in the Gulf of Mexico.

"Acquiring Broadpoint supports our strategy of enhancing our already strong presence in the global resource segment," said Joseph Spytek, ITC Global's chief executive officer.

"The combination of Broadpoint's satellite business and ITC Global provides oil & gas companies with a high-performance solution that can scale with their business to address critical communications needs."

Fleet-wide FleetBroadband deal for Sandigan

www.stratosglobal.com

Sandigan Ship Services is to deploy the Inmarsat FleetBroadband satellite communications service across its fleet of commercial vessels, following the agreement of a deal with Stratos.

Based in The Philippines, Sandigan manages a global fleet that includes bulk carriers and car carriers. Stratos says it has already provided FleetBroadband on 12 Sandigan vessels, and that deployment on the remainder of the fleet is expected to be completed by the end of this year.

This deployment for Sandigan includes Stratos Advantage value-added services to manage FleetBroadband performance, security and cost control, as well as online invoicing and firewall management.

"FleetBroadband from Stratos is meeting our high expectations by enabling us to achieve faster data transmission and better voice quality than the systems we previously used – at a lower cost," said Sandigan president, Capt. Tomoyoshi Yanagita.

"The service has increased the performance of many of the IP-based applications on which we depend. This has enabled us to improve business management."

"Stratos provided a comprehensive approach to this deployment. Their Singapore support team analysed our data traffic and provided a range of options. They patiently helped us reduce communications costs and improve the performance of critical applications such as BASSnet, our planned maintenance software."

In other news, Stratos Government Services (SGSI) and Segovia, both wholly owned subsidiaries of Inmarsat, have been awarded a new contract by the US Navy.

The Indefinite Delivery/Indefinite Quantity contract by the Defense Information Technology Contracting Organisation (DITCO) is for the US Navy Military Sealift Command's (MSC) Next Generation Wideband (NGW) commercial satellite communications (COMSATCOM) infrastructure and service.

MSC operates approximately 110 non-combatant civilian-crewed ships that replenish US Navy ships, conduct specialised missions, strategically preposition combat cargo at sea around the world, and move military cargo and supplies used by deployed US forces and coalition partners.

The contract, with a $315 million ceiling price, replaces the MSC's Afloat Bandwidth Efficient Satellite Transport (BEST) COMSATCOM infrastructure. The eight-year period of performance includes a four-year base period plus four one-year option periods.

To meet the requirements of the MSC contract, SGSI and Segovia joined forces to develop a solution that supports a Commercial-Off-The-Shelf (COTS)-based NGW system.

SGSI and Segovia services create an end-to-end IP communications pathway linking globally deployed MSC ships and assets.

The pathway includes space-segment services, satellite infrastructure, shipboard terminal hardware, supporting software, and a terrestrial-backhaul infrastructure for redundant global connectivity.

The SGSI/Segovia solution also includes worldwide installation and sustainment services for the MSC fleet.

"This award demonstrates the ability of SGSI and Segovia to effectively combine their considerable strengths to meet the complex communications requirements of one of the US Government's most important organisations," said SGSI president and CEO Bob Roe.

"This network will improve the capabilities of MSC to support our troops by delivering supplies and conducting specialised missions across the world's oceans."

'Anomaly' reported on Globalstar satellites

www.globalstar.com

Globalstar has reported that a number of the 12 second-generation satellites it launched in July 2011 and October 2010 have experienced in-orbit anomalies associated with their momentum wheels, while also announcing that its scheduled launches in December 2011 may be delayed.

The company acknowledged the issue with the momentum wheels in a filing to the US Securities and Exchange Comission, noting that it is currently working with the satellite manufacturers Thales Alenia Space to develop a solution to the problem.

However, Globalstar has said that it cannot guarantee that a successful solution will be found, and that "one or more satellites may not provide reliable service going forward."

Globalstar's second-generation satellites were designed with four momentum wheels, with the design requiring three functioning momentum wheels for operations and one momentum wheel for redundancy (a non-operating wheel acting as a spare on the satellite in space). Momentum wheels are flywheels used to provide attitude control and stability on spacecraft.

The company reports that one of the six second-generation satellites launched in October 2010 has experienced an in-orbit anomaly associated with its momentum wheels. In July 2011, the spare wheel also experienced a similar anomaly, which then required the company to place the satellite into a 'safe hold' mode.

In this mode the satellite remains stable in its operational orbit while a potential solution, involving a firmware update, is developed. This satellite is not currently providing communication services.

In October 2011, Thales informed Globalstar that it had identified further momentum wheel issues that could impact the six second-generation satellites launched in July 2011 and the six satellites launched in October 2010.

One additional second-generation satellite launched in October 2010 has experienced a similar anomaly, but is currently providing full communication services. Globalstar says that additional satellites in the first batch of six satellites could also be impacted by a similar anomaly.

The two companies are working together to develop a software solution that will allow the satellites to operate with two momentum wheels instead of the designed three. If they are unable to develop and implement a solution to resolve these anomalies it could mean that the satellites will no longer be capable of providing communication services.

Globalstar also warns that, even if a solution can be developed, it can provide no assurance that this would allow the satellites with only two functioning momentum wheels to provide full communication service over their designed 15-year life.

On the launch side, the remaining two launches of six satellites to complete the network of 24 second-generation satellites had already been previously delayed due to issues with the Soyuz launch vehicle and rescheduled to resume in December 2011.

However, Globalstar says that these launch dates may now change, partly due to the continued review of the momentum wheel issue.

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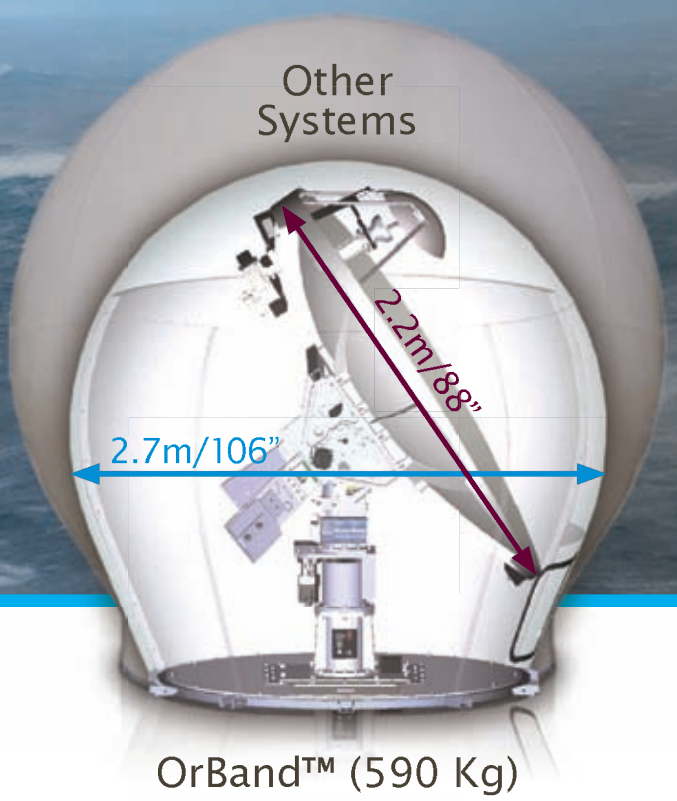

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Expansion for GlobeMobile and iFusion

www.globewireless.com

Globe Wireless has announced the completion of the 500th Globe iFusion installation, for German shipping company E.R. Schiffahrt, while its GlobeMobile GSM solution has surpassed 800 installations.

In September 2010, Globe Wireless released and started installing Globe iFusion, a single box that incorporates an Inmarsat FleetBroadband 250, a dual firewall, optimised IP connections, onboard GSM equipment, internet browsing capabilities and multiple least cost satellite gateways.

"We are honoured to be the 500th installation of the Globe iFusion. Globe iFusion has so far met all of our requirements and provides an extremely unique crew solution based on GSM technology," said Roland Felbinger, nautical senior superintendent with E.R. Schiffahrt.

"In addition, Globe iFusion has lowered our cost and gives us the ability to remotely support shipboard IT systems."

The system provides crew members prepaid access to voice and SMS messages from mobile phones as well as e-mail from shipboard computers, and includes a Globe iPortal which offers shore side control of the solution, with administration of user profiles and the other various aspects of the solution.

"I am very pleased with the success of the Globe iFusion rollout," commented Dave Kagan, president of Globe Wireless.

"The level and functionality and ease of installation of Globe iFusion is far superior to what standalone terminals can offer. We are proud to have E.R. Schiffahrt, one of the leading shipping companies in the world, using Globe iFusion as their primary communication system."

The GSM component of the iFusion system, marketed as GlobeMobile, has also enjoyed significant standalone success, with Globe Wireless recently announcing the 800th installation of the onboard GSM solution.

GlobeMobile, launched in 2009, only requires crews to insert the GlobeMobile SIM card into their GSM phone to connect to the service onboard.

The GSM system is built on technology developed by Zynetix, a UK-based firm which originally provided services as a Globe Wireless partner before being acquired by Globe at the beginning of 2010.

At the time of the introduction of iFusion, Globe had indicated pricing for the GSM services of $0.25 for SMS, $0.55 per minute for GSM voice (to landlines), and $5.50 per megabyte for e-mail.

Free onboard mobile to mobile calls are supported, as are multiple voice lines over the FleetBroadband terminal (though Globe notes that iFusion can also be used with VSAT and Iridium OpenPort terminals).

"I am very pleased with our success of being able to provide a high quality voice solution with inexpensive calling rates for GSM users onboard the ship," said Mr Kagan.

"We understand how important it is for crew members to communicate back home and look forward to continuing with the installation and expansion of our affordable GlobeMobile GSM solution."

Intelsat C-/Ku-band satellite completes testing

www.intelsat.com

Orbital Sciences Corporation reports that the Intelsat 18 satellite has completed its in-orbit testing and has been handed over to Intelsat for operation.

Intelsat 18 is to be operated at 180 degrees East longitude, where it will provide C-band communications services to eastern Asia, the Pacific and the western United States, and Ku-band communications services to French Polynesia, New Caledonia, eastern Australia and the United States.

Intelsat 18 was launched aboard a Zenit rocket from the Baikonour Cosmodrome in Kazakhstan in early October. A team of Intelsat and Orbital engineers have since conducted several weeks of orbit raising and testing operations to prepare the spacecraft for commercial service.

"We are very pleased with how smoothly the post-launch operations of Intelsat 18 proceeded," said Christopher Richmond, Orbital's senior vice president of its Space Systems Group.

"We have now turned over full operational control of the satellite to Intelsat and stand ready to support their operations over the next 15 years. We are also continuing production and testing of Intelsat 23, the tenth Orbital-built satellite that will join the Intelsat fleet in 2012."

Orbital designed, built and tested the Intelsat 18 satellite at Orbital's satellite manufacturing and test facility in Dulles, US. It carries a hybrid C- and Ku-band payload.

Orbital has handed over control of Intelsat 18 after completing testing

Star Cruises introduces wireless onboard

www.cellularatsea.com

Wireless Maritime Services (WMS) has agreed a deal to provide wireless services onboard Star Cruises' ships in Asia.

The multi-year agreement between the two companies will cover cellular wireless services for guests and crew members on the SuperStar Virgo, SuperStar Libra, SuperStar Aquarius and Star Pisces.

Passengers and crews on SuperStar Aquarius can already use the new technology to make and receive telephone calls, send text messages, access e-mails and surf the internet at rates WMS describes as "similar to international roaming." The service will be rolled out gradually on the other three vessels.

WMS services allow those onboard to use their mobile phones as they currently do on land while the ships are at sea. Connectivity is activated when the ship leaves port and turned off when in range of land-based providers.

"We are pleased to work together with Wireless Maritime Services to provide quality mobile services for our cruise passengers and ship crews," said Kenny Ng, senior vice president, information technology, Genting Hong Kong.

"As a leading cruise line in Asia Pacific, Star Cruises continues to enrich our passengers' cruising experience with value-adding technologies as well as new travel products."

Thrane terminals to offer new Inmarsat FB services

www.thrane.com

Thrane & Thrane has announced that two new Inmarsat service enhancements for FleetBroadband, the Multi-Voice Service and the Dynamic Telemetry Service, will be available on SAILOR FleetBroadband terminals when the services go live in Q1 and Q2 2012.

The new Inmarsat FleetBroadband Multi-Voice Service provides facility for up to nine simultaneous voice lines on a SAILOR 500 or SAILOR 250 FleetBroadband, while a SAILOR 150 FleetBroadband can offer up to four concurrent calls.

Each line will have its own unique FleetBroadband number (+870).

This new functionality will be available on existing SAILOR FleetBroadband terminals via a firmware upgrade and will be fully functional in all new terminals.

Due to built in PBX functionality, the SAILOR FleetBroadband terminals don't require integration with an external IPPBX to enable the Multi-Voice Service. All users need to do is to configure their FleetBroadband terminal and attach a Thrane IP Handset, or, if desired, connect an existing PBX.

The Dynamic Telemetry Service (DTS) is used to provide support for low throughput applications of any type, such as Data Reporting, Polling and Telemetry, and will similarly be available on all new SAILOR FleetBroadband terminals out of the box and through a firmware upgrade for existing terminals.

DTS is expected to offer a range of new opportunities for remote (shore-ship) monitoring and control of systems onboard a vessel, as well as various tracking applications.

"These exciting new services are major enhancements to FleetBroadband so we are committed to making them available on SAILOR FleetBroadband from the moment they go live," says Casper Jensen, VP maritime business unit, Thrane & Thrane.

"With over 20,000 terminals shipped so far, there will be a lot of users out there keen to bring multi-voice and DTS into daily operation, and with SAILOR FleetBroadband it will be a straightforward, cost-effective process."

In other news, Thrane & Thrane and Comtech EF Data Corporation have also announced the successful completion of interoperability testing of Thrane's SAILOR 900 Ku-band VSAT marine stabilised antenna systems and Comtech's ROSS Open Antenna Management (ROAM) protocol.

The use of the ROAM protocol is intended to help the VSAT antenna systems to globally roam across multiple satellite beams when operating on maritime vessels, maintaining connectivity while moving through different satellite footprints.

The ROAM protocol offers a common management interface for Comtech EF Data's Roaming Oceanic Satellite Server (ROSS) and third-party Antenna Control Units (ACUs) by providing a generic set of commands, information, interfaces and status queries. ROSS is an integrated location server that works in conjunction with Comtech EF Data's Vipersat Management System.

ROSS additionally enables remote modems to interface with stabilised, autotracking antennae, monitoring vessel position data, satellite signal and management status to determine when satellite handoff is necessary.

"The interoperability of the ROAM protocol and ROSS automation with the SAILOR 900 VSAT will provide maximum bandwidth efficiencies and roaming capabilities for maritime operators' satellite-based communications," said Daniel Enns, senior vice president strategic marketing and business development for Comtech EF Data.

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Reducing Complexity is Key – Round Table Discussion

How do shipping companies use satellite communication to improve their operational efficiency, what impact does the implementation of FleetBroadband or VSAT have on the wellbeing of sea staff, and will Inmarsat's new offer, Global Xpress, solve the challenges created by increasing technology onboard ships? These topics were addressed at a round table discussion that *Digital Ship* recently held in Hamburg, Germany

The latest *Digital Ship* round table discussion session titled 'Increasing Operational Efficiency through Satellite Communication', hosted by Inmarsat in Hamburg, Germany, brought together a panel of seven shipping company and communication supplier experts.

The aim of the session was to examine how shipping companies make use of satellite communication in order to boost improvements in vessel operations and increase efficiency, as well as to illuminate how satcom contributes to the safety and wellbeing of seagoing staff. A further key topic was whether more bandwidth is what shipping companies need from the suppliers in order to improve their efficiency, or do they require something different.

Digital Ship posed a number of specific questions to the panel (identified in the table below), starting with a look at how well the industry is taking advantage of the latest current available technology in maritime communications.

A major part of the discussion revolved around the question of how crew welfare and crew retention is influenced by the implementation of satellite communication and how the discrepancy in availability of communication options could be balanced between high and low bandwidth vessels. The debate then moved on to the challenges that the implementation of satellite communication entails and different methods of resolving those issues. The round table was eventually concluded with an outlook of what shipping companies will ask from satellite communication providers in the future and how these suppliers are positioned to fulfil their customers' expectations.

Satcom enabled apps

DS: What modern, satcom supported technology does your company use today to make its operations more efficient?

MD: We use satellite communications, which include VSAT as well as Fleet and FleetBroadband systems for private communication (telephone, email, internet, chat, video streaming) and for official communication (email, reporting, order management, maintenance, troubleshooting etc).

As well as updates for nautical publications, antivirus software and weather forecast systems are sent by satcom via ChartCo or competitors and by email. Soon we will also start to transfer daily updates from the onboard maintenance software to the company's head office.

We do use remote management as well. However, we use remote management only on vessels equipped with a VSAT system and usually only to administrate all admin PCs onboard. Remote management is also used for any kind of troubleshooting as well as the usual updates.

DS: Does modern satcom provide information to help sail the ships more efficiently, like live weather data for example?

MD: We do use satcom provided information for weather routing and respective forecasts; we use ChartCo via Fleet 77 and ChartCo-select via FleetBroadband.

This enables the crew to view the weather for a whole Ocean region; the exact area can be defined in the onboard system.

In the beginning we had troubles when using the ChartCo-email option as we could not provide the emails to the vessel properly and very often data was missing.

Now we use the ChartCo receiver and internet solution ChartCo Select, which works reliably and offers on top an email support service in case problems will arise.

DS: Is real time data something that is important to you? What about video?

MD: I believe that, at the moment, real-time data is overestimated; especially when it comes to the instant exchange of emails.

On the contrary, I try to encourage the captains to store mails until there is a greater package and a bigger amount of messages to be sent. In this way the mail exchanges are reduced to three up to five times a day and not every 15 minutes. This way we could reduce the cost up to 25 per cent.

The panel of seven shipping company and communication supplier experts debate Digital Ship's questions

On vessels with VSAT equipment shorter video streams are provided in regular intervals. Otherwise video does not play a role at the moment, but for sure the future will bring changes and video might be used for maintenance or medical purposes. The whole development is of course always a consideration between costs and resulting benefit.

Inmarsat made a clever move, when changing the increments to a minimum of 10 seconds, which was increasing the observable costs in our fleet; we're talking about five digits each year!

HH: Video is nowadays used for medical incidents. However, a medical emergency occurs very seldom. Because very often you are sailing close to the coast, having a lot of ports or a helicopter can pick up the person who has an accident, or who is ill. It is not so often that we make an appendix operation onboard.

DS: Has the implementation of modern satcom helped your company to save on travel costs?

MD: We are permanently monitoring and comparing the communication costs and of course we are trying to save costs as far as possible and in view of the functional and commercial benefit.

Until now the travel costs have not been reduced recently due to the implementation and improvement of satcom systems. For the IT matters we usually do not fly around the world to solve IT problems.

Every five years the vessels are dry-docked and remain idle, this time is used for the change of the administration computers onboard and to set up the IT system. This cannot be done remotely anyway and ship visits from the IT site will always be necessary!

Even in the past we have not been travelling a lot. We have a standardised IT system with a uniform configuration in order to create as little problems as possible under normal circumstances. All computers have been installed and configured equally on the vessels and 'troublemakers' have been removed or minimised as far as possible.

If a hardware problem occurs, we can always send a new pre-configured computer to the vessel – as a last straw. This will be much cheaper than flying around the world or ordering some onboard service to fix it. For sure other problems may occur, e.g. damaged network cable etc., but even here we send out the parts and a short instruction how to connect and replace the parts.

If we have a larger or more complex problem, which needs to be settled immediately, a lot of communication between ship and shore is required – in this case satcom helps of course.

Who's who: The Panel

The panel consisted of (abbreviations in brackets):

(MD) - Michael Dittmer, **Peter Döhle Schiffahrts-KG**
(RL) - Reinhold Lueppen, **Vizada**
(JC) - James Collett, **Inmarsat**
(LK) - Lars Kroog, **CSW Consulting Group**
(HR - Holger Ritter, **MTN**
(HH) - Heiko Höfer, **Nordic IT**
(DS) - **Digital Ship**

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'Ship visits from the IT site will always be necessary!'
- Michael Dittmer, Peter Döhle Schiffahrts-KG

'Everybody wants broadband communication but not everybody is willing to pay for it'
- Reinhold Lueppen, Vizada

Satcom and crew

DS: To what degree is the implementation of satcom motivated by crew welfare?

MD: Crew welfare is an important topic for Peter Döhle. The company is constantly looking for solutions to provide extensive communication options for our crew at competitive costs, thus increasing crew welfare and attractiveness as an employer at the same time.

But the involved costs have to be affordable for both parties, the shipping company and the employee as well. It is much easier to invest more money, if there is a predicable cost saving advantage, which can in the same way optimise the vessel's and company's efficiency.

There is not really a designed and fixed amount which we spend on crew welfare. It depends on the individual basic situations; e.g. kind and trade of the vessel, individual satcom system onboard etc. There is no real amount designed for it in the budget.

DS: Have you found that crew choose their employer according to the communication options they offer?

MD: We had the experience that there are some crew members who prefer vessels with modern satellite communication, but this is by far not all of them.

However, I do not think that crew chooses their employers according to the communication options – yet. But the trend shows that communication options are increasingly important and one day we might well get to a stage where this is an important factor in the recruitment process.

HH: When our customers change from Mini M, where a crew email would cost 60 cent for 2 pages, to FleetBroadband, where a 3 page email costs 8 cent, the communication volume rises dramatically.

Where crew would have sent 50 emails per month before we now have vessels that send up to 700 emails, which is twice as much as the vessel is sending for operations. This shows that the availability of communication options is clearly important for the crew.

HR: Some of our customers, who equip their new builds but not the entire fleet with VSAT see the tendency that crew who changes ship from one with modern satcom to one without, are easily dissatisfied.

This shows clearly that as soon as the crew has had the good experience of being able to use such communication options, they are keen to keep this standard.

Last week at the Cyprus Maritime Conference, John Whitlow from the ITF said, that the integration of social media will become essential in order to motivate and retain young crew. Even Alfons Guinier from the ECSA, representing the ship owners, agreed.

In my opinion, it is not the question of whether or not internet access for crew will become mandatory on vessels; it is a question of how fast this is going to happen. Mandatory internet access will then entail the availability of social media such as Facebook.

Shipping companies who consider themselves to be industry leaders and innovators already provide crew internet today. The companies who don't will, in my opinion, fall behind more and more. In order to stay attractive as employers, shipping companies will have to work on their social media strategies.

MD: Even if crew does not choose the employer according to high bandwidth, there is another potential dilemma.

If on parts of a fleet communication is offered on the basis of a flat rate virtually for free and on other vessels the communication is charged to the crew, this may well instil discontent.

And if this situation prevails over longer time some crewmembers will insist to sail on broadband vessels only.

'Taking out complexity is key'
- James Collett, Inmarsat

DS: What could be ways of solving the discrepancy between satcom equipped vessels and others?

MD: A sensible solution needs to take into account the crew on one hand and the costs for the company on the other. A possible compromise would be to charge the same rate for all crew members on all vessels and to share and equalise the costs internally.

This is unfortunately only an idea, which would be nice for the crew. I did not find a solution how this is possible yet even by the circumstance when more providers are implemented.

I think it is very important to balance these rates for the crew and with this solution the shipping company will not have to pay huge extra amounts.

HR: Resolving this discrepancy is a very important aspect. I would like to compare this to the aviation industry. If you fly today you expect a certain base service, such as a decent meal and something to drink. Therefore, the airline providing this service cannot set themselves apart from the competition.

The passenger only sees the value of base service once he has flown with a low cost airline.

This also holds true for the crew on the vessels. If a shipping company starts offering satcom supported communication options virtually for free the crew will get used to them and take these 'employee benefits' for granted. The crew will then not know the value of the availability of these options anymore.

LK: I see the very same danger. There will be the situation that all crew want to sail the broadband vessels and the motivation to sail the other vessels will be lost.

This has a negative impact on crew morale, which should be avoided. If only a part of the fleet is broadband equipped there has to be a compensation. The compensation could be of financial nature or through the provision of a 'narrowband' solution.

HR: The approach depends on what a shipping company wants to achieve. Amongst our customers we have shipping companies who have the philosophy that crew should get completely free internet access. Teekay is amongst them where the crew does not pay anything.

Other shipping companies regard providing communication options to the crew as an additional employee benefit. They want to be able to track the usage and bill the crew to partly refinance the company's satcom costs.

RL: The airline example is a good one. The important question is why low cost airlines are so successful?

They are so successful because there are enough people who would rather save the money and forego the service because they do not find it worthwhile.

The same principle applies to crew communication in the shipping industry. Everybody wants broadband communication but not everybody is willing to pay for it.

Among our customers we see different kinds of mentalities. There is the 'Teekay' customer who wants Ku-band and offers a flat-fee for the crew.

Then there are others, who do want to offer these possibilities but who do not want to pay for it. They need a solution where communication is possible but the costs can be tracked and the crew charged.

And there is a third group, who does not even want this, because they see the danger of the crew downloading trojans and viruses with the content. These companies stay with older satcom solutions for the moment. They might yet upgrade to a broadband solution but I wouldn't call them early birds.

HR: There is another aspect that needs to be taken into account.

As a provider I would not sell a VSAT solution without discussing security issues with the customer. There must always be a change in the company's IT structure. The ship's network has to change work being done in an ISDN mode to an internet-based mode.

VSAT or broadband in general changes more than just the bandwidth. There are issues such as firewalls, security, user rights, admin etc.

DS: Will higher bandwidth and a growing number of applications change the role of the crew?

RL: The growing number of applications will necessitate crew to acquire new skills.

Under a solution such as Fleet 77 that is technologically not challenging there was no need for IT experienced crew. After a change to FleetBroadband, even if it is not used for complicated applications, it becomes important to have crew onboard who know what they are doing.

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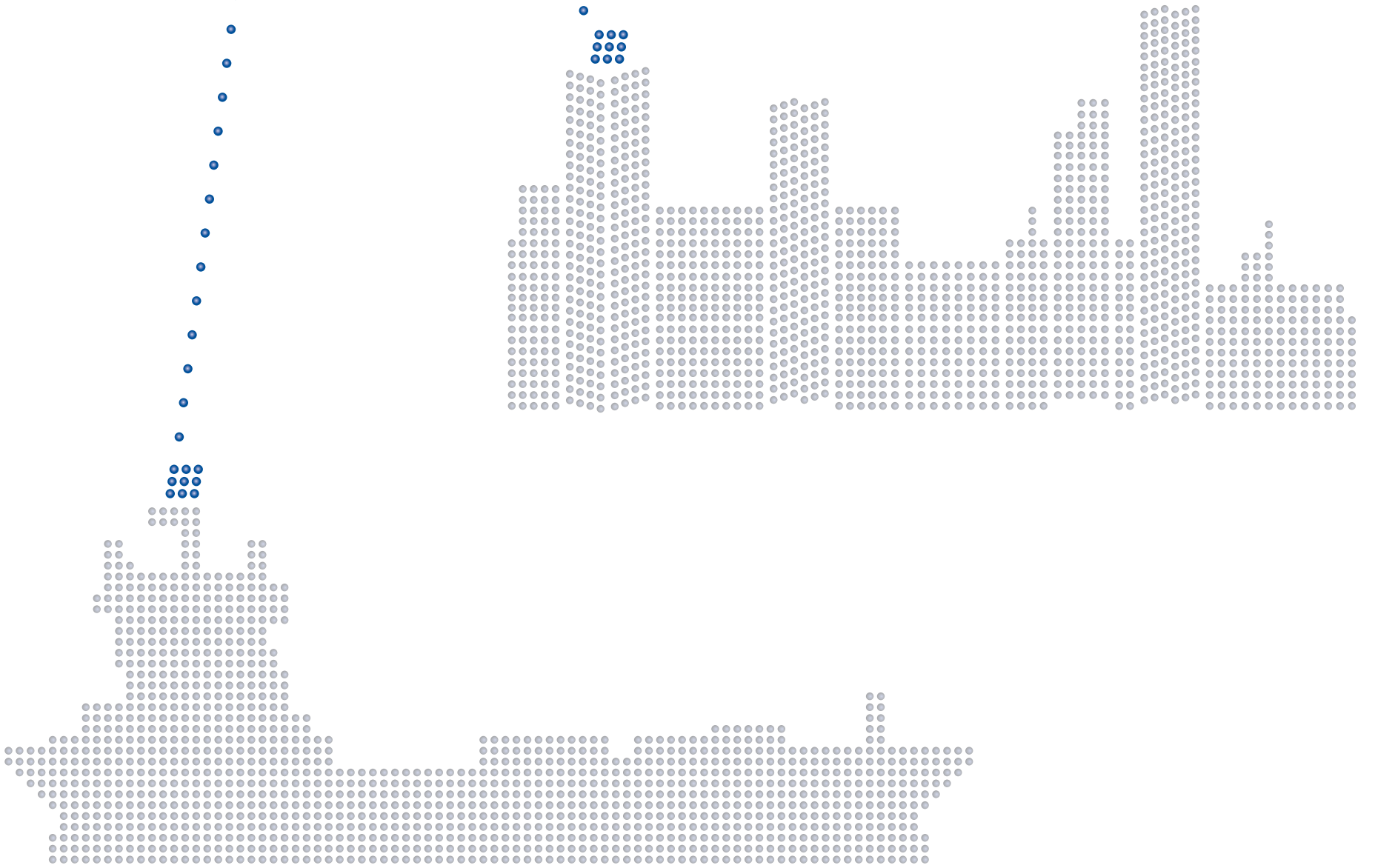

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'We should not forget that the IT onboard is only a small part of sailing the vessel. It is, unluckily or luckily, quite a key position' - Holger Ritter, MTN

For me this explains why there are shipping companies who choose not to implement new satcom. They stay with Fleet and hope they won't need all the IT stuff and choose the crew accordingly, namely crew who is not demanding satcom.

MD: Higher bandwidth allows for a greater number of applications. For these crew need instructions and manuals.

However, many problems onboard are caused by the user itself. Even though the crew is briefed in advance and is equipped with manuals and specific instruction there are incidents where support becomes necessary.

Sometimes, simply the effort to read the manual or the instructions onboard would help and solve the problem.

DS: Is additional IT training, possibly even satcom supported eLearning, a solution? Or is there a tendency to outsource the support?

MD: Presently there is no link between training and satcom. Usually the training is carried out directly onboard by means of classes or eLearning, which is based on a set of CDs/DVDs and respective software.

For the eLearning process we formerly used Seagull and nowadays a training system by Videotel is onboard, which includes different sessions and training topics.

However, we find that for IT related issues eLearning is not the optimal solution. Apart from the difficulty of finding time to complete such training, it would be nearly impossible to create such training sessions because the various systems are not standardised and specific to the shipping company.

This means that every company would need its own eLearning programme for each system. Furthermore, the technology changes very quickly and permanent modifications of the eLearning module will be necessary, which requires a lot work and financial effort.

RL: In the past, the captain knew through his nautical education the most important systems and for everything else he used the telephone.

Nowadays, we have a multitude of different systems on the bridge that the captain has to fix in case of a problem. And the number of different systems is growing. It is impossible for a single person to have the relevant knowledge.

The solution can only be to outsource the support to the supplier who has constructed the individual systems. The shipping company sails a ship and the supplier does the IT.

HR: I recently visited the COSCO Germany with its state-of-the-art bridge, which, the captain told me, has 48 systems from different suppliers. This is on the bridge alone; the engine room has not even been taken into account!

With such a high complexity and diversity of systems, one person, even the captain or chief cannot know all these systems in detail. It follows that he needs decision support from somewhere.

MD: Outsourcing of the support for the growing number of systems and applications is not a solution for us.

Regardless of the way this could be done, there will be extensive costs for this kind of service. Even if the suppliers found a way of doing it, they would try and hand down the additional support costs to the shipping company in one or the other way.

It is not even possible to route support requests through to the individual supplier's support. This is, for various reasons, technically not feasible. We would have huge security issues if we allow remote access to these systems.

The result is: We do not want suppliers to have access to our vessels and we cannot transfer the responsibility of the vessel's systems to someone else.

Challenges through satcom - complexity

DS: How do shipping companies handle the growing number of applications?

MD: Higher bandwidth allows for more applications and new IT adds to the complexity of running a ship. This is therefore something that needs to be considered before investing in new systems. The growing number of applications causes us problems and poses a considerable challenge.

A further complication arises due to the fact, that our crew has had negative experiences with new IT implementations before. This makes them dubious of the serviceability of added applications, which does not make things easier.

The problem is that the crew does not get substantial IT training yet. However, with a high number of different programmes they need to be more and more able to operate the onboard systems and all related applications in their entire complexity.

In order to help with this challenge, we are trying to train the key persons onboard with some briefing in our office before they join the vessel. However, the time we have with them on site is, of course, limited and IT is just one of the modules during the briefing.

The crew's training helps with some of the applications, but since the training is limited, there will often be cases where crew cannot solve a problem that arises. It's these cases that then become time consuming.

The crew will first look at finding a solution themselves. If the crew cannot find a solution onboard they will report the problem back to the office. This is a lengthy process, which results in considerable communication with the company's IT team in the office who try to help solving the issue.

LK: What you said in the beginning was interesting. Does this mean the people are rather afraid of new technology?

Which is a pity, because the new technology should help, but they are afraid of it so there is something that has gone wrong and the question is how do we solve this, to turn this into something where they perceive it as positive?

MD: This is just a summary of experience. Crew has repeatedly experienced trouble with IT in the past. This experience sticks. The IT department will never be able to convince crew that this time everything will go well, even if it does in the end.

Another challenge of growing satcom, that is not to be underestimated, is the impending overload with information. More satcom allows for a higher volume of data and information to be passed on to the vessels.

This makes life for crew more difficult, who are overloaded with information as it is.

For example, satcom allows for all sorts of control systems, which should help the crew. But even when these systems provide a lot of valuable information, the crew is simply unable to process the amount of additional data, due to time restrictions.

There are lots of sensors which are connected to the automation system; sometimes we have even more equipment installed than necessary, there are plenty of installations onboard which should assist the crew to do their job and which supply helpful and useful data.

But it is the crew's job to read the information provided by all the systems to realise what is going on with their main engine. Today we have sensors which tell us everything, but this has to be realised by the crew.

The solution to this dilemma is not more satcom, more applications and more data.

Instead of creating more and more systems, we need to make it easier for the crew to handle the existing ones. Higher bandwidth might work against this.

DS: How do suppliers address this problem of increasing complexity and can satcom also help?

HR: I ask myself the question: with so much technology is crew really able to go through all the parameters, or wouldn't it be better to have dedicated people on shore, which monitor the systems with alerts for specific conditions?

MD: With broadband connectivity a direct remote support would be possible but such a solution would demand a higher manpower in the office to maintain the whole IT system and solve the single problems.

I do not think remote monitoring systems will solve the situation. Even with broadband, we cannot connect every system with our satcom and solve problems remotely.

IT managers are not the service technicians for those 48 different systems. We can only support our PC systems that we have implemented onboard and the respective software solution used.

LK: For me this is a undesirable trend. It seems as though some shipping companies see IT as a kind of threat, because it's adding

'Instead of creating more and more systems, we need to make it easier for the crew to handle the existing ones' - Michael Dittmer, Peter Döhle Schiffahrts-KG

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complexity. But it's not only adding complexity, it's adding efficiency also.

There are certain things shipping companies look at when investing in IT and by optimising these we can help them.

Our clients always look at the cost of new applications first when investing into new systems. There are applications which are needed to run the ship and there are applications which are optimising the ship operations.

We have to emphasise that new IT can pay off quite quickly. Shipping companies need to make a return of investment calculation. And in addition, the companies need to consider if they add a new system that they might need new support.

HH: There is much need for help from the supplier side. Especially when we look at developments in the industry. A lot has changed, if you look back 50 or 20 years ago. There were standalone systems; the ship was operating on its own, not really connected to the shore.

The complexity of the systems has grown so much; I think it is our job to reduce this complexity, by giving crew means to make their lives easier and simpler.

We talked about aviation. How much decision support does the pilot get from the ground?

A lot. A lot more than a captain on a vessel.

And the systems onboard are getting more and more complex from the perspective of the network as more and more systems onboard are based on IP. The solution must be to hide this complexity from the crew onboard so they can do the job.

HR: We should not forget that the IT onboard, the communications onboard, is a small part of the whole shipping. Sailing the vessel, that's the major part. It is, unluckily or luckily, quite a key position.

The point is that the crew onboard might or might not have the relevant knowledge and for this reason we have to prepare everything as simple and as easy as possible so that the crew can do their job without any problems.

We need to give them troubleshooting, supported by manuals with pictures and easily understood explanations. So that the crew can solve the problems by themselves with our assistance.

Satellite communication gets more and more important and will continue to do so in the future, so it is always a key position.

RL: To solve the problem we need a change in the mind-set of captains and shipping companies. It will be inevitable that support from shore needs to be accepted in order to run a ship successfully with new technology.

This does not mean to take away responsibility from the captain; on the contrary: it's empowering him with support from the shore. And that is what I see, especially in the oil and gas market, this is almost state of the art today.

Outlook: more bandwidth or cheaper rates?

DS: Is satcom going to help your company run more efficiently in the next three to five years? And do you need more bandwidth?

MD: More bandwidth will not reduce or minimise the general problems. It's important to have this bandwidth available and it's good for us, but it won't change the way we run our vessels, if there is more bandwidth available right now.

So I am not sure if I see the advantage of the next step of having more availability of something.

JC: It's an interesting debate because I would have thought there are things you would like to do on the ship today that probably are bandwidth constrained?

MD: The demand for higher bandwidth to run the company and the vessels efficiently will not considerably grow in the next years!

For sure the data volume is increasing year by year, but will not necessarily require higher bandwidth as well.

The bandwidth might be more interesting for the crew welfare though, if you want to provide internet access or chat sessions.

DS: So if more bandwidth is not what you are looking for, what would you want the providers to give you in the future to make your operations more efficient?

MD: I think what is much more important than bandwidth is to make satcom more affordable!

More bandwidth will not make us more efficient, whereas saving money on satcom is a very important point for us. All of us shipping companies are spending a lot of money on the annual communication with the vessels.

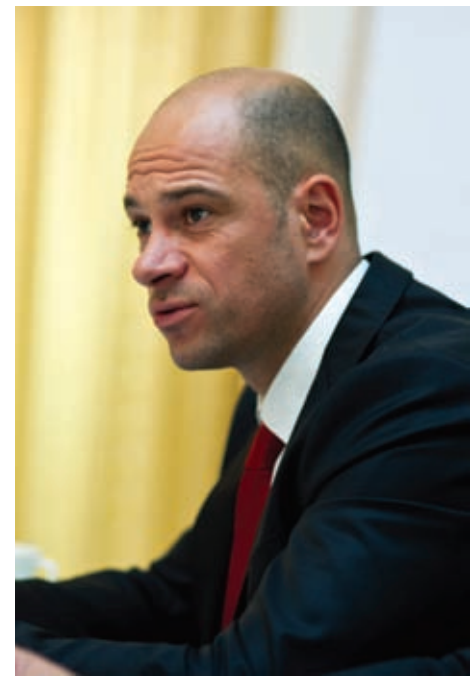
Ultimately the more affordable basis rates have to come from Inmarsat.

We need a crew internet solution as well as telephone for the crew; although the costs for crew telephone have decreased already, when using FleetBroadband instead of Fleet77.

I hope that we will get a solution from Inmarsat with a reduced price in order to make the crew internet attractive. We need a good and relatively cheap solution to be installed.

At the moment we are testing crew internet via FleetBroadband and a separate crew telephone which is installed in a separate room like an internet café in order to provide a certain level of privacy.

We will go ahead with this system on two further vessels and are anxious to see how the system will work and how the crew will adopt it. But for sure there have to be further price reductions on the price for the internet use, as it is still too expensive.



'Some may see IT as a threat, because it's adding complexity. But it's also adding efficiency'
- Lars Kroog, CSW Consulting Group

JC: I think anybody who has been watching how FleetBroadband prices have changed over time will see that they've been heading down. Now, where they haven't been heading down is for occasional users.

For occasional users we haven't really changed the price at all, not because for an occasional user FleetBroadband is already a huge saving, over Inmarsat-B specifically. Not so much on Fleet, but it's still a saving.

Where the big change is really would be for those people who are really stepping up their spend, and ready to consume higher data volumes, and I think what we see now is through value added solutions like the Vizada XChange. They can take a single subscription and it splits up between the bridge and the crew, and because the whole overall package is quite a high level of commitment, as far as we're concerned, the price per megabyte is much lower.

So this is then hitting a point where I think it's getting into the bounds of acceptability to the crew in terms of price point. In terms of ease of use, the PIN management and all those things, they are through the value added solution.

I think the direction is certainly moving that way, whether it's moving fast enough is obviously interesting feedback.

DS: What kind of solution could provide lower rates?

JC: If I was to turn the question back to you and say if we were to maintain the quality of the service you have on the bridge, with the same accessibility, with the same premium of availability, and then we were to provide you with an alternative service for crew, for which the throughput might not be as great and which would have significantly different parameters to what you have on the bridge, and I was to offer that to you at a lower price – would that be interesting?

MD: This sounds like a solution. It would be attractive, because on the bridge we are not interested in surfing, so we

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Will Inmarsat's offering, Global Xpress, solve the challenges created by increasing technology onboard ships?

don't use the bridge for surfing or for anything else other than email, telephone and our chart corrections.

JC: Not any intranet access?

MD: No, not at the moment.

DS: Is there anything else that you would ask of suppliers to help make your operations more efficient?

MD: Another thing that suppliers could do for us would be to ensure better connectivity.

Satcom is only good as long as you are online, even with C-band offline times will occur as shadows by mast, funnel or gantry cranes in port cannot be always avoided.

It's not very often, but you are offline and even in these times you are using a backup solution – FleetBroadband – and then it is interesting what volume you download or send up.

DS: What control mechanisms do you have in place to ensure that bills do not get out of hand even when VSAT is down?

MD: We do not allow internet usage.

Another restriction we have in place is checking the amount of megabytes sent by email to the vessel. Thus, we ensure the bill doesn't get out of hand. Even pictures can be sent in different formats and we can economise on MBs.

If someone is trying to send an email that exceeds this volume we get a notification. The system works both ways: from ship to shore and shore to ship. You have to tell everybody who is sending an email to the ship to not exceed this restricted amount.

RL: All our customers, whether it's FleetBroadband or Ku-band, have a demand for control, control, control. Independent of flat rates.

Flat rates are helping definitely to control the budget, but even with a flat rate there needs to be control, and control which cannot be changed onboard otherwise they can do whatever they want.

Even with flat rates we have people going crazy. In the end, you are asking the question "how do you limit it?"

I think it's key in the end, whether it's now or in five or ten years, to have mechanisms in place, which is implementing an IT policy, which is defined from the shore side, and which is rolled out over the entire fleet and is the same ship by ship so people get used to it. And it has to be a policy that cannot be overcome even if they do tricks and so on.

JC: We get these uplifts in bandwidth that come along, but the fact of the matter is that the applications, in terms of their bandwidth demand, are always going to move faster than our ability to support them over satellite.

So even when we are about to put on a new generation satellite network, which will have a huge increase on the bandwidth we have today, it will never be enough. And the management of that connection will always be fundamental.

There will always be the exception in remote places, but in terms of managing an enterprise it's never going to work that way. You are always going to have to manage that connection either if you are spending a lot of money to get the best out of it, or you don't want to spend a lot of money.

The investment in that area alongside the investments that other people are making in terms of networks is going to be key. And I think the point that was made earlier that echoes with me is the fact that, from the solution side of things, actually taking out complexity is key.

What I'm picking up on from this discussion is there might be the availability of certain solutions and everyone said "why don't you do that", but from the running of the ship standpoint, unless you remove complexity, it doesn't hold weight.

A solution through Global Xpress?

Is the new Inmarsat offering Global Xpress going to provide a feasible solution for you?

MD: I hope Global Xpress can replace the FleetBroadband, so we can install a single solution. We need one single solution, where it is not necessary to switch between the different solutions. I hope the price for the airtime and the respective hardware is acceptable and we will not need huge antennas.

JC: To clarify what Global Xpress will be – Global Xpress is a three satellite Ka-band system which will have a global network in 2014. What we will be able to do under that network is to offer higher bandwidths than you are able to get today, typically in Ku-band.

That gives us a couple of choices; we can either offer faster speeds to some customers, or we can drive down the cost per bit. It's clear from this side of the table which the priority is.

But this is a next generation system, it by no means is intended to replace L-band, we still see FleetBroadband and L-band playing a huge part in the market and for some users L-band will continue to service their needs.

In fact, the benefit that we will have when we come to Ka-band is that our heaviest users in L-band will naturally move into Ka-band. This will then release L-band capacity back into the network and should allow us to improve price performance in L-band.

But you made the point about dual systems and worldwide Ka-band having issues over rain, shadowing, coverage, so FleetBroadband will be an integral part of the service, but the way the service will be delivered will be as one package.

The hardware that you will use will include the below decks integration system, which will be seamless to you.

MD: Do you also supply the connection box between Ka- and L-band and as well the port, where we can plug in our onboard IT system?

JC: Yes. That will all be managed. And from your perspective, when you are on the FleetBroadband network or the Ka-band network, depending on which type of plan, what you won't have to worry about is if the Ka-band network is down that you've got an expensive bill, because it's all part of one bill, and it will automatically go over to L-band.

The advantage you've got is the FleetBroadband installations you are making today are an integral part of that solution, so you are actually future-proofing yourself, so then it's just an upgrade part.

Within certain fleets there will be certain vessels that are ready for higher bandwidth connections and they can be supplemented by Ka-band, but other vessels may remain on FleetBroadband.

MD: Does this mean it will offer a fixed price per month?

JC: Yes.

MD: On which all the potential backup volume of FleetBroadband is included?

JC: Yes.

MD: However, again we will have two equipments, more maintenance and again more space necessary on the compass deck of the vessel.

And I hope this time it works, because generally Inmarsat is a good dealer in communication.

JC: We are working with some fairly solid names for hardware.

MD: A quite big problem might be to install a further antenna, even smaller size, as the main view is always on the connectivity without shadows caused by masts or funnel arrangement, which is of course depending on the general size and layout of the compass deck.

Mainly we are using Fleet77 or FleetBroadband 500 and in addition a VSAT antenna for the reception for Sat-TV. You might think about the TV antennae, but then you have to think how you can support the crew with TV.

Even if it will be possible to broadcast TV channels via Ka-band, you probably have to agree some service contracts and pay for it to. It would be best to have one antenna, which can be used for broadband traffic and as well receive Sat-TV.

JC: That sort of thing is possible but it's heading in the wrong direction of low cost.

'Global Xpress - We need one single solution, where it is not necessary to switch' - Michael Dittmer, Peter Döhle Schiffahrts-KG

DS: Thank you very much for sharing your comprehensive insight into the current situation and your thoughts on future developments of satcom with *Digital Ship*.

It seems that however fast satcom is evolving there are still a number of issues to be addressed – namely the growing complexity of applications and how crews can handle the additional workload.

What suppliers will do to help shipping companies solve this problem and where Global Express will fit in, remains to be seen. DS

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PortVision introduces Dock Management system

www.portvision.com

PortVision reports that it has extended its TerminalSmart offering for marine terminals to include a new Dock Management module.

The TerminalSmart Dock Management System (DMS), which integrates with PortVision's existing TerminalSmart and AIS-based PortVision Advantage products, allows for the combining of job scheduling, activity logging and business intelligence utilisation, and demurrage reporting.

Once a vessel is docked, the DMS software takes over, maintaining the dock log, demurrage data, and other information pertinent to the statement-of-facts related to the vessel call.

"Until now, most marine terminals used paper-based and spreadsheet-based systems in order to schedule and manage dock operations and activities," said Dean Rosenberg, PortVision chief executive officer.

"This limits productivity, causes redundant data entry, increases errors, and makes it difficult to monitor, analyse and optimise operational efficiency. With the TerminalSmart DMS, companies significantly improve their understanding of resource usage, outage and availability."

"The DMS can support applications ranging from demurrage reporting and analysis to overall multi-dimensional comparative performance reporting, as well as other important tasks related to managing docks at waterborne terminals."

TerminalSmart DMS is available as a bundled option with the company's PortVision web-based vessel tracking, management and analysis service.

GIS Marine to implement MarineCFO

www.marinecfo.com

GIS Marine has agreed a deal to implement the MarineCFO Enterprise software suite, the companies report.

GIS Marine provides a fleet of supply vessels and crew boats to support oil and gas operations in the Gulf of Mexico.

"While GIS Marine is relatively new to the marine vessel business, we are growing fast and are fully committed to staying the industry leader when it comes to safety, performance and service," said Mark Pregeant, CEO of GIS Marine.

"We fully understand that technology plays a key role in the future growth of our marine service offerings. We researched the market and found MarineCFO to be the ideal software tailor made for the marine industry. The reporting capabilities of this system are phenomenal."

"MarineCFO gives us a tremendous competitive edge in that it will allow us to manage our business in a more efficient manner thus improving our bottom line and allowing our customers to access real-time data that will aid in managing their operations. We are extremely excited about our partnership with MarineCFO and are looking forward to going live with our fleet in 2012."

Seaplace acquires new CAD/CAM licences

www.senermar.es

Spanish engineering company Seaplace has acquired new licences for the CAD/CAM FORAN System, to be used in its marine projects.

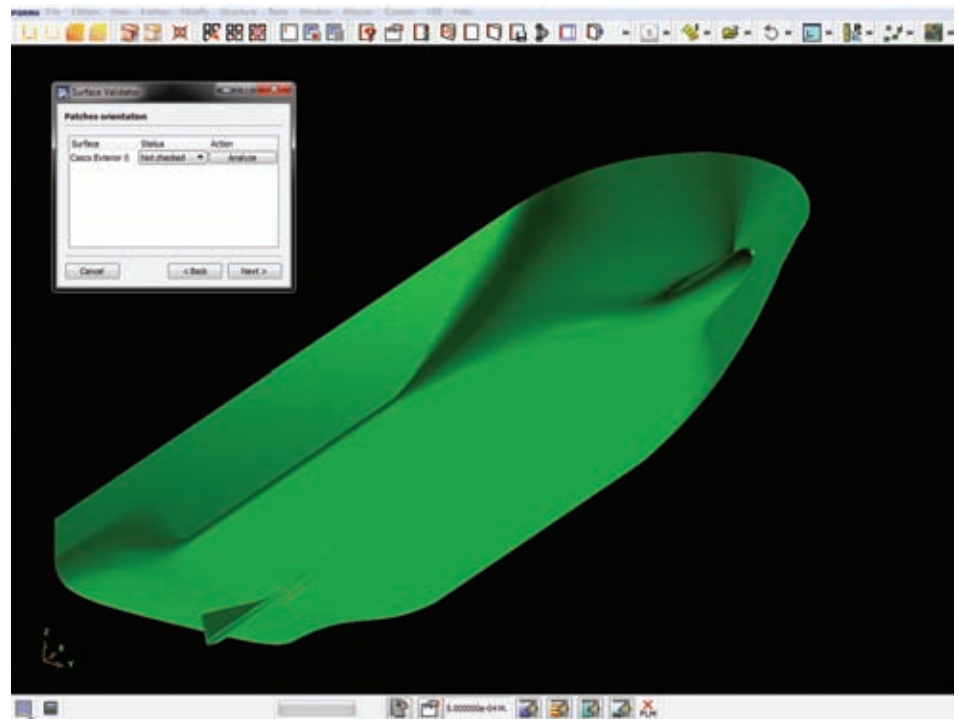
The new agreement includes packages of Forms, Naval Architecture and Advanced Design and Drawing of version V70 of FORAN. These licences will be added to Seaplace's existing licences.

Collaboration between SENER, the developer of FORAN, and Seaplace began in 1998, and Seaplace has been using FORAN continuously since then.

Seaplace is currently using the Naval Architecture modules of FORAN V70 for the design of an offshore crane vessel with a lifting capacity of 2,500 ST and an overall length of 172.5 m.

The estimated workload for the design contracted is around 10,000 engineering hours.

"With the extension of licences of the latest version of FORAN V70, launched by SENER in November 2010, Seaplace takes a big step forward in its technology upgrade to continue offering high value-added services to the industry," said Luis García, general manager, SENER Marine Business Unit.



Seaplace will expand its usage of Sener's ship design technology

United Tugs installs electronic forms across fleet

www.boatracs.com

Boatracs reports that it has completed the installation of Boatracs BTForms, an electronic forms product, on multiple vessels for United Tugs, Inc.

The project entailed the conversion of seven of United Tug's paper forms into an electronic version that captains can complete with their onboard PC.

"BT Forms has been an important piece of our compliance plan," said Tom Dantin, vice president of operations for United Tugs.

"Our goal was to reduce the manual work and paper needed to document compliance for the Responsible Carrier Program – to make the data collection as simple and automated as possible."

"On the vessel, BT Forms has been extremely successful in helping us gather the information needed for compliance without adding to the Captain's workload. On the shore side, we use BT Forms to streamline our record keeping and reporting."

BT Forms software was developed to convert paper forms to electronic versions that allow the vessel and shore to see the exact same information.

On the vessel, BT Forms uses 'smart forms' that verify and validate information before transmission, reducing manual errors at the point of data collection.

The hosted BT Forms web application on the shore-side can then compile the data into a variety of reports for managers.

"United Tugs is a forward thinking company and has been a valued customer of Boatracs since 2004. With a commitment to using technology to improve operations, they have added BT Forms to our core Boatracs satellite communications offering to further enhance their access to critical operational and compliance information," said Irwin Rodrigues, president and CEO of Boatracs.

"Optimised for satellite transmission, Boatracs BT Forms is a highly flexible software solution for data communications and reporting between any vessel and its shore-side office."

"It is exciting to see this product being used to solve a variety of operational issues, including regulatory compliance."

Online coatings inspection training from Lloyd's Register

www.lr-training.org

Lloyd's Register is offering new online training courses to support compliance with marine coatings standards.

The International Maritime Organisation (IMO) and the International Association of Classification Societies (IACS) coatings standards require inspections to be carried out by qualified coatings inspectors certified to National Association of Corrosion Engineers (NACE) Coating Inspector Level 2, The Norwegian Professional Council for Education and Certification of Inspectors for Surface Treatment (FROSIO) Inspector Level III, or equivalents.

Lloyd's Register has developed this new series of online marine coatings training courses to help to meet growing demand for these qualified inspectors.

Students can register for the course online, and after they have paid their fees they will gain access to the online training and have 12 months in which to complete the course. They must achieve 100 per cent to pass.

To achieve the IMO PSPC certificate, students must also pass (with a minimum 70 per cent mark) a theoretical and practical assessment.

For the diploma course, following completion of the online training section, students will need to produce written assignments for a number of specialist subjects. A three-hour examination then completes the diploma course.

"Students will be able to earn either certificates or diplomas, depending on the level they study, in coatings and corrosion control," said Andrew Williamson, Lloyd's Register's marine training manager.

"The qualification achieved by taking the course on Performance Standards for Protective Coatings is equivalent to the NACE and FROSIO qualifications required by IMO and IACS. Students can learn and progress at their own speed, and when it is convenient for them."

The courses - recognised by the Institute of Corrosion (ICorr), the British Coatings Federation (BCF), the Society for Protective Coatings (SSPC) and the University of Portsmouth - "make it easier and more cost-effective for unlimited numbers of students to enrol," said Mr Williamson.

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Jotron fleet management software for D/S NORDEN

www.jotron.com

Danish shipping company D/S NORDEN is to implement a fleet management software package from Norwegian-based Jotron Consultas across a number of its ships.

The two parties have signed an agreement which includes rollout of the latest version of the Consultas Fleet Management software suite for both the fleet and the office, v.4.

The new version of the system includes a Dashboard with customised KPI reports based on roles or responsibilities.

The deal also includes the applications C-Maintenance, C-Spares, C-Budget and C-Experience for installation onboard ship, and C-Purchase, C-Budget, C-Experience and C-Maintenance (Fleet version) for the office.

The Nord Neptune, one of a group of vessels set to implement Jotron software

Under the contract approximately 30 ships owned and operated by D/S NORDEN will be fitted with the software.

"Over the last few years, NORDEN has continued a fleet expansion to a level of more than 30 vessels, which means that both efficient and effective vessel management plays an increasing role for us," said Lars Lundegaard, senior vice president at D/S NORDEN.

"At the same time we have set ambitious goals for the quality and safety of our vessels that aim to maintain our leadership position. We think Consultas is the right tool for NORDEN and our fleet of vessels."

Jotron says it will commence work on the project in week 43 of 2011, and expects it to reach final completion by the end of August 2012.

BW Maritime to implement Palantir across fleet

www.palantir.no

BW Maritime has appointed Palantir to act as the solutions partner for its fleet-wide BW Common Vessel IT Infrastructure project.

Under the agreement Palantir will work with BW on the design, implementation and support of a common IT infrastructure across all BW vessels. This new system will be built on Palantir's existing KeepUp@Sea solution, and for a period of time will be delivered as a managed service from the Palantir headquarters in Stord, Norway.

"We believe that the KeepUp@Sea solution from Palantir would best meet the overall objectives for BW, which is to provide a reliable and secure IT network onboard our vessels," said Geraldine Pang, general manager global IT, BW Maritime.

"We have chosen Palantir because they provide a unique, comprehensive and proven solution, with many years of operational experience at major shipping companies. By utilising Palantir's extensive experience, we will be able to jumpstart the process, and quickly start seeing the benefits."

"Through the flexible KeepUp@Sea solution, it is possible for future upgrades and changes to be deployed from a single point onshore, reducing travel costs and improving efficiency."

Additional deliveries covered in the agreement include hardware, logistics, roll-out and migration services onboard the vessels. Following a pilot period, the global implementation across the BW fleet will commence at the end of 2011.

"This major deal is a statement of quality – both for our KeepUp@Sea solution and the skills of the people involved in supporting and developing the KeepUp@Sea solution," said Arvid Dregelid, CEO of Palantir.

"The core focus on standardisation and automation of IT&C services proves to be an advantage towards achieving new, international customers."

Grieg Shipping goes for AMOS

www.spectec.net

Norwegian company Grieg Shipping Group has signed a contract with SpecTec for the supply of its AMOS software system.

Grieg Shipping Group is part of the Grieg Group, one of the largest management service companies in Scandinavia. Founded in 1884, The Grieg Group established a shipping branch in 1961, Star Shipping, which became Grieg Shipping Company in 2008.

Today the company owns a 26-ship strong OHGC (open-hatch general cargo vessel) fleet, and has just taken delivery of four new open hatch vessels.

The company is also currently in the midst of a development programme including up to ten 50,000 dwt open hatch ships with a new crane design, together with two Supramax vessels. The ships will be delivered from the Hyundai Mipo shipyard in Korea in 2014.

The contract with SpecTec is for the supply of AMOS Business Suite Maintenance & Purchase software systems to these ten OHGC newbuilds and to both of the new Supramax vessels.

The Maintenance and Purchase software will be used to integrate maintenance work, cost management, stock control and requisition flows between the vessel and headquarters.

Users can check how much has been spent on purchases, and see how that fits with both current and future budgets.

The new deal is a continuation of an existing relationship between the companies, with Grieg Shipping Group having signed its first contract with SpecTec in 1994.

Krill introduces VOC

www.krillsystems.com

Krill Systems has introduced its new management tool, the Vessel Operations Center (VOC), which aims to allow fleet managers to monitor fleet fuel usage and receive synchronised fleet reports via the internet.

Krill uses Microsoft SQL server database technology to record all sensor data with two second resolution, and offers storage of at least one year.

Any communication system including cellular or satellite internet access, supporting standard SMTP email protocols, can be used to transmit the customisable reports and sensor data menus, in Excel format.

While every Krill-fitted vessel in a fleet would have its own database, the Vessel Operations Center (VOC) collects the database from each vessel in the fleet and consolidates them into a single 'VOC' database.

The 'VOC' database is continuously synchronised with all vessel databases in the fleet and provides a single overview of all vessel activity.

The Krill system allows shore offices to keep track of fuel usage onboard vessels at sea

Odfjell to implement IMOS for tanker fleet

www.veson.com

Norway-based Odfjell SE is to manage its entire fleet with Veson Nautical's IMOS (Integrated Maritime Operations System) and Veslink, the automated system for ship to shore communication, under a recently agreed deal.

Odfjell's shipping division, Odfjell Tankers, transports bulk liquid chemicals, acids, edible oils, clean petroleum products and other special products; its fleet of about 100 chemical tankers ranges in carrying capacities from 4,000 to almost 50,000 DWT.

When Odfjell's management decided to replace the company's in-house software system with a fully integrated solution, it shortlisted companies that could address Odfjell's biggest 'pain points'.

Odfjell was looking to automate routine tasks, streamline communications between departments, increase productivity, and to use real-time voyage data to make the most profitable decisions.

Einar Øye, senior project manager in Odfjell, explains, "From our first meeting, the Veson team demonstrated an in-depth understanding of our business processes and a holistic and advanced approach to voyage management and software design. That combination was an important factor when we chose Veson."

Odfjell has begun the implementation phase and expects to go live with IMOS by the end of 2012 for the shore based organisation, including about 15 global sites. Veslink is scheduled to be deployed onboard 100 vessels.

The company is also integrating IMOS into its corporate accounting package.

"IMOS and Veslink give us the ability to capture voyage related information at the source, and automatically utilise that information throughout our work processes," adds Mr Øye.

"It's our goal to provide Odfjell employees with tools which enable them to easily access information relevant to their work. We believe the Veson solution supports this goal, and this will be incredibly beneficial for us."

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Marine Software installed on RV Alliance

www.marinesoftware.co.uk

Marine Software reports that it has successfully supplied the NATO research vessel RV Alliance with its Marine Planned Maintenance, Stock Control and Requisition/Purchasing software suite.

The vessel is being managed on behalf of the NATO Undersea Research Centre by Anglo Eastern (UK) in Glasgow.

Office management software has also been delivered to the local Base Manager's Office at La Spezia, Italy, which will monitor vessel input to the Planned Maintenance and onboard Stock Control modules, along with the Purchasing module which initiates ship requisitions into the Purchase platform to include in budgeting.

The contract also required Marine Software to migrate data from the vessel's existing system prior to installation, to ensure all historic Planned Maintenance and spare part component history records were accurately transferred into the new system.

A barcode label option was also included that will assist with stock control and tracking of spare parts.

During the final database commissioning visit, Marine Software personnel delivered a three day training course for the ship officers and local shore management team associated with requisition and purchase, and will provide follow-up training for those involved in maintenance logging and stock control.

The RV Alliance has installed a range of Marine Software modules

WaveSentry project launches Knowledge Network

www.marinesoutheast.co.uk

WaveSentry, a project by Marine South East developing a system for the measurement, forecasting and portrayal of sea-states, has launched 'WaveSentry KN', a knowledge network which aims to facilitate the identification and exploitation of technologies for managing the risks of marine operations in adverse sea states.

The WaveSentry project wants to develop an improved decision support tool for marine operations that are impacted by adverse sea conditions for reasons of both economics and safety.

The WaveSentry project partners say that currently available information is based on atmospheric/ocean models which lack temporal and spatial information, and that they aim to exploit new data sources, including satellite remote measurements of wave steepness as well as real-time buoy and ship derived data.

The project is inviting organisations from both industry and the knowledge base concerned with the provision or use of sea-state measurements and forecasting to join the Knowledge Network, which can be done at: www.groupspaces.com/wavesentrykn/join.

Container ships added to online valuation service

www.vesselsvalue.com

The VesselsValue online ship valuation service, which already covers tankers and bulkers, is now valuing container ships from Feedermax (500 teu) up to ULCV (18,000 teu).

VesselsValue was launched earlier this year by London based S&P broker Seasure Shipping Ltd. The service provides data-driven ship valuations and market insights for vessels and portfolios which are currently being used by the commercial banking, investment fund, ownership and broking sectors.

The VesselsValue methodology incorporates ship specifications, real time sales and freight earning sentiment, to enable market valuations of vessels.

This model is updated and recalibrated daily to give the closest possible fit to reported sale prices.

Accuracy is tested and reported by comparing valuations against prices achieved in the market.

VesselsValue believes that, by adding container ships to the service, it will provide a much needed benchmark for ship values in this sector.

The service is available on subscription basis or pay-as-you-go, depending on the user.

Environmental CBT from Seagull

www.seagull.no

Seagull has added two more modules related to environmental protection to its portfolio of computer based training courses for the shipping industry.

The first of these is the Marine Environmental Awareness CBT unit, a basic training programme designed for seafarers in management, operational and support level roles.

The aim of the training programme is to motivate seafarers at all levels to contribute to the prevention of marine pollution by stimulating a sense of involvement and responsibility in this area.

The main learning objectives are that, after completing this training programme, the seafarer will be able to demonstrate the basic knowledge required to prevent pollution in the marine environment and will understand the importance of doing so.

"This is an important addition to our range of courses as it addresses one of the specific requirements of the Manila 2010 amendments to the STCW Code," said Seagull director training content, Captain Bjarke Jakobsen,

"These amendments enter into force in January 2012, and so shipowners will shortly have to comply with them."

"This module has been tailored to meet the needs of seafarers at different levels onboard ship."

This new CBT unit has been developed by Seagull in cooperation with the Prosea Foundation of The Netherlands. Prosea, a non-profit organisation, has been providing marine awareness courses since 1999 and is the author of the IMO model course in Marine Environmental Awareness in accordance with the STCW 2010 Manila amendments.

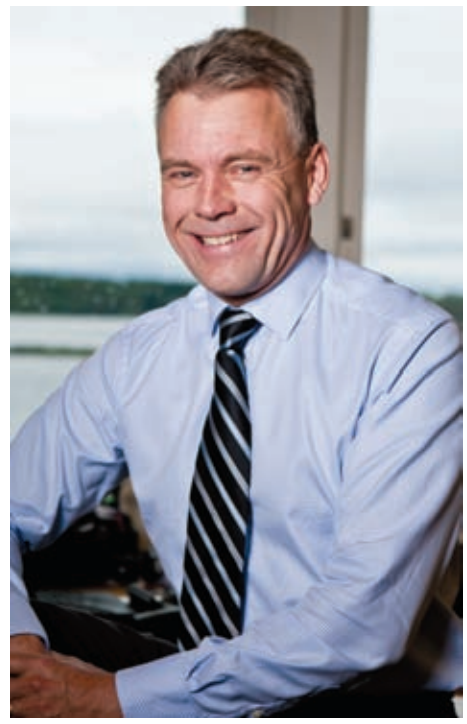
This is the first time that Prosea has been involved in developing a CBT course.

The second new programme from Seagull is a CBT module providing an introduction to the US Environmental Protection Agency (EPA) 2008 Vessel General Permit (VGP).

The VGP regulates discharges incidental to the normal operation of vessels in US territorial waters. The new CBT module is targeted at senior officers onboard and designed to give them an understanding of what the VGP aims to achieve, and explains its structure and the requirements it places on shipping companies.

It also sets out which onboard operations may have to be reorganised to comply with the VGP.

The course includes sections on when VGP coverage starts and ends; the discharges that are covered; and monitoring, inspection, recording and reporting requirements.



'The CBT has been tailored to seafarers at different levels onboard the ship' – Capt Bjarke Jakobsen, Seagull

It complies both with the US EPA's VGP and the IMO's ISM Code regulations and takes around one hour to complete. It also makes reference to the implications of the VGP for shore-based management.

New version of tanker broker software

www.axsmarine.com

AXSMarine is launching a new version of its software for tanker brokers, called AXSTanker.

The new system includes a message board, a fixtures tool and an enhanced AIS screen.

AXSMessageBoard helps brokers communicate by keeping their exchanges recorded in one place, to assist in searching for key information.

AXSTanker will be available as a mobile version, and an AXSTanker mobile website will allow users to access the application from any mobile device. The message board is also accessible from the mobile application.

AXSMarine says that at present there are more than 1,000 individual users of AXSTanker all over the world.

Regs4ships is planning a major redevelopment of its website, working with partners **aap3**, an IT and business solutions provider. The company says that it will examine the design, the type of information that is displayed and the way the pages are coded for the new site to ensure that its products keep in line with changing trends.

www.regs4ships.com

Reducing waste in the maritime supply chain

Cutting costs is a key goal for most companies in the current economic environment, but identifying where to cut those costs can be a difficult process. Applying technology to the procurement function is one way in which substantial waste could be eliminated, as Saurish Nandi, Selandia Ship Management, explained to *Digital Ship*

As global economic gloom continues to cast a shadow over shipping and industries in every sector, driving efficiency and making smarter choices are two of the basic operational goals of any savvy business manager.

As growth and revenue continue to be squeezed, cutting costs without adversely affecting performance and service to the customers that are still around is one of the best ways for companies in the current environment to improve their bottom line.

Saurish Nandi, head of purchasing at Selandia Ship Management, believes that the maritime procurement function is one area that is particularly ripe for this kind of cost cutting attention.

Mr Nandi has more than eight years of experience working in purchasing and supply chains, working with both The Great Eastern Shipping Company and Wilhelmsen Ship Management in India before relocating to Singapore in 2008.

As well as running the Selandia purchasing department, Mr Nandi is also currently doing a Masters in Business Administration at the S P Jain Center of Management. As part of these studies he has done a lot of work on the management of maritime supply chains, and the results of his research have highlighted how much potential there is for improvement within this sector of operations.

"What I found out was that 30 per cent of the time a purchaser spends is on invoice clearing," he told us. "30 per cent is on following up on logistics, and 30 per cent is on 'last minute' exigencies, like last minute orders."

"So that only leaves 10 per cent of their time available – where is the time for sourcing? That's the basic job of a purchaser."

Certain that there must be a better way to organise procurement for ships, Mr Nandi began to explore the make up of the maritime supply chain, to try and get a better understanding of how business theory could be applied to the shipping environment.

'Any mistake you make in procurement will be multiplied' – Saurish Nandi, Selandia Ship Management

"Typically in a marine scenario the supply chain includes the vessel, and the logistics which surround the vessel and provide a very important support base for the vessel managers. Without them the supply chain will definitely collapse," he said.

"The procurement function forms the heart of the supply chain, for me. Any mistake you make in procurement will be multiplied, and any benefits or savings you make in procurement will also be multiplied across the chain."

"Then the other parts of the supply chain include the accounts function, and the superintendents and vessel managers."

Supply chain theory

To analyse the maritime supply chain further, Mr Nandi decided to apply Value Chain theory to the procurement function, a concept developed by Michael Porter in 1985 in his book Competitive Advantage, which basically describes any activity in an organisation which adds value to the final product or service as being part of the 'value chain'.

"Within this model we have the support activities Procurement, Technology, Human Resource Management, the Firm Infrastructure – all important parts of the value chain," said Mr Nandi.

"This led me on to the concept of waste developed by Taiichi Ohno of Toyota. According to him any activity which does not add value to the final service or product is a waste."

Taiichi Ohno is considered to be the father of the Toyota Production System, the concepts behind which were the foundation of 'Just In Time Production' and the generic Lean Manufacturing movement. These concepts aim to preserve value while reducing the amount of work required.

Within the Toyota system, seven 'wastes' were identified for improvement or elimination: Transportation, Inventory, Motion, Waiting, Over-Processing, Over-Production, and Defects.

To demonstrate the idea of waste more clearly, Mr Nandi draws on his experiences of transiting Bombay Airport.

"You're supposed to arrive there three hours before the flight actually departs to be on time. The actual process of preparing for the flight takes about 10 minutes, with the baggage screening and immigration and those things," he explained.

"The rest of the time you are spending queuing up. That is waste in the value chain – there are better things you could be doing with your time than queuing up. The same concepts can be applied in any service industry."

In an attempt to examine how to reduce the potential waste within the maritime supply chain Mr Nandi draws on the Theory of Constraints developed by Eliyahu Goldratt.

"According to Mr Goldratt you should first identify the constraint, then allocate resources to it and then ensure that the constraint no longer remains," Mr Nandi explained.

"If you apply the same logic to waste in the same way, you would similarly identify the waste, decide how to remove it and allocate resources to do that."

"Can waste totally be eliminated? According to me, no. We will always have waiting and have queues, but you can find ways to reduce them. We can always make efforts to reduce the waste."

Technology and reducing waste

Mr Nandi recommends a number of key steps that a shipping company purchasing department that is looking to reduce waste

in its processes should follow, which focus mainly around reducing the complexity of the purchasing network.

"You should reduce the number of suppliers, and try and formulate long term supplier-buyer contracts. Appoint fewer, but reliable, freight forwarders. And finally, and this is key, start planning with a special focus on cost reduction," he told us.

Reducing supplier numbers may seem like a straightforward concept, but, as Mr Nandi notes, it can go somewhat against the grain for purchasing departments that may have been used to adding more and more sourcing partners to their supplier lists.

"Let me give you an example. Every week in my purchasing department I get requests from our purchasers to add four vendors to our database – our database already includes a thousand vendors," he said.

"In a month that would be an extra 16 vendors, in a year more than 200 being added to the database. The more suppliers you have the more vendor evaluations you need to do, according to your purchasing procedure. Everything is multiplied."

The idea of establishing long term relationships with a smaller group of suppliers is again something which Mr Nandi has seen as being contrary to the established way of working in many organisations.

"It's very typical in shipping to avoid this, we see it happen in manufacturing but in shipping it seems to be something very different for people," he said.

"I was reading an article a few months back about the relationship between J Lauritzen and Fuji Trading, where a purchaser from Fuji Trading actually comes to J Lauritzen and sits there for six months, so he will know what is happening on the other side. Then a purchaser from J Lauritzen goes to Fuji Trading and he checks what's happening there."

"That's the kind of supplier-buyer relationship that we're looking for, that's what we should be focusing on. At the end of the day it should help both parties, that's what it's all about. The same idea can also apply to freight forwarders, have fewer freight forwarders, or preferably just one, that can take care of the logistics for you. They are the experts in that field."

According to Mr Nandi, technology, in the modern business environment, is the key to waste elimination.

"Without technology you can't do it. Unfortunately you can't just wake up one morning and decide to go to a shop and buy technology and apply it to your value chain – you have to set a base for that," he said.

"Planning is the crux of all this, in shipping you always have things happening at the last minute, because lots of the things are not planned. But they could be – if the purchasing software system is properly implemented you'll have a critical inventory list flowing into your network, and you order on the basis of that."

"That will make life much easier and you can avoid last minute exigencies."

Mr Nandi suggests that it would be helpful to introduce integrated platforms that would connect the various stages involved in purchasing within one overall system, rather than using varied different packages to manages different aspects of the function.

"Currently I would roughly say that most companies have vessel-buyer portals, and then other buyer-supplier portals," he said.

"Then their supplier has a different portal to connect to their sub-suppliers, and a separate portal again to connect to forwarders, who use a separate portal to connect to the airlines."

"Besides that, the buyer also has to use a separate portal to the accounts system, which also needs a separate portal for banking. So we're talking about five or six portals just here, and it can be more in some cases."

Maritime e-purchasing company ShipServ has done a lot of work in this regard, in its attempts to bring maritime purchasing to a more centralised platform. Mr Nandi believes that the company has made important strides in the right direction, but notes that the technology is still a long way from being the perfect waste-eliminating electronic procurement system.

"I'm quite a fan of ShipServ, they have done good work with their e-invoicing and have also linked up with the forwarder portals, and that's the right way for this to be going," he said.

"But we have to go further than this, we need one common platform – I think that is the way forward. Each portal is adding to the waste in the value chain, it is adding on work needed to monitor each portal. Why don't we have a single portal for all of this? I know it's not going to happen tomorrow, but this is the way we should be heading."

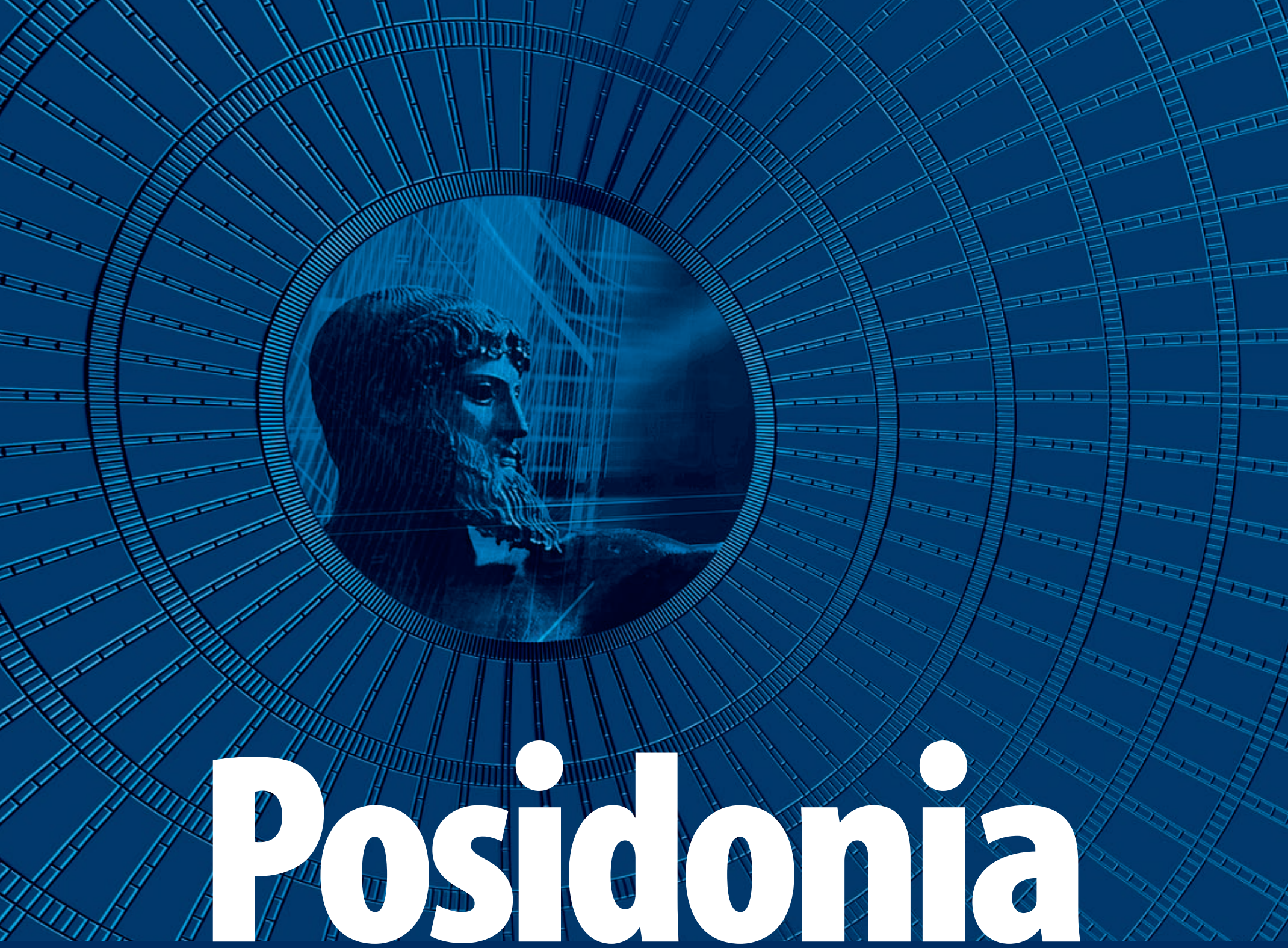
"Once we do that we could have a 'utopian' supply chain, where you have a single portal that connects your logistics, your suppliers, your forwarders and your accounts. Once we have something like that then we can bring the vessels into it, and it becomes the perfect supply chain."

One final important note Mr Nandi adds is that it is imperative to have executive support for any work in this area, if there is to be any chance of success.

"It's very important within an enterprise for the top management to be involved in this, it's not just at the ground level or operational level," he said. "The top people have to sit down with the operational people and identify the waste, as they will need to allocate the resources."

"Once that has been done and the waste has been reduced you also need to keep checking for inertia and keep monitoring everything so that the same waste doesn't occur, or you don't have new waste in the supply chain."

"As they say – start by measuring, because what gets measured gets analysed, and what gets analysed gets acted upon." DS



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Houtan Houshangi, OceanSaver's new CEO

OceanSaver has appointed Houtan Houshangi as interim Chief Executive Officer. Mr Houshangi replaces Stein Foss who has worked on the development of OceanSaver's BWT system technology since the company's inception in 2003.

A new version of the **Orion INS** (Inertial Navigation System) is being launched by **Teledyne TSS.** The unit provides attitude, heading and heave data and can support applications such as multi-beam sonar surveys or the construction of major seabed installations.

www.nautissim.com
www.oceansaver.com
www.comarkcorp.com
www.alphatronmarine.com
www.tss-international.com
www.safebridge.net

Comark Corporation has received Type Approval on its 47-inch Series of MDU Marine Displays from the **American Bureau of Shipping (ABS)**. The MDU47 utilises a 47-inch diagonal, LED backlit, 1920 x 1080P high-resolution LCD, coated to protect against moisture and corrosion.

Alphatron Marine has introduced its Alphabinnacle series of magnetic compasses. The compasses will be available in 3 versions: for vessels above 150 Grt, for vessels up to 150 Grt and for non SOLAS vessels.

Safebridge has been awarded state funding by the **Hamburg Authority for Management, Commerce and Innovation (BWVI),** to enable further development of its electronic navigation training system.

VSTEP's NAUTIS Full Mission Bridge Simulator has received Class A certification from **Det Norske Veritas (DNV).** The NAUTIS simulators are now qualified to operate as fully-certified maritime training simulators with any maritime training school worldwide.

NAUTIS simulators are now DNV approved

FORCE agrees Singapore simulator contract

www.forcetechnology.com

Singapore Polytechnic (SP) and the Maritime and Port Authority of Singapore (MPA) have awarded a contract to FORCE Technology to provide simulation facilities at the Integrated Simulation Centre (ISC) at Singapore Polytechnic (SP).

FORCE Technology will manufacture, install and operate a series of full mission simulators under the deal.

This is the first contract for the company to be handled directly in Singapore, with previous business in the country having been handled from FORCE offices in Denmark. The company says that this agreement has contributed to its decision to build up a permanent business base in Singapore.

FORCE Technology notes that it will work in close cooperation with the Singapore Maritime Academy (SMA) at SP and MPA to develop its applied domain knowledge, engagement in advanced training, certification, research and innovation in the maritime field.

The development of the Integrated Simulation Centre (ISC) into a maritime simulator centre will form a significant part of this process.

ClassNK approves first Type Specific ECDIS course

www.classnk.or.jp

ClassNK has issued its first Type Specific Training Course approval for an ECDIS Training Course offered by FURUNO INS Training Centre Singapore.

The approval, which coincides with the opening of the new training centre, certifies that the course offered by the centre complies with the classification society's new Standard for Maritime Education & Training

New requirements for the installation of ECDIS systems will be phased in from 1 July 2012, after which vessels will be required to navigate using ECDIS as their primary chart system.

As part of this process, masters and deck officers will be required to undergo adequate training and prove their understanding and proficiency in using the new systems.

In addition to the generic ECDIS training required by the STCW Convention and Code, the governments of the UK and Ireland, as well as the Paris MOU, require masters and all deck officers on flag vessels which make use of ECDIS systems as their primary means of navigation to undergo Type Specific ECDIS training for the ECDIS systems used onboard their vessels.

In recognition of this growing demand ClassNK developed new certification standards for Type Specific ECDIS training programmes, that it hopes will become a de-facto standard for the industry.

ClassNK executive vice president Koichi Fujiwara, who has directly overseen ClassNK's expansion into maritime training certification, said: "With the increasing level of technology used for navigation and ship operation, as well as growing regulation of seafarers, there is an incredible demand throughout the industry for higher quality seafarer training programmes."

"By developing new standards for maritime training, and working with training centres to meet these new standards, we hope to positively address these needs, and contribute to a safer future for our entire industry."

In addition to certification for both generic and Type Specific ECDIS training, ClassNK is also developing certification services for Maritime Education & Training programmes, as well as certification and training programmes for instructors of such courses.

MOL commits to BNWAS

www.martek-marine.com

Mitsui OSK Line has committed to installing Bridge Navigational Watch and Alarm Systems (BNWAS) on board its ships ahead of regulatory requirements, having taken the opportunity of the drydocking of 17 of its vessels so far this year to install the Martek Marine Navgard BNWAS.

MOL said it was likely that all of its existing vessels would be fitted with BNWAS before the end of 2011.

Under the terms of the revised SOLAS regulations new passenger vessels and cargo ships greater than 150gt have had to implement BNWAS since July 2011.

However, existing passenger ships and cargo vessels greater than 3,000gt can wait until July 2012 before BNWAS becomes mandatory, while existing cargo ships of between 500gt and 3,000gt can wait until July 2013, and those between 150 and 500gt until July 2014.

Alan Stewart, MOL Tankship Management (Europe) deputy general manager, explained that the carrier had already witnessed an increasing frequency of comments by SIRE inspectors regarding whether or not a BNWAS was fitted.

He said that MOL had decided on a course of "being proactive and not waiting until the last minute, as is usual in the marine industry."

The International Chamber of Shipping has carried out an investigation into accident reports in the Malacca Straits which are transited by more than 70,000 vessels each year. It identified 'loss of situational awareness' as one of the most significant factors that need to be addressed as a cause of accidents.

Of the incidents examined, 68 per cent resulted in collisions and all could have potentially caused harm or pollution incidents.

BIMCO has also issued advice to its members urging them to consider fitting systems at drydockings before the mandatory implementation date, and not to wait until annual surveys within the compliance window.

"There have been a number of incidents recently which show a lot can happen in three minutes, let alone 12 minutes, and so it is vital systems such as Navgard are installed on vessels as soon as possible," said Paul Luen, Martek CEO.

"Navgard is the world's first BNWAS system fully type approved by all major classification societies. Owners delaying implementation of BNWAS until the last minute are risking the lives of their crew and the safety of their vessels. Where is the sense in that?"

French contract for Kannad

www.kannad.com

Kannad has been awarded a contract to supply an Aids to Navigation (AtoN) Remote Monitoring System to the Centre d'Etudes Techniques Maritimes et Fluviales (CETMEF – French Institute for Maritime and Inland Waterways), worth €1 million over 3 years.

Kannad has been working with CETMEF since 2009, developing an AIS AtoN Station for use on buoys and beacons around the French coast.

"The team at Kannad has enjoyed working with CETMEF on this mutually beneficial and technically advanced project, and are very pleased to receive this contract, which is a result of a lot of hard work by all involved," said Pierre Jean Jannin, Kannad business unit manager.

Kannad's system currently comprises two main AIS AtoN Stations; the KanAtoN 1 (AIS transmitter) and the KanAtoN 3 (AIS transmitter/receiver), plus various interfaces.

This particular contract was for the new KanAtoN 3 AIS AtoN Station with interfaces, which allows for remote control of a number of functions on the aid to navigation, the activation of emergency equipment, control and activation of spare equipment, remote monitoring of the onboard system and malfunction detection.

This data is controlled and monitored via a network of land-based servers, or 'Shore Stations', relaying data exchanges between Aids to Navigation and the Supervision & Control Centre.

The Remote Monitoring System operates via a web-based application that is placed on a server to receive the AIS messages relayed ashore.

IIG buys Transas stake

www.transas.com

Industrial Investors Group (IIG) has acquired a 25 per cent plus one share stake in Transas, as part of a transaction valued at USD$50 million.

The partners say that this alliance will create new opportunities for Transas in areas such as avionics, aircraft simulators, unmanned aircraft, and virtual reality entertainment systems, but should also contribute to further development in its traditional areas of marine navigation and control equipment.

Industrial Investors Group already has experience in the marine sector, owning Russia's largest dry bulk and container shipping company, FESCO, and will be able to provide Transas with input from a shipping client's perspective.

Transas says that, at present, there are no plans to further increase IIG's share of ownership in Transas, and that the acquisition will not entail any changes in Transas' senior operational management.

The majority of proceeds from the acquisition have been reinvested into the development of Transas' new and existing businesses.

UKHO completes SevenCs and ChartWorld sale

www.ukho.gov.uk

The UKHO has announced the sale of SevenCs and ChartWorld to Dutch-Belgian-Trading GmbH (DBT).

SevenCs is a software company that develops software for the maritime navigation industry, and was acquired by the UKHO in 2005 to support the development of digital navigation products and services.

Its subsidiary company, ChartWorld, is a digital chart agent and value added reseller (VAR) which provides digital maritime data and data services.

"The sale of SevenCs and ChartWorld to DBT is part of our strategy to focus resources on our core area of expertise; providing highly accurate, trusted navigational data which seafarers need to operate safely and efficiently," said Ian Moncrieff, Admiralty CEO.

"We will continue to work closely with our distributors and customers to ensure that we're delivering that information through Admiralty products and services which best meet their requirements."

"I'd like to thank everyone at both SevenCs and Chartworld for their contribution to Admiralty's development, and I'm delighted that DBT is committed to maintaining both companies in Hamburg and has ambitious growth plans that involve both SevenCs and ChartWorld together."

AIS-SART launched by CML Microcircuits

www.cmlmicro.com

CML Microcircuits has announced the launch of the new Marine AIS Search and Rescue Transmitter (SART) processor, the CMX7045.

The CMX7045 is a baseband processor fulfilling the needs of an AIS-SART and meeting IEC 61097-14 requirements.

An AIS-SART is a self-contained radio transmitter that is deployed by a survival craft or distressed vessel to notify its position for the purpose of rescue.

In a rescue situation the device repeatedly transmits its updated position reports using a standard AIS. Position and time synchronisation is derived from an onboard GNSS receiver (eg GPS).

Every minute the unit transmits multiple position reports to maintain a high probability that at least one of the position reports is sent on the highest point of a wave, guiding rescue services to its location.

The CMX7045 employs a 9600 baud GMSK modem for the transmission of formatted AIS data, and offers low power sleep modes to maximise safety-battery life.

Tolani Shipping to use MARIS VDS for fuel-saving initiative

www.maris.no

Tolani Shipping's Singapore arm, Tolani Shipping (S) Pte Ltd, is to use the Voyage Decision Support (VDS) system developed by Maritime Information Systems (MARIS) as part of an initiative to adopt green technology on its fleet of owned and operated vessels.

Tolani Shipping owns a fleet of bulk carriers ranging in size from 50,000dwt to 84,000dwt, and with an average age of five years. With its origins in India, Tolani Shipping established a presence in Singapore in 2003 and operates vessels under both the Indian and Singaporean flags.

"We are looking to provide our charterers with the option of using the system to minimise the carbon footprint and reduce the impact on the environment and save on fuel," said Rohet Tolani, managing director of Tolani Shipping (S).

"Tolani Shipping's target is to reduce fuel consumption by an annual average of 3 per cent per vessel and, on specific longer voyages, by 5 per cent per vessel."

The company will initially implement the VDS system on five Singapore flagged vessels in support of the Singapore Maritime and Port Authority's green initiatives, according to Capt Mikkjal Poulsen, general manager, Tolani Shipping (S).

"Each vessel will be able to reduce its environmental impact through reduced emissions due to lower levels of fuel consumption, made possible by the system providing real-time guidance for optimal route planning to the Master, using technology, data and methodology which is superior to that used by traditional weather routeing services," he said.

"The integration of this routeing with the ECDIS system will also lead to safer navigation overall. It should certainly establish a new role model for superior standards within the industry."

The MARIS VDS System is an electronic tool based on the MARIS ECDIS, and is designed to plan and execute voyages in a safe and optimised manner, while also allowing for documenting and analysis of results.

The MARIS VDS System comprises a separate VDS computer, which is also a fully functional ECDIS. It operates in a LAN with the two regular ECDIS installations required for approved paperless ECDIS navigation.

The reason for choosing a total of three is that the VDS will have a second important function as a spare ECDIS. All three ECDIS installations receive required navigational information from the MARIS Digital Server.

"A reduction in the impact on the environment and the fuel saving potential of the VDS System has already been tested, proven and documented by major oil companies, but it has potential uses for other types of vessels such as bulk carriers," notes Bhupesh Gandhi, director of Asia Pacific, MARIS.

"The project with Tolani Shipping will highlight the unique advantage of VDS being based on an ECDIS system at the forefront of strategy as owners pursue measures to cut costs in this uncertain economic environment."

Online ECDIS training set for launch

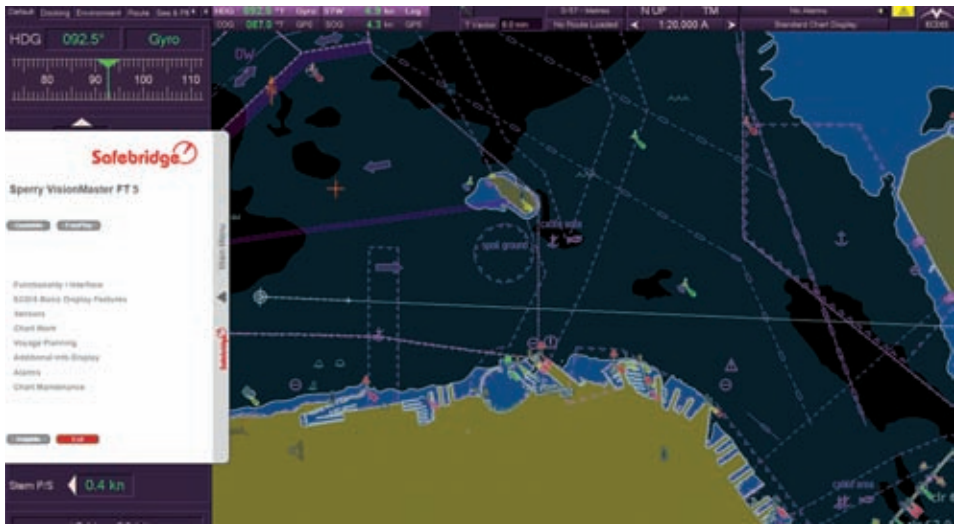
www.safebridge.net

Safebridge has announced the first release of its new online courseware for type-specific ECDIS training, which will be commercially available by the end of the year.

The Safebridge training software platform combines an e-learning component with OEM software and electronic charts (ENC). The learning process is controlled by Learning Management Software (LMS) to provide an interactive simulator that is true to the actual ECDIS brand being studied.

The company has cooperative agreements to develop type-specific training packages built around ECDIS products from Sperry Marine, Imtech, Transas, Raytheon Anschütz and JRC, and expects to develop similar programs for other ECDIS suppliers in 2012.

"As the new IMO ECDIS carriage requirements come into effect in 2012, internet-based e-learning provides a cost-effective training tool to meet the type-specific training requirements mandated under STCW, ISM, Port State Control and Flag State regulations," said Ulf Steden, managing director of Safebridge.



The Safebridge system allows seafarers to complete type-specific ECDIS training online

"While many ECDIS suppliers offer their own type-specific training courses, it is impractical and expensive for an officer to attend these one- or two- day courses for multiple ECDIS vendors. With the Safebridge solution, they now have the convenience of doing it all online with self-paced guided courseware."

"It also makes it easy for officers to retrain on new equipment when moving to a ship using a different ECDIS system and enables convenient re-certification as suppliers roll out new versions of their ECDIS software."

Users can log on to the Safebridge server via the internet to access the e-learning modes, including a guided tutorial, self testing with feedback and free play on the live system.

Students are taken step by step through modules as if they were using the actual technology, and are shown how to use each feature in various simulated scenarios.

Upon successful completion of the course, the student's online examination is graded by a qualified instructor, and the student receives a certificate of competence.

Mr Steden notes that internet-based training can be a very efficient use of training resources, since it can support a scalable number of students simultaneously.

ECDIS data simulator from Sailsoft

www.sailsoft.nl

Sailsoft has introduced its new ECDIS Master maritime navigation sensor simulator, used to assist in creating scenarios for ECDIS simulator training.

ECDIS Master dynamically simulates a number of navigational instruments and sensors like GPS, Gyro, weather, sounder and velocity, as well as different types of moving targets like AIS and ARPA.

The output of the simulator is in the NMEA 0183 (IEC 61162) data format, which can be input straight into chart plotters, ECDIS equipment and other nautical applications requiring NMEA input data.

Sailsoft says that the system is independent of ECDIS supplier-type, and can be used in uniform training routines over any IEC 61162 compliant ECDIS system, as well as for supplier-location independent training.

The company has made a free trial version of the system available for download from its website.

New version of FleetView from Transas

www.transas.com

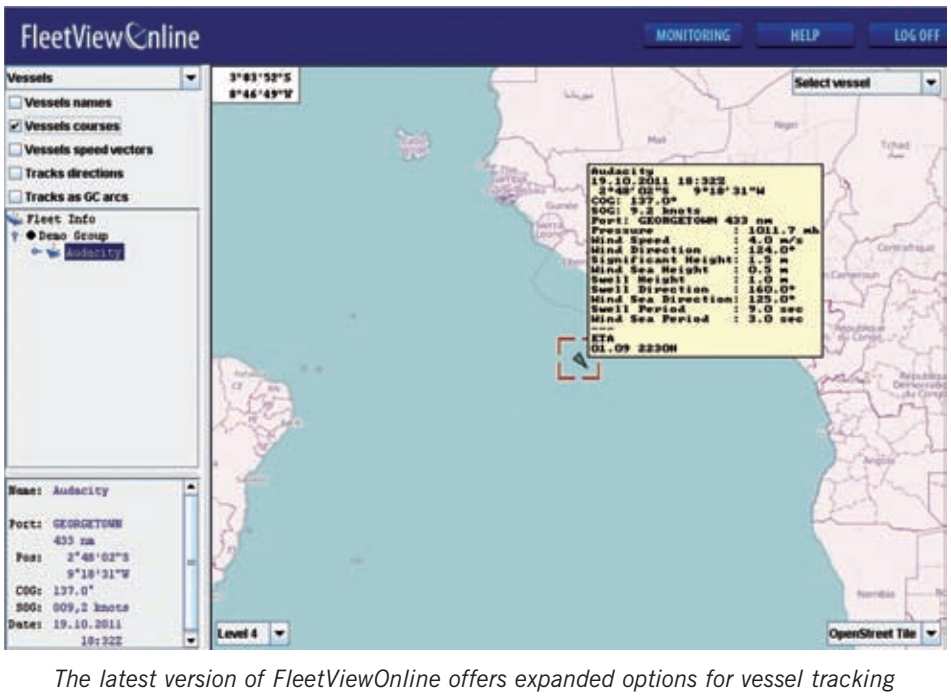
Transas Marine has introduced a new version of its fleet SSAS and tracking service, with the launch of FleetViewOnline 3.11.

The new version offers three alternatives for electronic chart presentation; Transas Marine's TX-97 charts with worldwide coverage, OpenSteetMaps land charts and any charts provided by Web Map Service.

Web Map Service allows for the loading and display of georeferenced images generated by a map server using data from a GIS database, such as, for example, charts from third-party providers, weather forecasts, satellite images, and images of industrial zones.

In FVO 3.11, SSAS and tracking functionality for Area A4 (Polar Regions above 70 degrees North or South latitude) is also available, for vessels equipped with SAILOR H4122 Iridium SSAS.

An Android client for FVO has been released and can be downloaded from the FleetView website, including functionalities such as graphical fleet location presentation, vessel tracks, the ability to send commands to a terminal, user zones presentation and editing of alarms, weather presentation, and various reports (fleet report, track report, SSAS log).



The latest version of FleetViewOnline offers expanded options for vessel tracking

In addition, a mobile version of the FleetViewOnline website is available for other smartphones and tablet computers, using any operating system.

In other news, Transas also reports that the new French National SAR Training Center, to which it has supplied the simulators, is now open for training in St-Nazaire harbour in the West of France.

Volunteers will be trained there using both simulation and real navigation equipment.

The simulator bridge mock-up has been designed in accordance with original ship drawings and is an exact 1:1 replica of one of SNSM's latest 14-metre life boats (V1NG).

A Full mission bridge with a 210° FOV with circular projection, a small 3-channel cubicle, instructor workplace with selective visual channel, introduced as an Evaluation bridge, and a complete VTS/MRCC desk with VTS simulator including Navi-Harbour 4.3 VTS were also supplied.

MITAGS gets ECDIS course approval

www.mitags-pmi.org

The US Maritime Institute of Technology and Graduate Studies (MITAGS) has received approval of updates to its Electronic Chart Display and Information Systems (ECDIS) MITAGS-179 course, part of its Advanced Navigation course.

This approval now aligns the course with the latest revisions to the Standards of Training, Certification and Watchkeeping (STCW) code as amended in 2010.

"Any applicant who has successfully completed the ECDIS course at MITAGS will now be considered to have successfully demonstrated the competencies of the amended STCW code of 2010," said Eric Friend, director of training for MITAGS.

"Our Pacific Maritime Institute (PMI) will be seeking approval for their course as well."

"MITAGS-PMI has strived to maintain its leadership in maritime training and will continue to remain vigilant about any and all changes to US Coast Guard and International Maritime Organization requirements regarding training under the STCW Convention."

Ship routing system begins trials

www.tidetech.org

A routing efficiency system by oceanographic data provider Tidetech is currently being trialled with a major cruise line company, the company reports.

The data can be integrated with onboard navigation systems and provides a feed of global ocean currents, sea surface temperatures and wave forecasts.

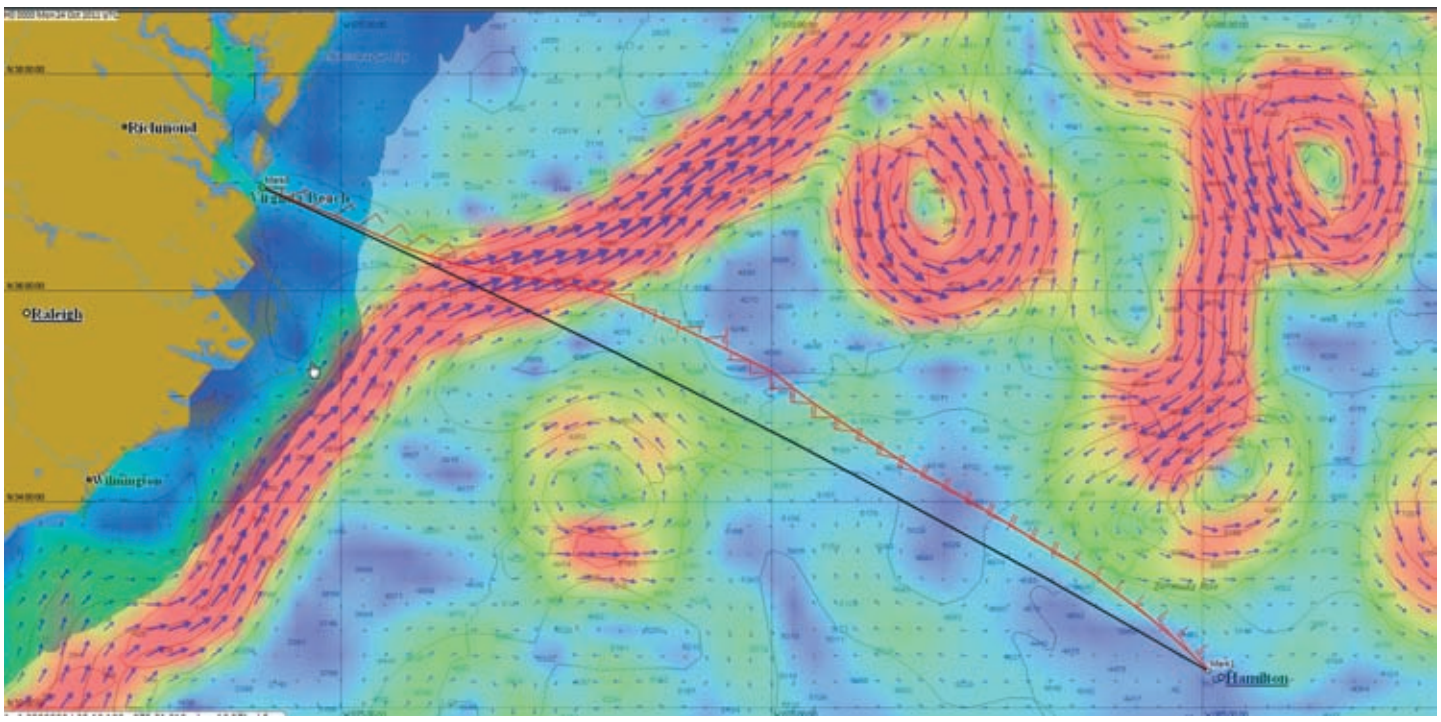
Tidetech's managing director Penny Haire said the data could potentially save shipping companies thousands of dollars in fuel.

"Ocean currents and trade winds have been relied upon for hundreds of years in trade shipping," she said.

"Previously data was based on estimates and historical information, providing an average ocean current estimate for a given month. Our oceanographic scientists evaluate data from multiple sources including satellites, government agencies and observation (among many others) to establish the exact location of constantly moving currents."

"The combination of applied oceanography and meteorology can result in large bunker cost savings and in turn will help ships meet their environmental obligations."

A live trial is currently underway aboard several cruise liners, and Tidetech says that it expects to have definitive results available by the end of 2011.



The Tidetech system is currently being trialled by a cruise line, with the aim of reducing fuel usage

1500 Pole Star ships contribute to Amver

www.polestarglobal.com
www.amver.com

Pole Star has reported that the number of ships contributing position reports to the Amver (Automated Mutual-Assistance Vessel Rescue System) search and rescue service via the Pole Star automatic Amver link has passed fifteen hundred vessels.

Pole Star developed the automatic link in 2008, in collaboration with Amver, allowing ship owners and operators to automatically send position reports directly to the rescue system, relieving the master of manually submitting position, deviation and final arrival reports.

Initially available to Fleet Management customers, Pole Star extended the Amver link to its SSAS Alert Advanced customers in March of this year. Since that time, the number of vessels using the feature has almost doubled, growing at a rate of four vessels per day and reaching a new high of 1,500 vessels in November.

"Pole Star is committed to promoting safety of life at sea which includes helping to reduce the bureaucratic burden on the master and ships' officers," commented Paul Morter, director of sales (commercial marine) at Pole Star.

"Automated reporting to Amver is one way of supporting these goals."

Benjamin Strong, director of Amver Maritime Relations, also praised the service and Pole Star's customers for their assistance in ensuring that calls for help are answered.

"It's a demonstration of the sorts of achievements that can be accomplished when government and the private sector work together," he said.

Cooperation for Thomas Gunn and Regs4ships

www.thomasgunn.com

Thomas Gunn has teamed up with Regs4ships to incorporate Regs4ships' digital maritime regulations into Thomas Gunn's Voyager navigational data management system.

Regs4ships delivers vessel electronic documentation covering Flag State requirements, EU Legislation, ILO Conventions and IMO output, amending and updating these key documents as required, to assist shipping companies in maintaining regulatory compliance.

Thomas Gunn's Voyager provides a personalised database of publications, charts and the applicable notices to mariners (NTM).

Weekly updates are provided by e-mail or via the internet, using file compression to reduce the size of transfers. Only files of relevance to the vessel's chart outfit are supplied, to further minimise data traffic.

Thomas Gunn says that nearly 2,000 vessels are currently subscribed to the Voyager service worldwide.

"Today's bridge environment is becoming more complex and regulated, and the navigator is subject to increasing pressure in order to stay abreast of regulations and requirements," said Thomas Gunn, founder and managing director of Thomas Gunn Navigation Services.

"Officers and, in particular, navigators demand access to the most up-to-date information, exactly when they need it - be that navigational charts or legislation. Our partnership with Regs4ships means that this important information can be delivered regularly in one package through the Voyager chart management system."

"The synergy between our two businesses can only benefit our customers. Customer response to this initiative has been very positive so far and we are looking forward to a long and mutually productive partnership with Regs4ships in the future."

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The dangers of presumed competence

An MAIB investigation into the collision between the container feeder vessel Philipp and the fishing vessel Lynn Marie has highlighted the dangers of shipping companies presuming competence in their watchstanders, based on what their qualifications might suggest

Earlier this year, in April 2011, a container feeder vessel, the Philipp, collided with the dredger FV Lynn Marie off the coast of the UK. Thankfully there were no injuries on either ship, but the dredger did sustain significant damage and had to be towed to the Isle of Man.

An investigation into the incident by the UK's Marine Accident Investigation Branch (MAIB) showed that the container vessel was fitted with an integrated bridge system comprising two multi-functional displays fitted either side of a centreline conning display.

This set-up included an electronic chart system (an ECS, rather than a full ECDIS, so paper charts were used as the primary source of navigation) which was overlaid with automatic identification system (AIS) data.

In addition to this an automatic radar plotting aid (ARPA) was also in use aboard the ship. The multi-function displays were capable of displaying either electronic chart or ARPA information, and both were interfaced with the AIS.

The engine, helm and autopilot controls were positioned adjacent to the conning display, with each bridge wing conning station equipped with a single display, helm and engine controls, and a compass pelorus.

However, despite the availability of these technologies, organised in a way which should have been enough to provide sufficient situational awareness, the Philipp's OOW was still unable to avoid a collision.

Unfolding events

The events of April 9th aboard the Philipp are described by the MAIB's report as follows.

"After taking over the watch, the chief officer sat in the forward-facing chair sited on the starboard side of the centreline control console from where he could see electronic chart system (ECS) with overlaid automatic identification system (AIS) information on the display directly in front of him."

"The display on the port side of the centreline console was configured to show 'X'-band automatic radar plotting aid (ARPA) radar information. The radar was operating in long pulse and the display was switched to the 6nm range scale, north up and in relative motion."

"The radar origin was offset to the south east, enabling a detection range ahead of the vessel of about 9nm. The ARPA alarms were set to activate for radar targets with a closest point of approach (CPA) of zero within 2 minutes. Automatic target acquisition was not selected. AIS information was also overlaid on the port display."

After approximately 0424 the report explains that the chief officer began to make a series of adjustments to the autopilot heading in an attempt to keep clear of a number of different fishing vessels in the vicinity. However, at 0451 the MAIB notes that the AB reported that Lynne Marie was by now very close on the starboard bow.

"The fishing vessel's red side light, white masthead light and aft deck lights were clearly visible. The chief officer moved from his seat and adjusted the autopilot override joystick sited on the centreline console in order to turn the container ship to port towards a similar heading to Lynn Marie's; a maximum of 8° of helm was applied."

"The distance between Philipp and Lynn Marie continued to reduce, so the chief officer sounded five short blasts on the ship's whistle and the lookout shone a searchlight towards the fishing vessel."

"The chief officer also moved from the centreline to the starboard side of the bridge to get a clearer view of the rapidly closing fishing vessel."

"At 0453, the starboard side of the container ship hit Lynn Marie's port outrigger; the container ship was still under helm to port and her heading was passing through 250°. Philipp suffered cosmetic damage to her starboard side in way of bay 28."

The mate keeping watch aboard the Lynn Marie was, at the same time, monitoring his own chart plotter and radar, using a radar display set on the 6nm range scale.

However, the report notes that the mate was convinced from his information that Philipp had altered course and would pass clear of the Lynn Marie.

"The mate monitored Philipp's radar target until it was lost in the sea clutter close to the centre of the radar display. He then stood up from his seat and looked out of the port aft wheelhouse window, where upon he saw the container ship bearing down onto Lynn Marie from abaft the port beam: he did not hear the container ship sound her whistle."

Based on the AIS and SVDR data gathered from the Philipp during its investigation, as well as GPS data from the Lynn Marie, MAIB reconstructed the moments leading up to the collision to help identify the contributing factors to the collision.

This reconstruction shows that, between 0440 and 0450, the compass bearing of Lynn Marie from Philipp moved from right to left, indicating that she was passing ahead of the container ship.

The report continues: "It is estimated that had Philipp's chief officer kept the container ship heading 314°, instead of making successive small alterations to port….Lynn Marie would have passed 1.5 miles ahead of Philipp, with a CPA of 6 cables (on) the container ship's port bow."

"The adjustments to the autopilot and the chief officer's use of port helm shortly after 0451, led to the container ship following a curve of pursuit toward Lynn Marie's port quarter while travelling at twice the speed of the fishing vessel."

Situational awareness

Situational awareness, or lack thereof, is one of the key points to consider from this incident. MAIB notes that, based on descriptions and the reconstruction of events, it is clear that the Phillipp's chief officer was aware of other vessel's in the vicinity and had taken measures to avoid them.

However, the report also notes that: "it is equally clear from the recorded radar information that he did not acquire any of the radar targets using ARPA. Consequently, the chief officer did not make full use of the information available to him regarding vessels' courses, speeds, bearing changes, and CPAs."

"His preference to predominantly remain seated at the starboard side navigational display, where only ECS and AIS information was available, also meant that he did not monitor the bearings of vessels in sight using the compass peloruses sited at each bridge wing."

"The chief officer relied solely on his visual assessment of the relative movement of other vessels. Consequently, his situational awareness was much reduced and he was only able to deal with immediate shipping problems, rather than maintain an overview of the traffic situation and the likely consequences of his course alterations."

MAIB suggests that this lack of situational awareness was what led to the inaccurate assessment of the risk of collision with the Lynn Marie, compounded by his further inappropriate avoiding action.

On the Lynn Marie itself it was noted that the mate had detected Philipp both by radar and visually when the container ship was at a distance of about 4nm, however it would appear that he lacked the necessary competence to adequately deal with the situation.

The report states: "Although the mate did not know how to fully utilise the navigation equipment fitted in the vessel's wheelhouse, and was also unfamiliar with the COLREGS, his assessment that Philipp would pass clear down Lynn Marie's port side was correct."

"As the distance between Philipp and Lynn Marie reduced, the mate was aware of the continued approach of the container ship but, because he was not closely monitoring or plotting her movements, he was unaware of her rapidly reducing CPA."

This incident highlights what could be a disturbing trend in 'presumed competence', where watchstanders, who may have the correct qualifications are, nonetheless, not fully competent in performing their duties in certain circumstances.

In the case of the Phillipp, for example, the chief officer had attended courses in the Philippines covering ECDIS, ARPA and bridge team management (BTM), but his actions onboard the ship seem to suggest that a sufficient level of competence had not been reached.

MAIB's comments in this regard are as follows.

"Ship managers frequently assume deck officers' STCW certification guarantees a level of competency. While every deck officer should have a sound knowledge of the COLREGS and apply them correctly, regrettably a significant number of collisions, including this accident, indicate that this is not always the case."

"Furthermore, individuals' preference for how, and to what extent, navigational aids such as ARPA, AIS, ECS and ECDIS are used will vary considerably according to their knowledge and experience."

"In order to raise and maintain bridge watchkeeping standards, it is important that vessel managers are proactive in ensuring that their bridge watchkeeping officers are competent, and that they have the knowledge and are provided with the guidance necessary to properly utilise the navigational aids fitted to their vessels."

Conclusions and recommendations

The withering assessment of the competence and training of the watchstanders involved in this incident is carried through into MAIB's conclusions and recommendations following its investigation.

On the navigational side, the three conclusions that are most relevant are the following:

"Philipp's chief officer did not utilise the full extent of the information available to him regarding vessels' courses, speeds, bearing changes, and CPAs. Instead, he relied solely on his visual assessment of the relative movement of other vessels. This resulted in him making an inaccurate assessment of the risk of collision with Lynn Marie."

"There is a need for vessel managers to ensure that their officers are competent, and that they are trained and capable of gaining the maximum benefit from the navigational aids available."

"Lynn Marie's skipper's decision to use an unqualified wheelhouse watchkeeper, who did not fully understand the operation of the vessel's navigation equipment or have a working knowledge of the COLREGS, to take Lynn Marie to the fishing ground in a busy shipping environment and in the dark, was inappropriate."

To try and avoid such incidents in future MAIB also recommended to the container shipping company that its bridge watchkeepers are "provided with training and guidance such that the operation of navigation and anti-collision aids fitted to its vessels is understood and the equipment properly utilised." DS

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When asked about the origins of ShipNet 12, Head of Product Management Luis Panozzo said "Version 12 comes out of an extensive process of looking at industry trends and talking to our customers to see where ShipNet can really deliver value to their business. The functionality contained in ShipNet 12 will definitely help shipping companies be more efficient in what are undeniably testing times for the industry as a whole".

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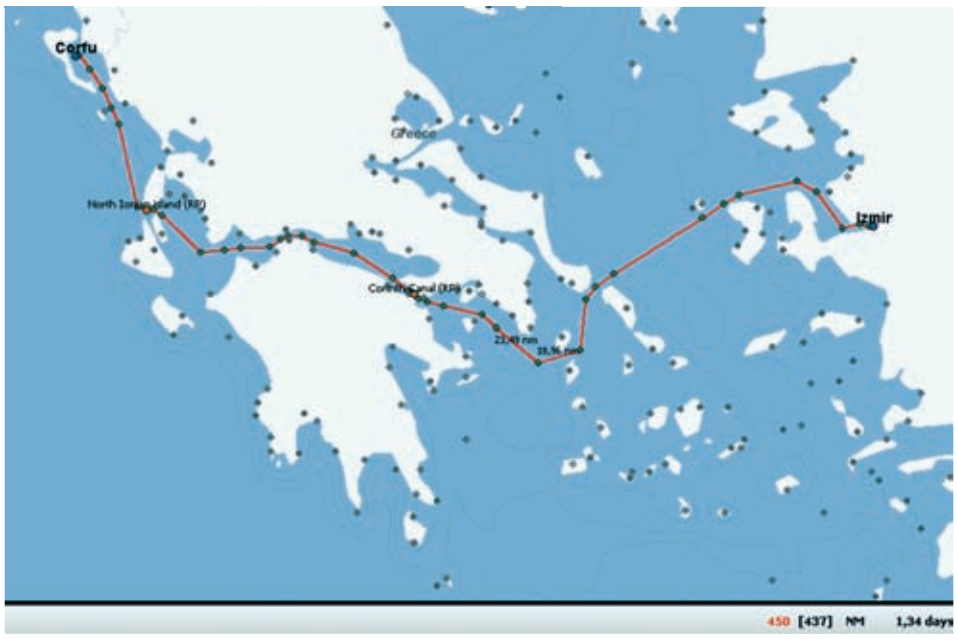

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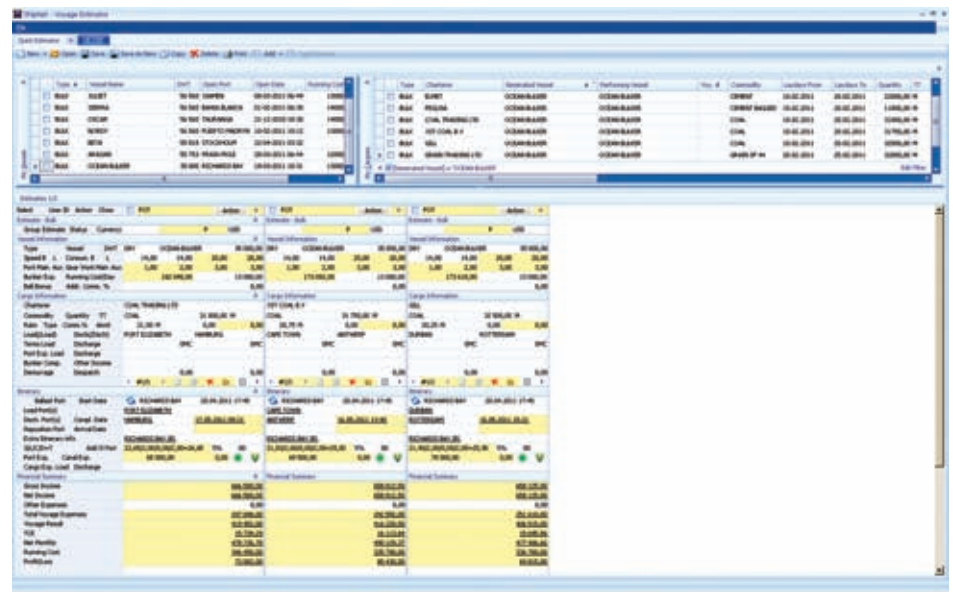
Keep up to date with ShipNet 12 at www.shipnet.no/ShipNet12



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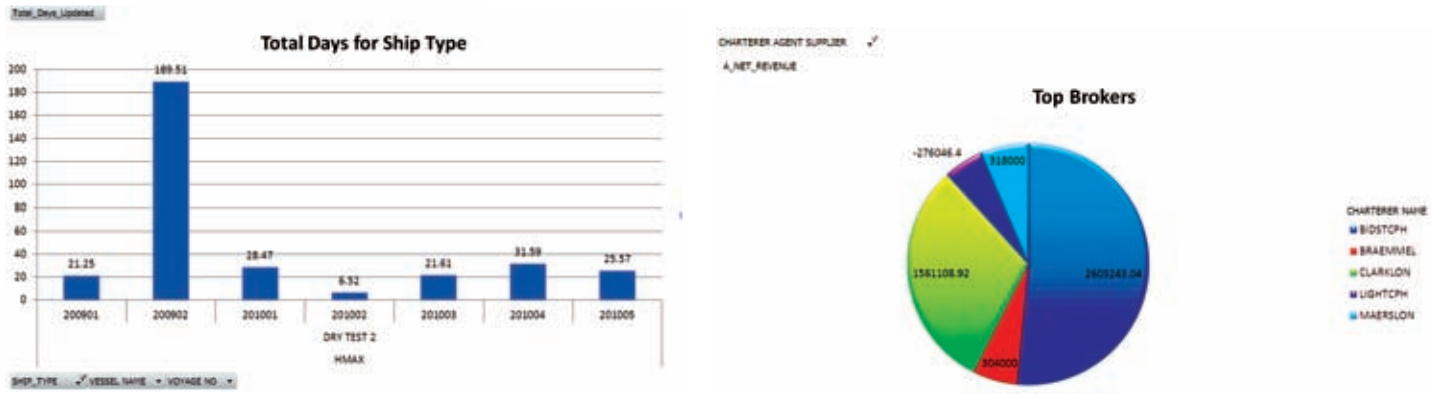

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Navigational integrity

The usefulness of electronic navigational systems only stretches as far as the accuracy of the information they display. With this in mind, it is imperative to examine the integrity of the data that is being relied upon, as *Dr Andy Norris* explains

It has been often commented that there is a distinct difference between older and younger OOWs regarding their attitude to electronic navigational aids.

In the extreme caricature, the older navigator highly distrusts any electronic equipment and relies solely on the view from the bridge windows while the younger one is glued to the instrumentation, paying scant regard to the reality outside.

Of course, the diligent OOW needs to be highly wary of any one navigational input, whether derived visually from the bridge windows or electronically. An important task of the watchkeeper is to compare all the relevant navigational data available and look for tie-ups or inconsistencies.

This gives a measure of the integrity of the perceived navigational situation – where there are inconsistencies special care needs to be taken but appropriate tie-ups give more confidence that the situation is being properly perceived.

The steady move to ECDIS needs an ever greater awareness of the true capabilities and weaknesses of electronic based navigation – after all, ECDIS does not have a non-electronic mode.

Positional integrity

The normal operation of ECDIS relies on the continuous availability of high accuracy positional data.

Since this cannot yet be guaranteed always to be the case, it means that continual consistency checks on positional accuracy have to be part of the normal human process of using ECDIS – does everything tie up?

Fortunately, in many coastal and buoyed waters there are near constant opportunities to see that there is reasonable consistency every time ECDIS is looked at.

Compared to the use of paper charts ECDIS greatly simplifies this task, not least because the electronic estimate of own ship's position is being constantly displayed on the chart.

Also, because the equipment is usually situated close to the bridge windows, it allows easy visual comparison with the outside world. To an ever increasing number of OOWs, it makes good sense to aid this by generally using course-up or head-up display mode when route monitoring.

Even then, more formal checks on positional integrity need to be carried out at frequent intervals. These should at least check whether a single visual or radar derived bearing taken on an appropriate charted object accurately aligns with that derived from ECDIS. For radar, a single range measurement is also usefully used.

The low latency that can be achieved when plotting a single bearing or range onto a well designed ECDIS can identify when even reasonably small positional errors are present.

However, on some bridges it can be a long walk to take a visual bearing, considerably adding to the latency of the measurement, unless teamwork is employed.

Of course, consecutive bearings should ideally be around 90° apart – in practice, generally at least greater than about 45° – to avoid hiding a positional displacement aligned to any one bearing measurement.

Furthermore, ECDIS provides a highly useful facility allowing two or more bearing or range measurements to be combined into a positional estimate. An automated dead reckoning or estimated position process within ECDIS compensates for the time delay between consecutive measurements.

The equipment automatically makes a record of this position, together with the user input bearings and ranges. This electronic record replaces the regular 'cocked hat' positional checking evidence on paper charts so beloved of port state inspectors.

For ocean passages, the DR/EP facilities of ECDIS can be used to keep a long term check on GNSS derived position. Furthermore, celestial position estimates can be readily input into ECDIS.

The very same facilities are there to be used if there is a complete failure in electronic positioning. Despite a surprisingly common view to the contrary, ECDIS is a highly useful asset when GNSS suffers an outage.

In contrast, the paper chart is much less effective.

Consistency checks

Other consistency checks on all navigational data significant to the voyage are necessary to assess the integrity of the perceived situation. These should be carried out using both ECDIS and radar.

A recently witnessed example on a chart radar – that is a radar with an ENC chart underlay – showed that when set to a short range scale the radar returns from all charted radar-conspicuous objects had become non-coincident with their charted positions.

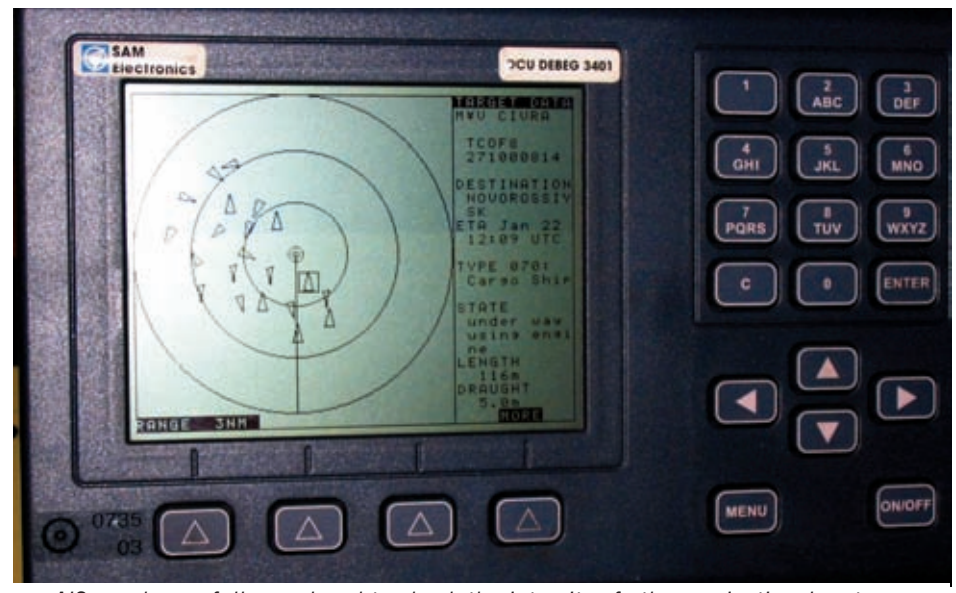
There was initial speculation that it was due to a positional problem, an offset of the GPS or perhaps even a datum issue. On closer examination of the display, however, it was realised that all the radar targets had a very similar range discrepancy.

In fact, the radar had developed a range offset of about 70 metres, which was usefully identified by the visual analysis of the displayed discrepancy.

The same conclusion would have been obtained if a short range comparison had been made between radar and AIS returns.

Before AIS and electronic charts it was quite difficult to check the accuracy of radar and there has been a tendency by some to assume that radar range and bearing is always correct.

However, in general terms, AIS is typically at least twice as accurate as radar. For relative measurements radar only has to meet a range accuracy of 30 metres on a point target when operating at short range, and a 1° bearing accuracy, which at 1 nautical mile is also about 30 metres.



AIS can be usefully employed to check the integrity of other navigational systems. Photo: Clipper

AIS also conveniently defines the positional reference of the target – the centroid of a raw radar return does not provide any consistent reference.

This is the very reason that can cause strange discrepancies in the tracking data of a radar, particularly when a target is manoeuvring and changing its aspect to own ship.

Of course, it is not uncommon that the transmitted AIS information can be highly in error, which can cause dangerous confusion. Fortunately, the instances of this has significantly decreased since the early days of the system, mainly because of diligent monitoring and action by coastal authorities, but it still remains an everyday problem.

ECDIS, radar and AIS

The relative strengths and disadvantages of radar and AIS are actually very complimentary and it normally makes a great deal of sense to have both shown on the same display – the radar. Screen clutter can be reduced by sensible use of the automatic target association facility.

When there is a good tie-up of a target's radar and AIS properties there is a very high probability that the observed situation matches that of reality and therefore straightforward decisions can be made concerning that target.

If there is no tie-up or a tie-up is questionable then it requires a greater degree of caution in one's own navigational decisions.

Some have urged that ECDIS should be used as an integrated navigation display, with near continuous overlay of radar and AIS data. It has also been suggested that collision avoidance decisions can then be made from the ECDIS.

However, even though the temporary overlay of such data can be highly useful in assessing the integrity of a navigational situation, there are two major reasons why ECDIS should never be used as the primary collision avoidance display.

The first is that it is an IMO requirement that radar, AIS and other overlays on ECDIS must not degrade the displayed ENC data. This implies that the ENC data could sometimes compromise the overlaid data – a possible disaster situation if ECDIS is being inappropriately used for collision avoidance.

The second is that any radar functionality provided by manufacturers on ECDIS – or a multifunction display in ECDIS mode – will almost certainly not have been type approved to meet IMO's radar requirements, simply because it is primarily an ECDIS.

In reality, it is particularly difficult to conceive of a single display mode that could simultaneously meet IMO's radar and ECDIS requirements. It is therefore imperative that both ECDIS and radar displays are used together for the safe navigation of the vessel.

Also, since the electronic chart is so useful in being the backdrop for many navigationally significant functions, including met and NAVTEX data, it makes sense for a third display to be generally used for such overlaid data, rather than potentially confusing the main ECDIS display.

On many installations this could usefully be the regular function of the back-up ECDIS. 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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