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BP agrees fleet-wide VVOS contract

Jeppesen has agreed a deal to supply its vessel optimisation systems to BP Shipping's fleet of ships – a significant further move by Jeppesen into the voyage management software sector

BP Shipping, one of the world's largest operators of oil and liquid natural gas (LNG) tankers, has agreed a three-year deal to install Jeppesen's Vessel and Voyage Optimization Solution (VVOS) on 52 globally operating BP vessels.

The contract also provides for integration of Jeppesen's FleetManager shoreside software into BP Shipping operations. FleetManager will be used to track BP's owned and chartered vessels.

VVOS will be used to help BP vessels optimise ship routes and engine settings, while the FleetManager component will allow BP's shore side managers to monitor vessel performance at sea, and receive reports on any vessel's current operating environment.

VVOS incorporates hydrodynamic modelling computations, together with ocean forecasting tools, to recommend optimum speed and heading to minimise ship motions and reduce damage to the vessel and cargo.

The system uses a model of the ship's motion, engine and propeller characteristics to predict the ship's speed-over-ground and roll/pitch motions under forecast wind, wave and ocean current conditions for a given engine power and propeller RPM.

While underway, VVOS provides ongoing monitoring and alarms for excessive motions and accelerations, including parametric roll.

In addition, Jeppesen's Vessel Routing Services will be available to provide support from Ship Masters on shore to analyse ship data and respond with route planning and advisory services.

"After a thorough tender process and onshore/offshore trials, we determined Jeppesen's quality weather data and forecasting models, combined with its advanced user interface for both vessels and shore staff, made the company's solutions a good fit for BP Shipping," said Dan Read, global voyage operations manager, BP Shipping.

"We are excited to continue working with Jeppesen on this suite of solutions for our vessels and shipping operations."

The new technology should allow for routes to be optimised according to parameters such as speed, ETA, fuel consumption and ship motions (based on computer models of BP vessels and predicted impacts due to weather).

In addition, C-MAP electronic charts are built into both the shore and vessel based software interface, allowing vessels to perform depth and obstruction checks before accepting a route.

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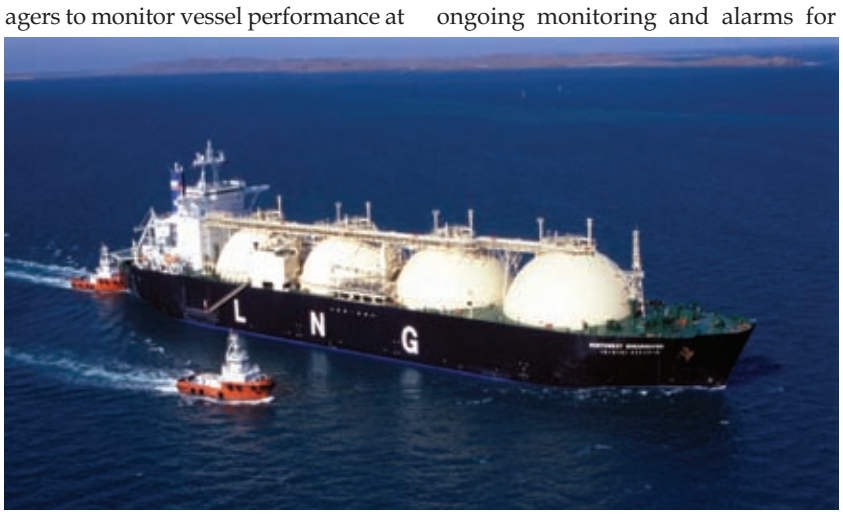

BP will use the system to optimise operations and reduce fuel consumption on 52 vessels. Photo: BP Plc

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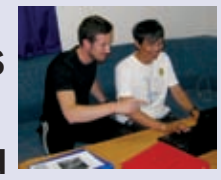

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"Over the years, BP Shipping has demonstrated a strong commitment to improved vessel efficiency and reduction of carbon emissions," said Jeppesen director of professional services Joel Meltzner.

"We're honoured that, following an in-depth evaluation of today's most advanced technologies, BP Shipping selected Jeppesen as its optimisation partner for these vessels."

Software growth

This BP deal represents one of the most significant single fleet contracts yet agreed for the Jeppesen VVOS system, and marks an expanding focus for the Boeing-owned company.

Jeppesen made its big move into maritime with its acquisition of Norwegian electronic chart provider C-MAP in 2006.

While C-MAP did offer some bridge software services, its main business was in the provision of its own portfolio of private electronic charts as well as production and distribution of official ENCs.

This seemed to be a complementary fit with the fact that, for Jeppesen itself, its own largest business area was the provision of navigational chart data to the aeronautical industry.

However, in 2008 Jeppesen made a significant addition to its marine portfolio with the purchase of Californian company Ocean Systems, a provider of vessel and voyage optimisation solutions.

The company also began to more aggressively market its voyage optimisation package in 2009 with the introduction of a 45-day trial and evaluation programme for prospective customers wishing to test VVOS.

This trial offering soon paid dividends when it was cited as being instrumental in the agreement of a new contract with NYKCool AB a few months later, to install VVOS aboard a class of refrigeration carriers trading from the Caribbean and Central America to Northern Europe.

This was followed by another trial with the US Navy, where the system was evaluated by Commander, Naval Meteorology and Oceanography Command – CNMOC – at the US Naval Maritime Forecast Centres in Norfolk, Virginia and Pearl Harbor, Hawaii.

The new deal with BP now adds to this list, offering the most compelling evidence yet that Jeppesen is no longer an electronic chart-focused company but expanding its use of navigational data to make a wider mark on the maritime technology sector. DS

SingTel and Navarino confirmed as GX resellers

www.inmarsat.com
www.singtel.com
www.navarino.gr

Inmarsat has signed Singapore Telecommunications Limited (SingTel) and Navarino as the latest Value Added Resellers (VAR) for the maritime market for its Global Xpress (GX) Ka-band service.

SingTel has been installed as the first telco in Asia to have been appointed as a reseller for GX, which is scheduled to enter service in 2014.

"By harnessing our telco and ICT capabilities in combination with GlobalXpress, we are now able to offer our maritime customers a fully integrated end-to-end solution," said Andrew Lim, managing director of business group, SingTel Group Enterprise.

"The maritime industry is facing unprecedented challenges and opportunities created by rapidly changing technologies. Together, GlobalXpress and SingTel will be able to lead the change and revolutionise the future of maritime communication, which is an exciting prospect for our customers."

Frank Coles, president of Inmarsat Maritime, described the deal as a natural result of decades of cooperation between the two companies.

"SingTel has an extensive knowledge of the Asian and Australian markets with a wide distribution network through which to deliver Global Xpress," he said.

"SingTel is the preeminent communication solution provider in Asia and the ideal partner to introduce Asia's growing maritime market to the potential of Global Xpress's superior high bandwidth value."

Piraeus-headquartered Navarino, already part-owned by Inmarsat via a shareholding held by Stratos prior to Inmarsat's acquisition of that company, is the first Greek VAR for Global Xpress.

Navarino has a client base of more than 500 shipping companies throughout Europe and Asia, serviced by offices in Piraeus, Hamburg, Oslo, Cyprus, Hong Kong and Singapore.

"Global Xpress is the best response to the increasing need for data-driven and cost-effective communications at sea, offering the shipping industry unprecedented data speeds and global coverage," said Dimitris Tsikopoulos, CEO, Navarino.

"Greece has the largest single ownership of ocean-going vessels, with around 17 per cent of the world's ship owners based here. Our customers have the highest bandwidth requirements and Global Xpress, with its combination of a new super-fast Ka-band satellite network and the existing FleetBroadband service, will deliver a quality, global service with the utmost reliability."

"The deployment of Global Xpress will herald a revolution in maritime communications and will have a significant impact on how the shipping industry can improve its profitability through achieving long term cost efficiencies."

Navarino and SingTel join JRC, Telemar and GMPCS as confirmed resellers for maritime for the Ka-band service.

Inmarsat has previously indicated that there will be a total of 8-10 resellers eventually appointed for Global Xpress, including Inmarsat itself via its direct sales channel.

"Navarino is a highly specialised integrator, reseller and developer of maritime communications services. Its worldwide installation and support capabilities will certainly aid the swift deployment of Global Xpress amongst their customers in both Europe and Asia, and we are delighted to recognise them as the first Global Xpress VAR in Greece," said Frank Coles.

"I believe Navarino is well positioned to offer the next generation of Inmarsat services to its current and future customers."

The list of Global Xpress resellers is expected to total 8-10 companies when the service is launched

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Astrium extends VSAT coverage

www.astrium.eads.net

Astrium has completed an extension of its worldwide VSAT satellite communications services, which it says will offer more bandwidth over smaller antennas.

The company claims that the addition of further service in the Atlantic and Indian Oceans will allow it to provide the most extensive global VSAT coverage available in the market.

This extension will apply to the Astrium Services brands of Sealink, Wavecall (via Marlink) and the former Vizada brand Pharostar.

These VSAT services are based on iDirect technology and use terminals ranging from 60cm to 2.4m in size. Data throughput speeds have increased to up to 3 Mbps for standardised VSAT services, and up to 10 Mbps for customised, tailored solutions via Sealink.

Geographical coverage extensions are now completed over the Indian Ocean Region (IOR) and the company plans to further expand over the southern part of the Atlantic Ocean by year end.

Customers currently using Astrium's VSAT services will automatically receive coverage in the new areas.

"We are pleased to announce that with the extended, near global coverage, Astrium Services now provides the most extensive Ku-band satellite coverage in the market," said Tore Morten Olsen, head of maritime within Astrium's Business Communications division.

"By providing the maximum coverage, we are allowing customers to limit their usage of alternative, more costly communications when they are out of VSAT coverage area."

This expansion is supplemented by a range of newly signed capacity deals with SES to deliver connectivity to vessels around Latin America as well as in the North Sea, Mediterranean Sea, Red Sea and Gulf of Aden.

Astrium Services will renew capacity on the SES-4 satellite to provide its maritime customers with communications services. Located at 338 degrees East, SES-4 is among several SES satellites providing capacity to Astrium Services.

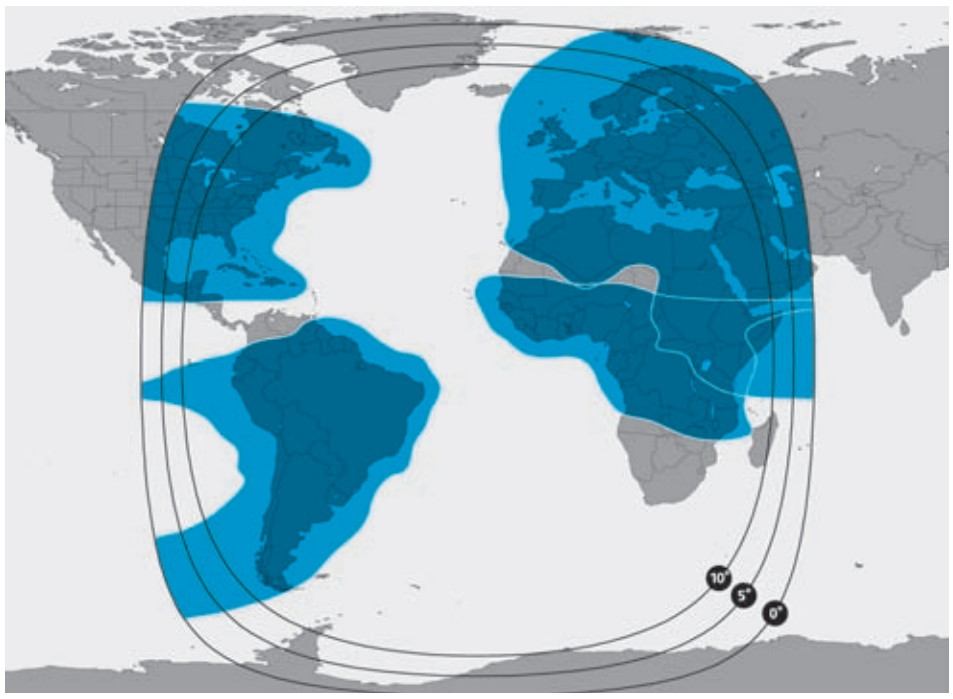
"The comprehensive coverage of the new SES-4 satellite extending from the Arabian Sea to the South Pacific Ocean is ideal for our customers in this region," said Mr Olsen.

"Combined with SES' satellite expertise and our dedicated sales and service team, this coverage is key in developing reliable VSAT services for our global customers in these strategic maritime routes."

Astrium says that the wider footprint of SES-4 will extend its coverage over the Gulf of Aden to support customers in piracy risk zones, for instance off the coast of Somalia, as well as maritime customers in Europe.

"On-the-move global communications needs of the maritime industry have to be met constantly even when vessels and crews are at remote regions of the world," said Norbert Hölzle, senior vice president of Europe, commercial for SES.

"The series of new contracts with Astrium Services reinforces our long-standing partnership and is a testament to our leading position in delivering mobility satellite services."



Capacity on the SES-4 satellite will be added to Astrium's VSAT services

Million minutes per month on Globe GSM

www.globewireless.com

Globe Wireless has announced it has reached the milestone of surpassing one million GSM minutes per month on its Globe Mobile system.

Since its launch in April 2009, Globe Wireless says that GlobeMobile has grown to become the world's largest maritime GSM network with approximately 20,000 active subscribers on just over 1,300 vessels.

The Globe Mobile service has 20,000 subscribers

GlobeMobile provides crew members with voice calling and SMS capabilities, allowing for standard voice calls to and from the vessel, SMS messaging and free onboard mobile-to-mobile calling.

The system can be used with Inmarsat FleetBroadband and VSAT terminals through the company's own Globe Wireless-built GSM network.

Crew members insert the GlobeMobile SIM card into their own GSM phone, and can then send and receive voice calls and SMS messages while at sea.

"We have over one million reasons why GlobeMobile is the maritime industry's GSM service of choice," said David Kagan, president and CEO of Globe Wireless.

"I think it speaks volumes about how our customers recognise the value of GlobeMobile in being the anytime, anywhere at sea, personal communications solution."

Beam and Iridium to collaborate on new product

www.beamcommunications.com
www.iridium.com

Beam Communications has entered into a strategic product development initiative with Iridium Communications, which will see the companies collaborate on the manufacturing of a new product.

The agreement signed by the two companies defines the new product development initiative for which Beam Communications, a wholly-owned subsidiary of World Reach Limited, will be the primary contractor and Original Equipment Manufacturer.

"Beam was appointed a Value Added Manufacturer ten years ago and since this time has developed a strategic range of Iridium based accessories and terminals for the Iridium satellite network," commented Joel Thompson, vice president product line management at Iridium Communications.

"This new initiative however is the first of its kind whereby Iridium is directly utilising Beam's engineering and manufacturing expertise to design, develop and manufacture a new dedicated Iridium product."

The companies say that, for commercial reasons, the exact details of the product being designed and manufactured cannot be disclosed at this time, however it has been revealed that an initial order commitment for the new product is expected to produce incremental sales revenues exceeding AU$3 million in the first 12 months of commercial sale.

The prospective launch of the product is scheduled for the second half of 2013.

Ahmad Abdulkarim Julfar, the new Thuraya chairman

Thuraya shareholders have elected Ahmad Abdulkarim Julfar as the company's new chairman, and Dr Daniel Ritz as a new member of its board of directors. Both men are currently at **Etisalat**, where Mr Julfar is group CEO and Dr Ritz is group chief strategy and M&A officer.

KVH has opened an office in Tokyo to support to its Japanese partners, including **SKY Perfect JSAT Corporation,** which provides the mini-VSAT Broadband service under the OceanBB brand name, as well as **Furuno** and **Japan Radio Co. (JRC),** which provide and install KVH TracPhone communications systems. Yoshito Yamane will act as the country manager and representative director for KVH Industries Japan.

Livewire Connections has formed an agreement with **Jason Electronics,** headquartered in Singapore, whereby Jason Electronics will be retailing the Livewire Access Controller FB-10 range throughout its group, which has offices in Thailand, Malaysia, Korea, Indonesia and China.

www.kvh.com
www.livewire-connections.com
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Reaching a decision on crew internet - BSM

With the myriad of available options in the satellite communications market, shipping companies looking to provide internet services to their crew face the challenge of deciding which offering best suits their business needs as well as the needs of their seafarers. Adonis Violaris, Bernhard Schulte Shipmanagement, told *Digital Ship* about his company's experiences evaluating crew internet solutions

Having completed a year-long evaluation project during which it tested and compared a number of potential satellite communications systems and suppliers, Bernhard Schulte Shipmanagement (BSM) is set to begin an ambitious roll-out of crew internet services across its fleet of vessels.

The new services will be deployed in the form of onboard crew internet cafes, with Inmarsat as service provider, Telaccount Overseas as the project manager and World Link Communications as the Internet Service Provider.

BSM has agreed a deal for an Inmarsat 6GB SCAP (shared corporate allowance package) to provide the bandwidth to run the internet service, and expects the roll-out of the service to take approximately three to six months through to completion.

According to Adonis Violaris, director marketing and corporate communications at BSM and managing director at Telaccount Overseas Ltd, the introduction of this crew internet solution is a natural progression in the evolution of the maritime satellite communications market in the last few years, with faster bandwidth and cheaper data gradually beginning to bring IT at sea in line with seafarer expectations.

"The maritime communications airtime service providers have been looking for a long time now to increase the demand for bandwidth, and airtime providers have looked to prove that with higher bandwidth we can get the ship closer to the office," he told us.

"The shipowners and shipmanagers were also asking for many years now for extra bandwidth onboard the vessels, for constant, uninterrupted connections and reasonable flat monthly rates that can accommodate both the needs of commercial traffic and crew private needs."

"Not long ago, we were very happy to use the MF/HF system and the Satcom C units and we were really happy to have onboard the vessel a personal computer to compose fax messages and prepare letters. The network system onboard was so very simple, in fact, it did not even exist."

Mr Violaris believes that the introduction, in 1982, of the Inmarsat-A satellite system was the start of a revolution in maritime communication, providing a system that could be used for voice, fax, data and telex services.

However, developments in vessel technology have struggled to keep pace with the frenetic pace of advances in terrestrial IT and communications, and ships have, in many ways, been left behind in the digital age.

"I believe at that time, people involved with communications in the shipping industry were impressed with this technological miracle, mainly because the differences in technology were not as obvious as they are during these days," said Mr Violaris.

"Although nowadays the network structure is very similar to what we have at a small office ashore, shipping still, I would say, is years behind the rest of the world with regards to technology, whether this is communications or software, and this gap cannot be easily bridged."

"The problem has been that software developers are blaming the communication providers for not being ready to support the software they already provided ashore and have thus forced them to create different applications to suit the ships' communications' low transmission speeds."

Crew aboard the Cap Mondego enjoyed a new level of communications access during the Inmarsat FleetBroadband VLA trial

As an example, Mr Violaris points to typical planned maintenance systems or condition monitoring systems, only using database updates when synchronising data between the vessels and shore due to the data constraints imposed by satellite, or the use of Electronic Navigational Charts, where suppliers provide a portfolio of charts pre-loaded on the vessel and the ship need only download the necessary licence via e-mail to unlock the pre-loaded chart.

"The requirements of the operators to bring the vessel closer to the office are growing day by day as they need to be able to manage, monitor, control, act and improve processes, like on-line planned maintenance, TMSA, KPIs, e-purchasing, e-learning, entertaining and to be able to deal with the various regulations and conformances," said Mr Violaris.

"Everything is moving fast on land and if we are not using an always-on connection the technology gap will become wider. The whole world is turning to the web for information and applications and much of this was talked about for years, but the vessels never had the always-on bandwidth connection to work with."

Crew attraction

In addition to the business demands on satellite communications, the seafarers' appetite for online connectivity has also continued to grow sharply, with younger crew members in particular increasingly looking for access to the services they are used to at home.

In this regard, Mr Violaris points to a recent Cisco survey of nearly 3,000 students and young professionals aged 21 to 29 from 14 countries, which suggested that one out of three college students and young professionals see online connectivity as a 'fundamental need'.

"Over half of survey participants quote the internet as an 'integral part of their lives'," said Mr Violaris.

"64 per cent of respondents would choose connectivity over owning a car. 40 per cent think having web connectivity is more important than dating, music or going out with friends."

"Half would rather lose their wallet or purse than their smartphone, 20 per cent had not bought a printed book in two years and just 10 per cent thought TV was important in their lives."

In this environment, Mr Violaris suggests, communication can no longer be considered as a luxury and is, instead, becoming a necessity.

"We all know that crew should be entitled to access the internet onboard the vessels, and without browsing, chatting, e-mail with attachments etc. they feel disconnected from shore," he said.

"Crew problems will only be accelerated by this, seafarers will be discouraged to go onboard the ships if it means keeping out of touch with their homes and their families, with the result of crew shortages starting to increase. In particular, seafarers from developing countries are trying to catch up with more personal communications while at sea."

"The new generation of seafarers are born with a mobile in their hands, they are experts when it comes to new technology and then they go on a ship that is equipped with low bandwidth technology terminals. This makes the seafarers look for employment elsewhere, where the shipowners are providing such facilities or are now looking into the possibilities to have such systems onboard their vessels."

Mr Violaris believes that it is, in fact, in the shipping companies' own interests to provide these services if they intend to maintain competitiveness in the market, and that the consequence of not investing could be even more expensive.

"It is very important that shipowners and shipmanagers do their utmost to enhance crew morale and welfare onboard, as recruitment challenges will become again a hot point in their agenda and crew will want to move on, making the crew retention rate more difficult and definitely not cheap," he said.

"The most recent estimated information about the number of crew using internet onboard for e-mail purposes is below 20 per cent, and we are talking about e-mail only and not the rest of the internet facilities. Only 10 per cent of commercial vessels have some kind of broadband onboard."

Satcom developments

Mr Violaris is hopeful that advances in satellite technology will help to make high-speed connectivity a ubiquitous feature of shipping vessels, and that competition from VSAT providers in particular will help to make prices increasingly attractive.

"Recent technological advances have put broadband-at-sea within reach of even the smallest vessels," he said.

"Until some years ago, vessels travelling more than five miles offshore had one option for internet access — Inmarsat. Now Inmarsat finds itself competing with other technologies, like VSAT."

"Early VSAT antennas were bulky and expensive — as much as $65,000. But in 2007, KVH Industries launched a new generation nearly half the price and a quarter the size, and continues — along with competitors like SeaTel, Furuno, Orbit and Intellian — to dramatically decrease the size, weight and cost of antennas."

With all of the available technologies, there are positive and negative aspects which have created a choice for shipping companies looking for the best fit with their own operations.

"VSAT offers a number of advantages at a fixed monthly rate, but unfortunately so far for the Ku-band antennas these only work within limited coverage areas, with

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coverage missing especially in areas like the southern Atlantic and southern Pacific – only if you installed a C-Band 2.4m antenna like the ones that are used on the passenger vessels you will be able to have an Inmarsat-like global coverage," said Mr Violaris.

"Ku-band VSAT satellites, which until now are most interesting to our community, cover most well-travelled areas of the globe, but there are regions where service is unavailable. Inmarsat has better coverage, but also does not cover the poles. Iridium, with its Pilot, provides pole to pole coverage, but does not provide the high bandwidth available from Ku or Inmarsat's L-band systems."

"The Iridium Pilot link provides three separate phone lines and a data channel configurable from 9.6 to 128 kbps, but users are charged a per-megabyte fee, or a monthly fee with data limits, and the scalable internet connection isn't as fast as VSAT or Inmarsat."

So – what's the best system for the modern shipping company? Of course, the only way to judge this is to look of the specific range of requirements of the particular vessel operator and compare these needs with the available offerings.

BSM will roll out crew internet cafes, running over FleetBroadband, across its fleet

This was the approach that BSM followed last year, when its management and shareholders requested that its in-house vessel communications value added services company Telaccount Overseas evaluate different systems in the market, so that BSM could start providing internet access to the crew onboard its vessels.

"During our trials we tested both a VSAT V7 from KVH and an Inmarsat VLA (very large allowance package) with FleetBroadband 500," said Mr Violaris.

"We can report that both crew and operations have benefited from this experience. With both systems we were able to improve enterprise communications with the vessel through unified communications and streamlined vessel operations, and were able to offer the crew unlimited internet access in both trials."

"The challenges were many; some mostly technical, and some mostly in creating a different mind-set for all parties concerned, such as shore operators and superintendents, master onboard, and not least the crew."

As Mr Violaris notes, the change in how those onboard the ships interacted with the communications systems following the introduction of the trial terminals was immense – both on the positive and negative sides.

"From store and forward e-mail we went to instant e-mail and jumped into instant messaging. From bridge controlled phone calls to home, crew dived into Skype from the privacy of their cabins," he said.

"However, the Master had to learn how to ping and trace route, and a lot of times it was not easy. And when everyone onboard screamed 'we cannot browse', a bandwidth hugger like Skype or a torrent download were found to be the culprits."

"Technology, as always, will make our life easier and our operation more efficient. But we have to manage the change, train crew, and maintain vigilance – on one of our vessels we logged the crew's usage who have collectively browsed in excess of 500 hours a month."

Ultimately, following the conclusion of these trials, BSM opted for the 6GB Inmarsat package previously mentioned.

"VLAs are the immediate Inmarsat responses to flat rates from VSAT competition," noted Mr Violaris.

"Based on our vessels' usage, we can see that today a vessel can satisfy its operational and crew requirements within the range of 10 to 15 GB per month. This may include crew usage of internet browsing, VoIP, instant messaging, and social networking."

"The Inmarsat VLA is a managed service, so when usage reaches the upper limits of the plan, Inmarsat will start reducing speed to preserve the remainder of the plan until month's end. This will allow users to continue their light browsing, e-mail, and messaging, but would limit streaming usage like video and audio conferencing, and other bandwidth-hogging applications."

Network considerations

These trial experiences quickly led Mr Violaris to the conclusion that, when looking at bandwidth optimisation and crew usage, it is important to consider the actual capabilities of the bandwidth in question in terms of service delivery.

"We need to understand what are we controlling and managing. It helps to know or understand what we can do with bandwidth," he said.

"If properly managed, 100 MB can go a long way when it comes to crew welfare. It could provide chatting or texting for 200-plus hours, sending one line of text at a time, or it could just mean browsing for 20 hours."

"Bandwidth optimisation becomes critical to the successful implementation of an internet café onboard. Satellite bandwidth will remain a scarce commodity, and there is nowhere this is more apparent than today's broadband services onboard; hence the need to ensure that traffic is prioritised and all parties have access to the pipe."

Managing the bandwidth also extends into ensuring that the vessel always has available connectivity to carry important operational traffic and access services that are critical to the running of the ship.

"Without prioritising the traffic we can be looking at traffic chaos. Traffic needs to be controlled based on the originating network, the application that is running, and the end user," said Mr Violaris.

"By controlling traffic we are able to guarantee quality of service. By further limiting the bandwidth shares between applications, we ensure voice, for example, will always be available even under all circumstances."

Apart from bandwidth management, network security is another critical issue when it comes to crew internet access, making sure that granting permission to a crew member to access the internet doesn't also mean granting permission to an external virus to visit the ship.

"Security will always be the biggest concern among the different parties involved in deploying an internet café onboard our vessels. Today we cannot depend on just firewalls to secure the onboard network, for example," said Mr Violaris.

"Today, we can identify at least two separate networks that need to co-exist onboard the vessel – the vessel operations LAN and the crew LAN. Both have totally separate applications and require different levels of security."

"Consider however, that in the near future a third network will announce its arrival onboard the fleet, the vessel systems network. This is the network where engine monitoring and control data are online, ECDIS, radar and GPS are communicating. This is the network that carries the blood of the vessel. Taking an offensive posture on security now will pay off in the long run."

In addition to the networks on the ships, it must also be considered that the overall IT complexity of the organisation, taking into account shore based offices as well as the vessels, will increase as connectivity is improved, and the consequences for support should be taken into account.

"Dealing with a larger fleet can strain the existing enterprise resources for remote and mobile users," said Mr Violaris.

"It is not uncommon that the 'remote mobile' population would exceed the onshore staff. The larger the enterprise, the more evident this force becomes. Supporting mobile users, who expect service delivery because they are paying for it and because it is personal, will burden the enterprise."

"Outsourcing support to the new population is cost efficient especially when considering that the enterprise ashore is currently going through cost reduction. But, ultimately, the cost of deployment is made up of bandwidth, hardware and operations running costs."

Advice

Having gone through the process of evaluating and selecting a system to provide crew internet onboard BSM ships, Mr Violaris is well placed to offer advice to other vessel operators looking to extend the communications options available to their seafarers.

"With the current pricing structure, the line is blurring between whether one would select VSAT versus an Inmarsat VLA," he said.

"Quality of service on the VSAT depends on what you are buying, meanwhile with Inmarsat you are buying a uniform service. Controlling operating costs requires management, that requires reporting, that requires a solid platform and a solid technology partner."

"But whether your vessel is using VLA or VSAT, you will definitely need to manage the services provided onboard, either for bandwidth control or bandwidth optimisation."

Mr Violaris also notes that the requirements and demands from the various stakeholders in the project are very different, and need to be carefully weighed against one another.

"Owners' concerns are influenced by enterprise policy, while crew concerns are totally personal," he said.

"The enterprise IT department will dictate the security policies, procedures, and priorities, while the cost of the project is looked at in value for dollars spent. Crew welfare from the enterprise point of view will swing with market conditions and freight rates."

"On the other hand, the crew expectations are high for services, with pent up demand. Even though it has been only a few years that we have been talking about crew privacy in making phone calls on the bridge, today the crew would prefer a faster internet connection and access to social media at the work place to making additional money while deprived of their friends' status updates."

While the process may be complicated, and include a number of potential pitfalls, Mr Violaris is confident that most shipping companies should, in the modern era, be able to integrate crew internet services into their shipboard set-up.

"At the end of the day, and after a lot of sweat, it will come together and ensure success and ease of mind once you, the fleet manager, are in control of your communication costs onboard your vessels," he said.

"A number of features are necessary to ensure such success, but most important is cost management – and that is done through reporting and resource management. There is no need to re-invent the wheel, especially if you pick the right technology and support partners."

"The shipping industry now has the chance to make use of similar advanced communications technology as used ashore. At BSM we hope that the quality of these services will be of an equally high standard to what we use in our daily lives, at work and at home, in a way that will allow the industry to conduct its operations more efficiently and cost effectively." DS

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Crew and the value of talent

Crew welfare is not just a matter of providing benefits to employees, it is fundamental to the ongoing battle for talent in the global workforce, across every industry. Jay Fernando, Magsaysay Maritime Corporation, explains why offering better communications to the next generation of seafarers is no longer a choice, but a matter of survival

There is an abundance of rhetoric in the maritime industry today on the issue of crew welfare – people talk of the duty to offer seafarers the same facilities they could expect as employees in land based offices, as well as the need to bolster crew retention to avoid the potentially devastating consequences of manpower shortages.

However, the issue of crewing at shipping companies is just one part of a wider competition for talent across the world, with every sector and industry looking, in their own ways, to attract the best and brightest workers that will propel productivity and keep generating profits.

So, to really understand the issue of crew welfare it is important to consider it from this perspective – as the front line in a global battle to attract and retain talent in the workforce, making shipping a prospective career that can meet the goals and aspirations of new recruits.

At Magsaysay Maritime Corporation, a specialist in crewing services with approximately 33,000 people working on different types of vessels all over the world, understanding the value of talent is key to every aspect of operations, according to Jay Fernando, the company's vice-president of strategic planning and business development.

To illustrate the point, Mr Fernando points to the enormous changes in valuing talent that have occurred in recent decades in a more transparent market than shipping – football.

"In 1904 the world record for player transfers in football was held by Andy McCombie, he was a right back for Sunderland. When he transferred between Sunderland and Newcastle United it cost them a whopping £1,000," he said.

"80 years after, when Diego Maradona transferred from Barcelona to Napoli, he went for £5 million. Then, when Cristiano Ronaldo transferred from playing at Manchester United to Real Madrid he went for a staggering price of £80 million."

"One thing is clear – talent is one of the most important things and one of the most expensive things we need to manage today. At least in football. In shipping, it's been a perennial topic of discussion, the concept of crew shortages, so I think we're in the same boat."

Mr Fernando says that an appreciation of the value of talent has led Magsaysay to make the concept of 'care' one of its core philosophies – care for the crew and care for their families.

"This ultimately means happier crew and that they stay with us. We've been fortunate that this philosophy is shared by many of our partners," he said.

"Admittedly care is not the only factor to consider, but it's not something that can be set aside. People will not necessarily leave just because they're offered a higher salary, but if you make them feel unimportant, uncared for and unvalued, ultimately they will."

"So the feeling that a company cares for me and my wellbeing can trigger a sense of happiness, and that sense of happiness and being valued is what leads to loyalty and retention."

Communication development

As Mr Fernando points out, with loneliness and separation inherent in the maritime business, it is not surprising that stakeholders in the industry have increasingly come to realise the importance of communication as a means of expressing that sense of 'care'.

This has been done in various ways, and Magsaysay itself has introduced various initiatives to try and use IT and communications to improve the quality of life of its seafarers.

Cristiano Ronaldo, the £80m man – an example of the changing value of talent

One early project involved delivery of basic news stories from the crews' home country, to mitigate, to some small extent, the disconnect from their community while serving at sea.

"In 2005, the Philippine-Japan Manning Consultative Council (PJMCC) started sending a condensed version of their daily news, called Balitang Marino (Seafarers' News), onboard the ships of the Japanese vessels," said Mr Fernando.

"Just about the same time, Magsaysay started to do the same thing with our Home Harbor daily news. It still goes on today, and about 280 vessels are benefitting from the service."

"For the size of 120 kB, the size of a regular e-mail, it gives the crew a certain sense of being connected to what's happening at home."

Another initiative involved the introduction of tailored mobile phone services that could help crews to manage their own personal information.

"In 2008, in partnership with one of the largest communications companies in the Philippines, we launched the Magsaysay SIM card, which allowed our seafarers to push and receive information from our system, with regard to vessel assignments, results of medicals, visa schedules etc," said Mr Fernando.

"At the same time, they are able to enjoy discounted roaming rates for their communications to the Philippines. Currently about 80 per cent of our people use this service."

"Also, in 2009, the Filipino Association for Mariners' Employment (FAME), in partnership with SMART Communication, made available an affordable private satellite voice service that can be used at sea independent of the ship's satellite bandwidth. To date we have about 192 ships with this facility onboard."

These developments have been supplemented on the port side, with the introduction of improved facilities for seafarers to communicate with home when approaching land, such as the Port of Singapore's WISEPORT programme offering WiMAX connectivity up to 15km outside of Singapore.

"Since then several ports have offered this. We continue to be an advocate for more of these types of services to be available to seafarers," said Mr Fernando.

Gen Y

However, despite these welcome developments, Mr Fernando views these initiatives as part of history, and believes that offering a wide range of new communications capabilities will be fundamental to any efforts by the shipping industry to attract a new generation of talent to careers at sea.

He references a report called 'Gen Y @ Work: A Profile' conducted by Kelly Services in the US, a company providing manpower to 85 industries and not focused on shipping, that includes the following assessment:

Skill shortages are dominating the marketplace and many organizations are facing stiff challenges in identifying, hiring and retaining the best talent. Many organizations and employers struggle to fill job vacancies and candidates receive more than one job offer. As skill shortages continue, organizations can expect more intense competition for talent.

As Mr Fernando notes, the implications of this are "staggering."

"It means that the war for talent within our industry is merely a small battlefield in a much bigger war that is already raging," he said.

"It's not about attracting the best and brightest seafarer for our fleet anymore, but it's about attracting the best and brightest for our industry. With this in mind, the war on talent has taken on much bigger dimensions, and we need to know the prize that we are fighting for."

Dealing with this issue means understanding the differences that exist between this generation and the current generation of managers in the maritime industry, taking account of their different needs and aspirations.

"The average seafarer, right now, goes onboard at the age of 23 or 24," said Mr Fernando.

"This means that they were born after 1989, and they've grown up in a world of TV, internet, computers, PlayStations, iPhones and iPads. They've watched the world whizz past them at a fierce pace."

"The average time a ship spends on shore these days is between 16 and 17 hours. It used to be 8 to 12 days a mere 20 years ago. That means that there's less opportunity for shore leave, and more work that needs to be done while in port."

"In Gen Y @ Work, they say that this generation could potentially be the most productive, adaptive and creative generation to ever enter the workforce. They dislike being treated like the new kid on the block, they always needs to be challenged and find some meaning in the work that they do. They have high expectations for their personal and financial success, and they need to be plugged in 24/7."

Mr Fernando suggests that, for this demographic, the shipping industry is failing to project itself as an attractive career choice.

"This generation grew up in an environment where gratification is instantaneous, with disposable diapers, microwave popcorn, mobile phones, SMS that all scream the word now," he said.

"Whether it's news, data, status updates or anything else – everything is just a click away. This comes from the experience of creating meaningful relationships without the need for a physical presence."

"Because of the speed at which their life whizzes past, they've taken the art of multi-tasking to a whole new level. They can study with music playing and updating their Facebook status – and they're doing well. None of this is possible without being plugged in. Unplug them and

they become lonely and miserable."

New standards of care

Understanding this point will mean re-defining the concept of 'care' that Magsaysay, and the shipping industry in general, has applied to the crews serving aboard its vessels.

In this regard Mr Fernando says that his company has now tried to radically alter the options it provides to its seafarers to try and improve the connectivity they can achieve between their working life at sea and their digital life at home.

"This year we have moved from pulling and pushing information to the SIM card via the GSM platform to taking advantage of the features of the smartphone and tablet, with the launch of the Magsaysay seafarers' app for Android," he explained.

"Being on Android provides us with a lot of additional flexibility and a lot of features we can add. We've added additional functionalities for online purchasing, transfer of funds, and made more interactive content and information available from our system."

"Building on the voice service that was introduced in 2009, our partners at SMART Link Communications now combines both data and voice connectivity anywhere at a much lower price, on a pay per use basis. We just finished the installation of the first SMART Link system on one of our ships, and 14 more are currently being installed."

Magsaysay believes that these moves are important first steps in changing the working environment for seafarers in a way that will make the physical dislocation of the job easier to deal with.

"All of these services we have done are steps we have taken towards creating a community on a digital platform where people can interact and stay connected in a multi-device, multimedia environment, because this is what this generation is looking for," said Mr Fernando.

"We need to realise that this new generation, their needs are different from ours. They assimilate information in ways and methods that are different from us. They live their lives differently and have a different set of priorities."

"It is important for this new generation to be connected, for them to be provided with the means to see their child in port after they have been born is no big deal, they will demand to see them being born in the hospital on a live feed while at sea."

In Mr Fernando's view, this issue is now beginning to reach a stage where it is no longer just a crew issue and is a key part of company strategy.

"It used to be that we would think of communications as crew welfare. It has moved on beyond crew welfare," he said.

"We are constantly innovating and advancing technology to have safer ships, more environmentally friendly ships, reducing emissions and fuel consumption, and having more efficient operations. But in our pursuit of these things we, as an industry, cannot forget the need to channel our innovative drive to find better and faster and more cost effective ways to help our people get connected."

"Stakeholders in the industry need to get together to lobby to have more of our ports provide Wi-Fi and connectivity. We need to be able to find ways to provide more affordable voice and data services onboard our ships, not only to express our care for the wellbeing of our crew but to be able to present our industry as a viable career option for the next generation."

Magsaysay has launched a new Android app for its seafarers to allow them to manage their communications.

It is also important to understand that, with the lead time involved in dealing with these issues, acting early and before crew shortages become apparent in a shipping company's own operations is critical – once you realise you have no crew available it is already too late.

"One of the things about shipping that we've seen is that shipowners and shipmanagers do tend to take a long term view, at least the ones that survive. The companies and people we've been privileged to work with, who take a long term view, get this idea that if we don't do something now we are going to have a problem 15 to 20 years from now," said Mr Fernando.

"In 1991 we started the Magsaysay Institute of Shipping, which is essentially a cadet development programme. It takes about 10 to 12 years to grow someone to a level close to a captain. The ones that partnered with us at that time saw the vision that if we don't do something about developing cadets now, we're going to be in deep trouble 15 years from now."

"True enough, the ones that partnered with us and stayed with us over that period are the ones that have now benefitted from that initiative in 1991. So when we start talking to our partners about the need to be able to attract crew, they seem to get it."

As Mr Fernando notes, in this environment it will very soon cease to be an issue of choice for any shipping company that wishes to remain in business.

"It is not about crew welfare anymore, it's about survival," he said.

"At the end of the day, if we don't there may come a time when even an offer of £80 million won't be attractive enough to get someone to have a career at sea." DS

Crew internet in three easy steps at Wallem

Over the past six years, shipmanagement company Wallem has invested considerable effort into an ongoing project to improve communications for its seafarers. For a time it seemed that crew internet was an unlikely goal – and then the world changed, as Ian Parkes, Wallem Innovative Solutions, explains

The development of communications systems available to vessels in the last few years has been nothing short of astounding.

Increasing competition in the satellite sector and the extension of technologies initially targeted at terrestrial connectivity into the maritime space has seen the introduction of a range of innovative systems that have created capabilities and choices light years ahead of what was possible 10 years ago.

For a shipping company however, learning about these new communications options is the easy part – making a choice that can improve operations and meet business needs while also fitting within the organisation's financial plans is another matter entirely, and can be a long and difficult process.

For shipmanagement company Wallem, utilising these new communications capabilities to deliver improved connectivity services to its seafarers around the world has become an important part of its strategy to maintain the highest level of operations across its fleet.

The company's pursuit of this goal has followed a three-step process, with the project currently moving into the closing stages of a journey that stretches back approximately six years, according to Ian Parkes, operations director at Wallem Innovative Solutions – the IT arm of the Wallem Group.

As Mr Parkes notes, this three-step process has been something that Wallem considered virtually impossible not that long ago, but which has now allowed it to reach a point where the company believes it is on the verge of achieving its goal.

"Most three-step processes from vendors will have a step one where they ask you to spend a large amount of money, and you're then responsible for making that work," he explains.

"You then spend another large amount of money and you're responsible for making that work. Finally, you spend the last large amount of money and have to expect some kind of small miracle and for the world to change to actually get you to where you want to be."

"The bad news is that our story does follow that pattern, but the good news is that I believe that we're actually there now, we're in the post-miracle stage and looking forward to actually moving ahead and deploying a crew internet solution."

Current availability

Despite the advances in communications technology over the last decade, crew access to connectivity services onboard while working at sea is still, even today, extremely limited.

To highlight the realities of the situation, Mr Parkes points to an independent survey conducted by the ITF Seafarers' Trust, which revealed that half of the people working onboard ships still didn't have access to e-mail, and virtually none of the respondents had access to internet.

The survey results showed that 52 per cent of seafarers, and 68 per cent of ratings have no access to e-mail on their vessels, while 80 per cent of seafarers and 97 per cent of ratings had no access to the internet.

"I think, from Wallem's perspective, we weren't too surprised by the findings on internet. We had not really sensed it was available anywhere in the market at the time, except maybe some very early adopters," said Mr Parkes.

"What we were surprised about was the findings on e-mail, because crew messaging is something that we actually started looking at quite a long time ago, back in 2006, in response to what we perceived as the very large demand from our crew at that stage to tackle the e-mail situation."

Wallem began a project to improve crew access to communications onboard its vessels in 2006. Photo: Wallem

At that time Wallem had launched its own Crew Connect service, which provided an onboard text-based e-mail solution, while also supporting attachments when used via a shore-based web service.

"Just before it was launched we ran a trial where we actually charged just under $0.50 per e-mail message," said Mr Parkes.

"The feedback we were getting at the time was that, if the charge was reasonable, people would probably be prepared to pay it to get something that was revolutionary in those days like an e-mail solution onboard."

"The fact of the matter was, when we charged for that e-mail solution, even the $0.50, the uptake of it was effectively zero. There was no uptake at all, despite the fact that it was being loudly requested and people had indicated that the charge might be acceptable."

In response to these developments Wallem went back to the drawing board before officially launching the service in late 2006 as a free e-mail service.

"Within the first few months while we were rolling that out, traffic immediately jumped up to about 40,000 or 50,000 messages per month," Mr Parkes recalls.

"Today we have 10,500 subscribers online, and we handle about 200,000 messages every month. So there was certainly the demand there – once the price was right."

This pricing issue was further illustrated by usage of an SMS service that Wallem made available to its crews as part of its original Wallem CrewConnect communications package.

"What's interesting today is that we still charge, though it's lower than $0.50, for an SMS message, and despite the fact that we have a very large number of Filipino crew onboard who are very well versed in the use of texting, SMS messaging accounts for less than two per cent of the total messaging traffic," he said.

"Packaging is very important. We have to recognise the value perception – even if we'd only charged $0.10 or $0.05 or $0.01 for an e-mail, we would probably still have had zero take-up, because the perception of the crew was 'why should I be paying for this when I don't need to pay for it when I am at home ashore?' We have to understand these values and address them."

"So there were some lessons there that we learnt in terms of the way that we have to listen to the crew and have to interpret what we're being told, and how to move forward in terms of the actual activity in what we roll out."

Another lesson seemingly learnt from this experience, according to Mr Parkes, was that the company seemed to have been able to move away from the traditional three point plan in introducing these services.

"The first step didn't actually call for a very large investment up front. The investment required, when we did things the right way, was actually very modest," he said.

"It worked out at about a $300 start-up pack for each vessel, just to get the kit onboard, and us allocating an old PC so they actually had the platform to run it on, and then about $50 per vessel per month from then on. It's even less than that these days. So there wasn't a major investment required to actually get moving."

"The product that we deployed was very easy to deploy, it provided the SMS in a very simple prepaid environment, with very few risks of anything going wrong with it and very easy for people to use and for the master to administer. In terms of the actual pricing, as I said it was typically free for the crew and had very limited costs in terms of cost per vessel."

Next steps

Having successfully managed to complete step one in its project by providing a popular and efficient e-mail system to its crewmembers, Wallem was confident of building on that success through the introduction of further communications services.

"I guess we went from that success to thinking 'that's quite easy' – step one, box ticked. Let's crack on with step two," said Mr Parkes.

"So, in 2007 our next stop was crew internet. That genuinely was the feeling within the organisation, and it was certainly the aspiration I had – because we had actually found such a good way forward on the e-mail, crew internet was just around the corner."

"When we looked just around the corner, what we saw was that the only realistic way on offer to deliver anything which could approach crew internet, at the time, was really VSAT solutions."

This realisation proved to be a major stumbling block in continuing the progress of the crew communications project, as the company struggled to find a system that would balance its requirements in terms of both performance and cost.

"In 2008, from the first look at VSAT that we did, the first point in the presentation I made was that if we wanted to roll it out then the first thing we'd have to do was to spend $70,000 to $100,000 per vessel on the kit," said Mr Parkes.

"I don't think anybody ever asked me what the second point in my presentation was. It was not what they wanted to hear, and wasn't the answer to the problem we had."

Another issue that Mr Parkes identified with the available VSAT offerings at that time was a lack of integration of the technology with maritime operations – vendors were merely proposing installing the system, with an attitude that 'we've solved your problem, you can have an all-you-can-eat data package, so the crew can have internet'.

"But it wasn't a 'packaged' solution – it wasn't a 'solution', as such. It's all very well to talk about business traffic where you've paid a flat fee and can use all you want, but when you're talking about a crew solution it's different," said Mr Parkes.

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"You've got people who are rightly concerned about crew paying attention when they're at work; rest hours; watch-keeping; and a whole host of very real safety concerns – so if somebody is then saying to just give everybody unlimited access to the internet it won't be a viable solution for any professional ship manager or ship operator."

"I think it's taken quite a long time for those new entrants into the market to actually understand that, when we talk about a solution, it has to be one that suits the environment onboard. Though we talk a lot about pricing – and I do talk a lot about pricing! – that's the start of the conversation or the end of the conversation. It's not the whole conversation. We needed to see much better controls and management tools to make any kind of crew internet access viable."

Mr Parkes also believes that the commercial environment for ship managers around that time was not conducive to discussions that revolved around expensive equipment and a sizeable monthly commitment over an extended term.

"As it was, the relationship a vendor had with a ship manager, and a ship manager had with a ship owner, typically focused on a six-monthly fight on whether we could shave a penny off the price per minute or shave a couple of pence off the price per kilobit."

"You can't take an industry that is organised that way and come up with a plan that looks at a strategic 5-year platform, which is what we needed to do to pay for something that would cost $100,000. It wasn't going to happen."

However, the company was aware that something really needed to be done to move forward on the crew issue, particularly with regard to the need to maintain high levels of crew retention across the fleet.

Mr Parkes illustrates the seriousness of this point by noting the feedback from the fleet officers meetings the company conducts regularly.

"There is a huge groundswell of demand at these sessions to actually start to provide these internet services, and it echoes directly back to the point we were at just before we identified a viable solution for the e-mail service," he said.

"There are real crew retention issues, and we must recognise that. Some of it may be exaggerated, but I think there is genuinely a demand from the crew that this is part of normal life now, and if it's not normal onboard then there's something wrong."

"We're fast reaching the point where we are not doing anybody any favours by providing crew internet – we're giving people what they expect and deserve."

As Mr Parkes notes, the modern world for the new generation is such that these types of services are no longer a choice but a necessity for shipmanagers that want to maintain a competitive advantage.

"I'm a service provider to Wallem shipmanagement, and I promise you that it's not a choice from where I'm standing, it's an imperative," he said.

Changing perceptions

While the new technologies available in the market had proven to be beyond the realm of what Wallem was willing to commit to in 2008, the journey had at least opened the company up to examining different approaches and prompted a re-examination of the IT strategy being pursued.

"While there were moves for taking those sorts of things forward for particular cases, it wasn't something that we felt we could actually move forward on generally. But what it did do is that it alerted us that this was probably what Step Two needed to be all about," said Mr Parkes.

"We had to get out of this attitude of 'penny wise, pound foolish', putting a box round the communications and saying that it stands on its own. We had to change the way that we were looking at it, and the way that the vendors were looking at it, and the way that our customers were looking at it."

So, as Mr Parkes notes, for Step Two that was really what the company tried to do, looking at the lessons learnt earlier in the project, the value perception, and identifying what Wallem really wanted to achieve.

This led the company to focus on prioritising the criteria it would follow in choosing a communications system that would meet the demands of the various stakeholders involved.

"What we wanted was effectively some kind of volume-based and predictable costing so that people knew what they were getting into. It was like every other thing that they did where they knew the price and it wasn't an open-ended agreement – people don't like getting surprises when it comes to bills," said Mr Parkes.

"Obviously it was a global solution that we needed, in terms of data, and a good solution in terms of quality and cost effective voice."

"We needed something that was actually going to transition the environment across onto the new technology - FleetBroadband kit in our case - that was actually going to provide a new platform so we could do more."

Other elements that were deemed to be essential included a package that would offer services beyond just the delivery of the equipment and airtime, and a reasonable contract period that would fit with Wallem's financial strategy.

"We wanted to wrap the other hidden extras, the maintenance and so on, up into it, and we wanted to end up with an overall solution that could be justified over a three-year horizon," said Mr Parkes.

"Not a five-year horizon, because I doubt anybody, even today, is going to want to sign up for anything for that long in the communication environment. Three-years, most people are satisfied with that for most of the things that they do, and a lot of what we are doing these days is a lot more uncertain than communications."

"And we wanted the right price. That was the key – being able to wrap the entire solution up into a package and come up with a single price. Then we could look at the idea that that price was probably no more than people were typically spending, at that time anyway, on communications."

At the time of the search Wallem was typically looking at $700 to $1,000 as the price range it considered viable for the communications budget, and Mr Parkes notes that he was beginning to see packages that were coming in around that pricing point, in the form of bundled FleetBroadband offerings.

"This worked for us, because instead of it being a case of 'now you have to make your second level investment', we were able to say to people that we could do all this, we can get the kit, we can get the re-platforming and it's not going to cost any extra," said Mr Parkes.

"We just need to commit for three years, and we only need to commit to spend what we're spending today."

"That was really step two for us, to create those FleetBroadband bundles, which actually transitioned us from the 'penny wise, pound foolish' environment into a market that was starting to take a more strategic view of the important area of communications."

The internet question

While the changing communications environment had caused Wallem to update its own strategy for providing connectivity to its vessels, progress in the three step process towards onboard crew internet had stalled.

"At the sorts of volumes we were looking at in those days, with no increased cost, we were looking at 30-50MB of data per month to support little more than business e-mail," said Mr Parkes.

"That was a realistic argument at the time, but came with the price point for extra data at $10-15 per MB. There was no way anybody was realistically going to roll out a crew internet solution based on those prices for browsing."

Wallem was also still a little bit concerned about the control aspects of the systems, and the potential for internet usage to generate large amounts of unregulated data traffic if not properly managed.

"We have read in the press about these other shipmanagement companies that have had terrible experiences with rogue users breaking through the firewall and generating $200,000 bills which the ship manager and ship owner dispute, while the vendor pretends they don't need to get involved in the conversation," Mr Parkes noted.

"There are a lot of smart people onboard these ships, and if you give them enough time and access they will probably be able to do something that you either didn't intend or didn't want to happen."

Wallem's Crew Connect service allows its seafarers to access free e-mail and low cost SMS

"So, we made some good progress in Stage Two, but we didn't crack the main issue of crew internet."

However, what happened next was to change the landscape considerably. As Mr Parkes explains it, he began to see a shift in the maritime communications market, where the lessons learnt by Wallem and others, in terms of moving from a day-by-day, kilobit cost environment to a more strategic view, had led vendors to introduce new products that could come closer to what was required to make the crew internet project a reality.

"As well as us realising that the FleetBroadband bundles had been a good idea, the vendors began to realise that it wasn't such a poor concept either. Looking at how things could be bundled together provided things in such a way that we could actually start to formulate solutions, and see a way forward. This kind of thinking has seen 35,000 SIM card activations on Inmarsat's FleetBroadband just a couple of years later," said Mr Parkes.

"The value perception today has transitioned from the point of 'I need a little bit of connectivity so I can do my e-mail' to 'I really do need this vessel to be part of my corporate network'. We're sending more e-mails and bigger e-mails, with massive attachments."

"But more importantly, we need to stop treating the ships as remote offices and treat them as connected offices, and therefore we can see that we're not going to need 'tens' of MB but 'hundreds' of MB - and in a few years' time, who knows?"

Most recently, the catalyst for Wallem's change in its thinking has been Inmarsat's adjustments in the pricing for its larger

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volume packages, doubling the data available under existing 1GB and 3GB plans while also replacing the 10GB and 15GB bundles with an 'unlimited' FleetBroadband package starting from under $3,000 per month.

"We're now seeing a very realistic prospect of persuading both business and crew customers that they can get, maybe not all you can eat, but all that you need, with these larger GB plans. Then they can think about how to change the world onboard rather than worry about the communications bill," said Mr Parkes.

"For Stage Two, we saw a lot of our owners take up the FleetBroadband 250 bundled offers. Up until recently that hadn't been the greatest starting point as it limited what you could do with the strategy going forward, But that's now changed with the latest announcements and all of the unlimited plans are now supported on the 250 kit that our Stage Two put in place."

"If we look at a fully future proof solution, in terms of incorporating VSAT, then not only can we do that for the same price effectively as we can for unlimited FleetBroadband, we can also now do that over a three year planning horizon. So we've got a credible way forward in terms of using the existing kit we have onboard and a future proofed VSAT/FleetBroadband hybrid solution justified over a three year planning cycle."

Data traffic

Since committing to bundled packages on FleetBroadband Wallem has been producing surveillance reports which allow management to watch out for rogue users that, Mr Parkes wryly notes, "of course, don't exist in our organisation."

This report is used to create a chart that looks at the top 50 vessels in terms of their usage each month.

"For the top 50 vessels in our fleet, typically there's not one of them that has used less than 200-250 MB in any month in the last year. That's the top of the range, and there's no 'one size fits all' solution, which is another of the things we've learnt over the years," said Mr Parkes.

"But what we can see now is that if you are talking to someone about using 200-250 MB, and they're doing that on the basis of $10 to $15 per MB, and you can go back to them and say you can have a future-proof VSAT/FleetBroadband hybrid solution for less than what they are paying today, then it's not the typical three-point plan."

"There is no major investment in step three, and we're back being able to say that you can do this for basically what you're paying today. For the top tier at least."

Mr Parkes believes that, once a company starts to move into this type of environment, it changes the whole complexion of what is required to roll out a crew internet solution.

"If we look at what's going on in terms of pricing for the crew, we don't have the direct experience yet, but we have been able to lean on the experience of others about what people are prepared to pay, and what we're seeing is that where crew are getting internet for free they're probably going to use something like 8GB/mth on the vessel, typically provided through an internet café solution based on timed access," he said.

"If we're looking at people who are offering paid solutions on the basis of these large allowances, then people are typically using 1-2 GB per vessel monthly."

"If you start to look at the size of these packages now on offer, these are the sorts of volumes that, realistically, we're going to need to deploy if we're going to have successful crew internet. There's no point to deploy a crew internet solution where nobody can actually use it the way they want to."

These changes in the satellite communications pricing environment have now propelled Wallem into the third stage of its crew connectivity project, where it now stands on the brink of being able to follow through on its initial goal from 2006 of introducing online access for its seafarers.

"In Step One we showed what we could do with limited, but well directed investment. Step Two also required very little additional investment," said Mr Parkes.

"Then there were some important world changes, which we can't take credit for but are grateful for. And in Step Three we're at the point where there are realistic value propositions for the business side of things in terms of realistic volumes for connecting those vessels to the network."

"There is the right product available in terms of global coverage, and we still have a solution for quality voice services at a good price. We've got proper management tools to make sure we protect ourselves and our users. And on the crew side we have a genuine opportunity for the 'at home' experience."

Wallem intends to begin by deploying prepaid or internet café-style services on its ships, with built-in controls in place to manage access. Importantly, the company is also very keen to make sure these services are available at the right price.

"Increasingly that will mean free, but the changes in pricing announced recently will allow us to offer fully funded crew internet solutions where we're looking at costs certainly below $1.20 and maybe below $1/MB for crew internet usage," said Mr Parkes.

"We think we've come a very long way compared to the 'pre-miracle' point we were at this time last year, and we believe that 2013 will be the year of crew internet for Wallem." DS

MTN introduces next-generation Nexus platform

www.mtnsat.com

MTN Satellite Communications (MTN) has launched its next generation MTN Nexus system — a hybrid network combining satellite communications, terrestrial connectivity and a cloud computing-based optimisation platform in one package.

MTN Nexus will also offer a range of new products and services that will be enabled only through this hybrid solution, the company said.

"There is no communication network like MTN Nexus in the world," said Errol Olivier, CEO and president of MTN.

"For 30 years, we have innovated new ways to deliver connectivity and content where no terrestrial wireless or wireline networks could connect vessels far out at sea. But passengers and crew no longer accept limitations — they want to stream video, post their updates on Facebook and share vacation images with friends … or even family members sailing with them on the same ship."

The new service will make use of MTN's recent investment in a purpose-built payload on Intelsat's EpicNG satellite constellation.

MTN says it partnered with Intelsat to engineer the delivery of "maximum bit-to-hertz efficiency" for the satellite, which will allow for the delivery of a High Throughput Multi-Spot Beam (HTMS) solution delivering up to 500 Mbps per beam in the Caribbean.

MTN HTMS will enable vessels to seamlessly roam between MTN HTMS beams and conventional Ku-beams, for extended coverage and redundancy. The MTN service will remain backward compatible with existing Ku-band satellite systems, current network infrastructure and customer-preferred network topology.

MTN notes that this network design was the first step in developing MTN Nexus, with the second being the combination of its satellite capabilities with a terrestrial network to build a Near-Port/In-Port network using Wi-Fi, 3G, 4G, WiMAX and/or LTE.

As vessels move into port, they will switch to Wi-Fi infrastructure using in-built switching technology. As a Wi-Fi connection is established, MTN will reallocate unneeded satellite capacity back to ships at sea, to maximise efficiencies in unused bandwidth when ships are in port.

MTN ShipCloud will provide the integrated shoreside and shipboard platform for the MTN Nexus hybrid network.

Leveraging cloud computing technology, MTN says this aspect of the service will allow it to deliver a powerful infrastructure for processing and caching of data and content.

According to the company, this combined platform should allow for the provision of a range of communication and content products specifically optimised for maritime use to deliver applications in areas like social media solutions, content and calling.

In addition, MTN Nexus will be an open platform, to allow MTN products and products from third parties to be integrated and optimised.

MTN says it is currently aiming its next-generation network at the cruise market, but it hopes to ultimately expand these capabilities to other maritime sectors.

"Bandwidth is only part of the solution to the connectivity demands we see every day from our cruise partners," said Mr Olivier.

"The complete solution is an integrated hybrid communications platform specifically designed for the cruise market to further enhance the total user experience. MTN's next-generation network, built on a worldwide infrastructure, will minimise costs, maximise throughput, optimise operations and deliver the greatest profitability to our partners."

"MTN Nexus is a purpose-built solution to deliver the at-home experience at sea and in or near port. We know this market better than anyone, and we know how to solve the problems. MTN Nexus will forever change the way we all think about communications at sea."

Norwegian deal

MTN had further cause for celebration after its Nexus announcement was closely followed by confirmation that the company has extended its contract to provide VSAT services to Norwegian Cruise Line, to cover an additional five years.

The deal includes VSAT communications, crew calling, internet services, access to MTN Worldwide TV and related services.

MTN will continue to provide its communications solutions to the entire Norwegian fleet, including its newest ships, Norwegian Breakaway and Norwegian Getaway, launching in 2013 and 2014 respectively.

"Throughout our 21-year partnership, MTN has been committed to the highest standard of excellence when it comes to providing reliable and comprehensive communications services to our passengers and crew," said Norwegian senior vice president and CIO Vincent Cirel.

"MTN is always willing to test innovative new ideas that help keep our company at the forefront of maritime communications for our guests and crew members. Their longevity and dedication to the cruise industry is truly unmatched and we look forward to continuing our successful partnership."

MTN's partnership with Norwegian started with the 709-ft Seaward in 1991, where MTN provided bandwidth to the cruise ship's 1,480 guests and 740 crew members.

With the extension of the contract, MTN will continue providing Norwegian with communications services such as internet cafés and Wi-Fi, so users can have internet access via smartphones, tablets, computers and laptops. Additional services will include MTN OceanPhone.

"Norwegian has taken amazing steps to better the passenger and crew experience, and we embrace their challenge to always be one pace ahead of their communications demands," said Mr Olivier.

"MTN values its customers and its own service team as seriously as Norwegian. This is a natural partnership for achieving Norwegian's impressive connectivity milestones."

"MTN specialises in leveraging not just the bandwidth, but also throughput to fleets so every last gigabyte – and even terabyte – is optimised, resulting in service excellence and the best at-sea experience the industry has to offer." DS

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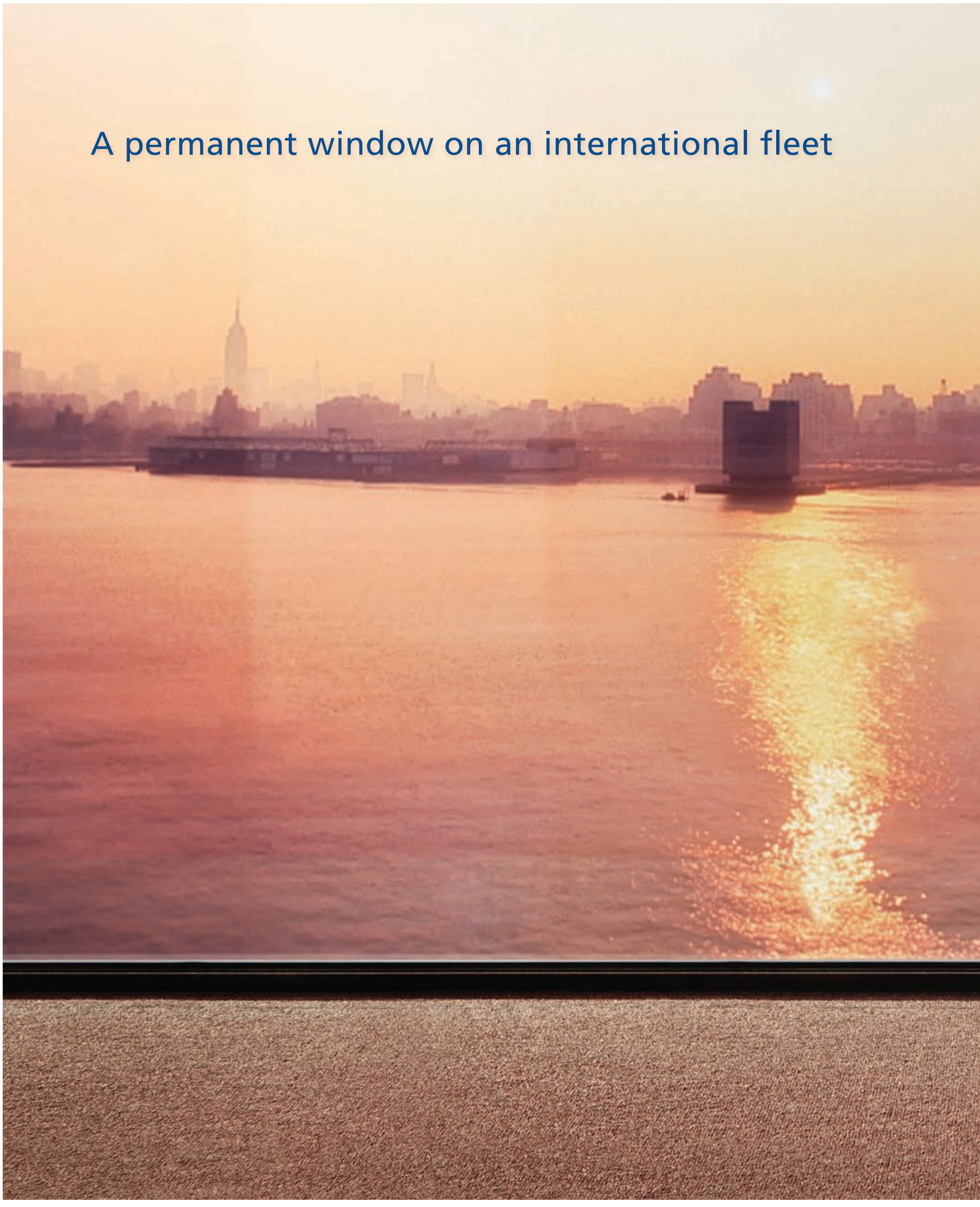

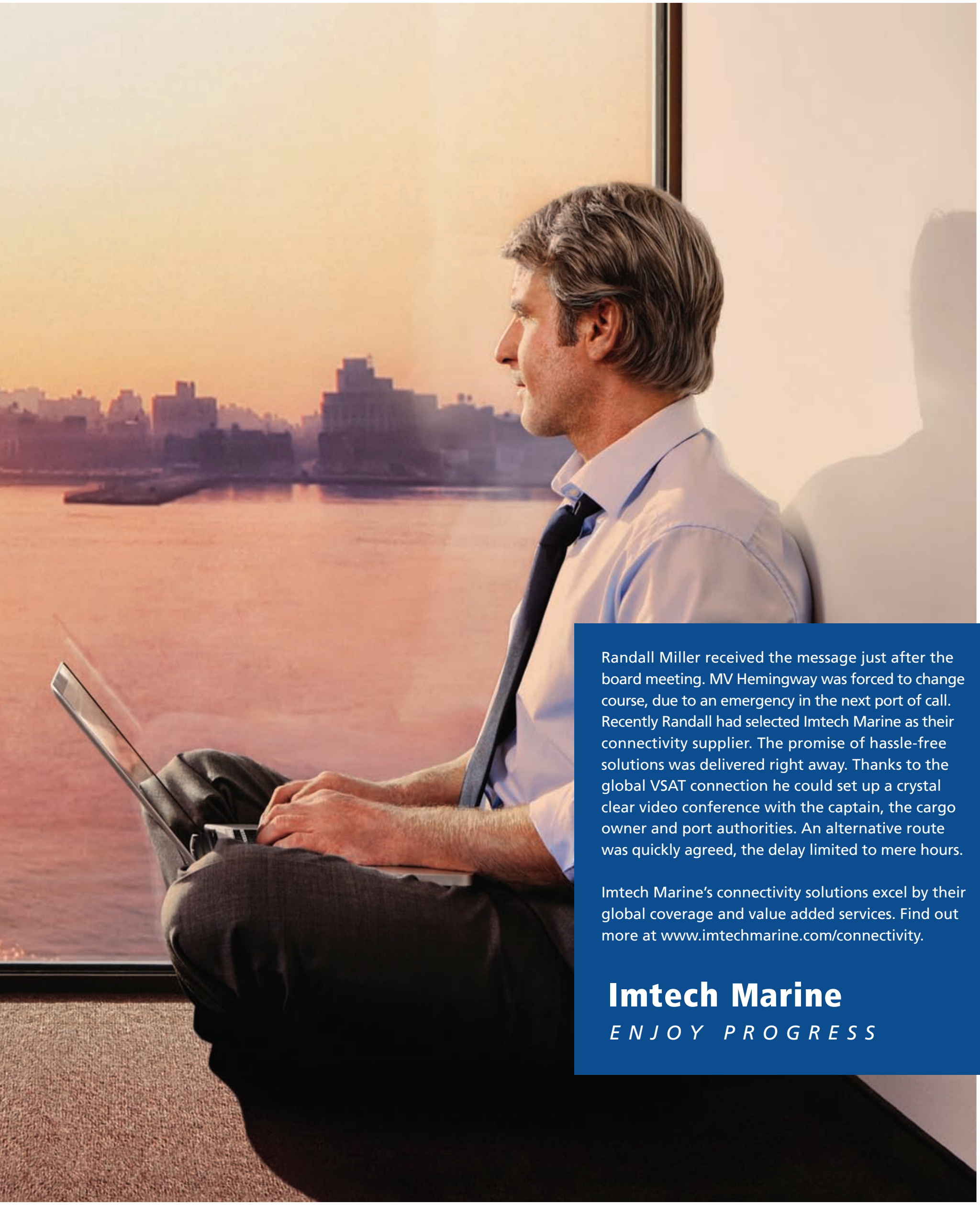

Randall Miller received the message just after the board meeting. MV Hemingway was forced to change course, due to an emergency in the next port of call. Recently Randall had selected Imtech Marine as their connectivity supplier. The promise of hassle-free solutions was delivered right away. Thanks to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

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

Imtech Marine

ENJOY PROGRESS

SpecTec's new office in Poland

SpecTec reports that it has opened a Product Development office in Poland, in Tyczyn, near the city of Rzeszow. The SpecTec Poland team is working on AMOS2 development, IDEA development and on testing of AMOS2 EMS.

ShipNet has appointed Jon Bumstead as managing director and Suren Thadani as chief operational officer. In their new roles they will focus on innovation and product development to deliver new products.

www.spectec.net
www.shipnet.no

Marorka adds Jotun compatibility

www.jotun.no
www.marorka.com

The Marorka Online system has added new functionality to make it fully compatible with Jotun's Hull Performance Measurement Method (JHPMM) energy-management dashboard, according to the companies.

JHPMM was developed specifically to enable performance-based contracts as part of Jotun Hull Performance Solutions (HPS), as the Marorka Online platform can be used to determine the outcome of these performance-based contracts between shipowners and suppliers of hull and propeller performance solutions.

"There is an increasing body of evidence as to the fuel cost and GHG emissions saving potential related to improvements in hull and propeller performance," said Marorka's director of sales and marketing, Kristinn Aspelund.

"Enabling reliable measurements of hull and propeller performance through Marorka Online is an important step in our continuous efforts to help the shipping industry become more energy efficient, more sustainable and more competitive."

"Performance-based contracting makes it possible for shipowners and eco-technology providers to work together to realise fuel cost and GHG emissions savings. We therefore expect that performance monitoring systems increasingly will include support for the transparent measurement of relevant performance indicators such as hull and propeller performance."

Seagull to produce ISF e-books

www.seagull.no

Seagull has signed a licensing agreement with the International Shipping Federation (ISF), the employers' association for shipowners, which will allow Seagull to utilise electronic versions of ISF Onboard Training Record Books.

The electronic versions of the books will be made available in conjunction with Seagull's Competence Manager software.

The agreement grants Seagull the right to develop an electronic version of all four ISF Record Books and sub-licence these to ship operators who choose to use the Seagull Training Administrator program.

"The STCW 2010 Manila amendments require shipping operators to maintain documentary evidence of structured onboard training," said Roger Ringstad, Seagull managing director.

"This requirement has been extended to include watchkeeping ratings, and those seeking to qualify for the new STCW grade of Able Seafarer, as well as officer cadets who are already required to complete training record books."

"This agreement will enable our customers to use electronic versions of the widely recognised ISF Record Books while allowing the seamless transfer of data about training activity from one vessel to another and to the company ashore."

The four ISF Record Books – for trainee deck officers, engineer officers, deck ratings and engine ratings – have all been written to reflect the amended competence requirements of STCW 2010. They include training tasks to ensure that trainees receive properly structured onboard training.

The ISF books also assist officers who are supervising the training to make an objective evaluation of whether trainees have achieved the required level of competence.

"ISF is pleased to allow Seagull to make use of our Record Books, satisfying a request from our Manning and Training Committee to facilitate their availability electronically," says ISF Secretary General, Peter Hinchliffe.

"This should provide a very useful supplement to paper-based record books, allowing the operator to choose the best of both worlds."

MarineLink to overhaul e-commerce platform

www.evry.com

MarineLink, the maritime e-commerce service provided by EVRY, has announced the launch of the next generation of its SupplierOnline application.

The new system will be launched on the 5th January 2013, and will introduce a number of improvements for shipping companies and suppliers looking to connect with one another.

Since its inception, MarineLink has had three main products for its suppliers: SupplierAttach, SupplierOnline and SupplierLink.

SupplierAttach featured an Excel spreadsheet, sent via e-mail and handled and stored locally before being returned to MarineLink by e-mail again. The company says that, though free to use, this product was simplistic and limited, and will be discontinued in 2013.

The SupplierOnline service is a web based system, also free to use, which has had three major overhauls since its initial launch, and is the service that will be the subject of the 2013 updates.

Upcoming improvements to this system will include a direct link to products within an e-mail notification, availability of attachments in Quotes and POC (PDF, JPG, XLSX, DOCX etc), an option to perform 'batch select' functions, and better control of data processing.

Users of the SupplierAttach service will be migrated to the new SupplierOnline service when the former is discontinued.

MSI to install BASS across 50-ship fleet

www.bassnet.no

MSI Ship Management Pte Ltd (MSI) in Singapore is to perform a major IT systems upgrade across its fleet, and will install the BASSnet software package to manage its operations.

The BASSnet package includes modules for maintenance, procurement, operations, safety management, risk management, review and improvement of operations, human resource management, payroll and report generation.

"We chose to work with BASS because they share a similar commitment to service quality and service excellence that complements our business strategies," said Li Kwok Hung, managing director of MSI.

"We went for the complete modules of BASSnet suite software solutions."

MSI aims to use the new IT set-up to improve efficiency in a number of areas, such as scheduling maintenance, reducing down time on its vessels, achieving optimal utilisation of spares/stores and overall improvement in the management of its fleet of more than 50 ships and 2,500 seafarers.

The company has offices in Singapore, China, the Philippines, India and Thailand.

"We are keenly conscious that MSI's vote of confidence proves that BASSnet software solutions and quality of service meet the stringent standards that shipping majors maintain," said BASS' chief executive officer, Per Steinar Upsaker.

"Furthermore, we are confident of partnering with MSI's growth to prove our solutions' development."

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ClassNK to introduce ship maintenance software

www.classnk.or.jp

ClassNK, IHI Marine United (IHIMU), Diesel United (DU) and IBM Japan have announced that they will jointly develop a ship maintenance management system, with the aim of helping to reduce ship lifecycle costs.

The jointly developed system, which will make use of condition monitoring sensor technology and data analysis systems, will be offered by ClassNK as a cloud-based service to shipowners, managers and operators from June 2013.

From April to July 2012, ClassNK, IHIMU and IBM Japan carried out a joint research project to investigate methods for the early detection of machinery abnormalities.

Making use of ship machinery performance data provided by the IHIMU Group, ClassNK and its partners analysed how machinery performance changed in the situations where malfunctions occurred.

This process was made possible by new data analysis technology developed by IBM Research in Tokyo which can automatically identify hidden dependencies between operational parameters and identify sensor anomalies, allowing noise and false positives to be automatically removed from the sensor data.

When research confirmed that the new technology can effectively analyse the data from sensors connected to onboard machinery, ClassNK began working to adapt the system for use in the maritime industry.

ClassNK's new ship maintenance management system will build on the technology used in IHIMU's ADMAX shipboard management software, which is already in use on more than 700 vessels, and IBM's Maximo asset management software system.

The IBM Maximo Enterprise Asset Management (EAM) system is already used in power generation, manufacturing, real estate and other industries to manage maintenance and reduce the lifecycle costs of machinery and other capital intensive assets.

The system itself will make use of IBM's cloud service to ensure the availability of maintenance information anywhere in the world.

In order to efficiently record maintenance data onboard ships, even when internet access is not available, IBM will also jointly develop a mobile Enterprise Asset Management application for the new management software, using its Worklight mobile application platform.

This mobile architecture aims to allow maintenance data to be recorded onboard and accessed by managers or owners from anywhere in the world via mobile devices.

In order to ensure the effectiveness of the sensor data analysis technology the new system will also be verified on existing bulk carriers, oil tankers, and container carriers equipped with DU's Lifecycle Administrator (LC-A) system, a sensor based system for condition based and preventive maintenance which makes use of sensor data to determine the condition of diesel engines and other engine room machinery.

In addition to assessing the effectiveness of the new analysis technology, the tests will also confirm the effect of real ocean conditions and differences between individual ships on the sensor data.

While LC-A requires a specialist to develop an analysis model for each vessel on an individual basis, with IBM's new technology and extensive testing on actual vessels, ClassNK says that its new maintenance system should minimise the need for a custom built analysis model, increasing the scope of system application and allowing it to be used immediately on almost all vessels.

The goal of the new service is to help owners and managers detect machinery abnormalities at the earliest possible moment and predict where malfunctions are likely to occur, thus allowing them to prevent machinery malfunction and lengthen machinery lifespan, while also reducing lifecycle costs.

This research project is one of more than 100 R&D projects currently being carried out as part of ClassNK's 'Practical R&D for Industry' programme, which unites partners from both inside and outside the maritime community to develop new solutions to the challenges faced by the shipping and shipbuilding industries.

IHIMU, which will soon merge with Universal Shipbuilding under the name Japan Marine United to become Japan's largest shipbuilder, will use the data and expertise developed as part of this project to improve the ship support service of its lifecycle business, which will be one of the company's key market segments following the merger.

Indian company to implement FORAN

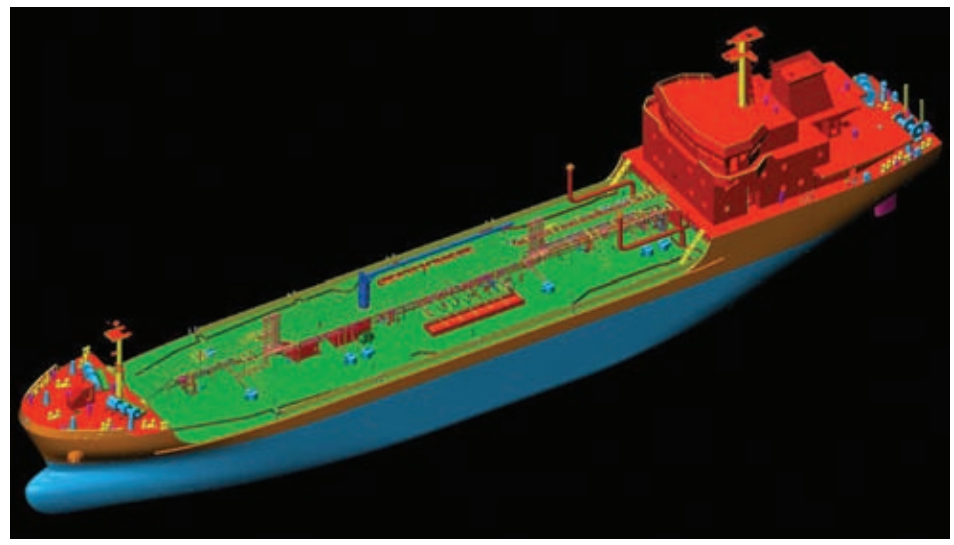
www.sener.es

Navgathi Marine Design and Constructions has signed a contract with Sener for the use of the FORAN software system in its design and shipbuilding activities.

According to the agreement, the marine engineering company based in the town of Kochi, India, will acquire licences for a package including Forms (hull form generation, decks and bulkheads), General Arrangement and Naval Architecture calculations.

The work to be performed by Navgathi includes basic design, detailed design and generation of all information for production and assembly, both in new construction and conversions and repairs.

The system will cover small boats up to large ships and marine structures.



Navgathi is to use the FORAN system

Zodiac implements data replication system

www.iora.com

UK ship management company, Zodiac Maritime Agencies Limited has agreed a four-year deal to use replication technology from iOra in the operation of its vessels.

Zodiac recently embarked on a review of its IT systems and operations with the aim of improving the way critical information was distributed.

Previously, Safety Management System (SMS) updates were delivered on a CD to vessels, a process that was judged to be unreliable and time consuming. Zodiac wanted to start distributing this information across the network in a faster and more efficient manner.

To do this, the company selected iOra's data replication solution to deliver documents to its ships, and has now purchased 150 licences to replicate critical files, including SMS updates, to improve and streamline its information distribution process.

"We selected iOra because it was the best performing technology in its class to address the challenge of updating safety management manuals to the vessels. Using a CD to do this was very resource and time consuming," said Ilan Shechter, IT manager, Zodiac.

"The introduction of the technology has enabled us to significantly improve efficiency and has now been deployed across the fleet, transforming the way we operate. We are now looking at using this technology in other areas of the Zodiac business."

The iOra replication system works in environments where available network bandwidth is as low as 2kbps. It offers server to server, server to virtual server and server to laptop solutions.

"This is an exciting relationship for iOra and Zodiac, highlighting how iOra is recognised as a leader in data replication for the maritime market," said Mark Thompson, CEO, iOra.

"Our patented technology has provided Zodiac with a resource-free solution to the problems faced when delivering critical documents quickly and safely to ships across the world."

Boatracs to work with consultancy on compliance software

www.boatracs.com

Boatracs has formed a strategic partnership with maritime compliance consulting firm Maritime Compliance International, to collaborate in the development of a new electronic forms software product designed specifically for compliance management of the upcoming US Coast Guard 46 CFR Subchapter 'M' regulation.

The new product is based on Boatracs' electronic forms platform, Boatracs BTForms. BTForms is currently in use on approximately 200 vessels and aims to assist in collecting accurate vessel data for dispatch, Health, Safety and the Environment (HSE), maintenance and management.

Kevin Gilheany, owner of Maritime Compliance International, will work with Boatracs to build on this technology via the development of a Subchapter M compliance product.

"Subchapter M, with all of its grandfathering, exceptions and other applicability specifications, is the most complex regulation ever produced by the US Coast Guard," said Mr Gilheany, himself a Coast Guard retiree.

"The biggest challenge is to determine exactly what is required for each individual vessel in a fleet. I have greatly simplified this process for vessel owners and operators by using a list of questions to determine the optimum level of compliance."

"Whether an operator chooses inspection by Coast Guard or a third party auditor, this product is designed to make complying with Subchapter M manageable for any size fleet."

The forms-based software product will be installed on an on-board PC and, based on certain input information, will automatically generate a vessel survey checklist and all of the corresponding forms required to meet the regulations for that particular vessel.

The product will also include alerts for required dates to provide reminders of upcoming requirements.

Completed forms can be stored on the on-board PC, printed, and the data transmitted to shore where an identical form will be accessible from any PC, tablet or smart phone through a web-based user interface.

The commercial product will be launched at the end of the first quarter of 2013.

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Adonis introduces version 4.0

www.adonis.no

Crew management software company Adonis has released version 4.0 of its maritime package.

Release 4.0 has seen a complete makeover of the Adonis Maritime Suite, according to product director Erick Meijer, with the inclusion of Microsoft Office ribbon-style menus and a number of new icons throughout the system.

An improved range of help options and 'tips' have also been made available.

"The individual user has been in focus for this release," said Mr Meijer.

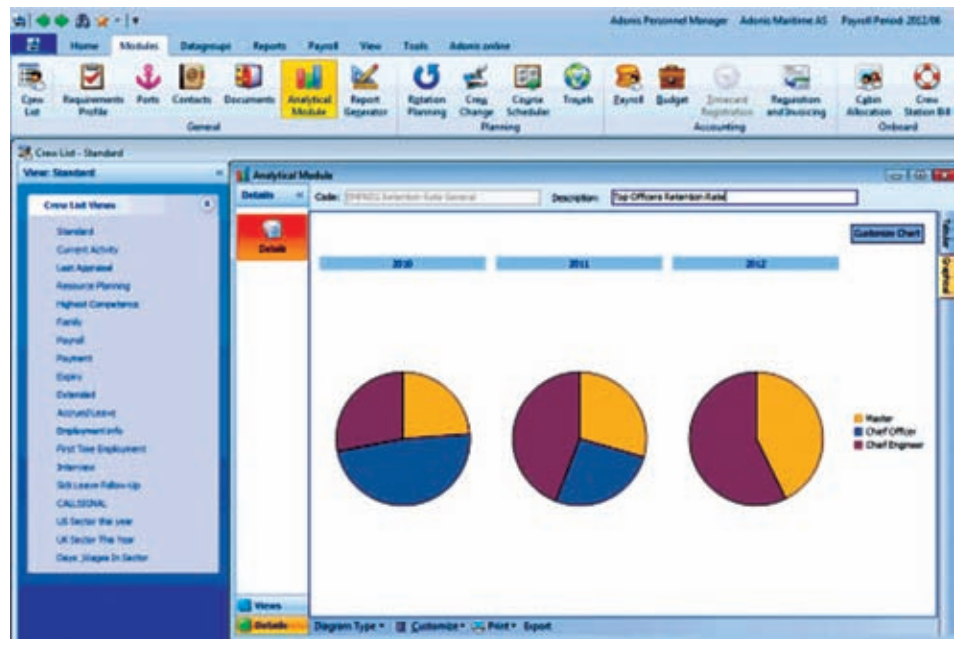
"All the settings for the useful new options, such as the Quick Access Toolbar, the Navigation Panels and the multiple Work Spaces can be saved by the individual user, allowing rapid access and a flexible approach to the content of the comprehensive Adonis Human Resource database."

A new Analytical Module has been added, used to define an unlimited number of database queries across all tables in the system. The result appears with Pivot functionality and can be presented in tabular or graphical modes.

This function can be used to perform tasks like definition of KPIs and examination of retention rates.

A Portuguese language option has also been added, and the company says that, in principle, any other language can be made available, with further development to be based upon customer needs.

Adonis notes that, for existing users who are happy with the previous interface, it will still be possible to run the new software release in 'classic' mode.



Version 4.0 includes a new Analytical module

SEEMP survey highlights lack of awareness

www.napa.fi
www.futureship.net

A survey conducted by ship design software company NAPA Group into preparation levels for the upcoming IMO ship energy efficiency management plan (SEEMP) has revealed a major divide between large and small shipping companies in the use of electronic systems to ensure compliance.

The survey, completed by over fifty ship owners, operators and charterers, revealed that the industry is taking responsibility for SEEMP compliance seriously and is optimistic about its benefits. However, the focus for most respondents was to ensure compliance and maintain a business-as-usual approach.

Individual responses to the survey described SEEMP as "absolutely needed", "long overdue" and "one of the best practices"; an assertion re-enforced by the fact that 79 per cent of respondent organisations already have a system in place for SEEMP compliance.

Company size was identified as a key factor in levels of preparedness – 95 per cent of those responsible for 30+ vessels are "prepared", with the remaining 5 per cent in the final stages, compared to companies with 5-15 vessels who had the lowest preparation rate at only 43 per cent.

36 per cent of respondents were prepared for paper SEEMP, and 45 per cent for electronic. Organisation size was the greatest determining factor in choosing the method of SEEMP - 62 per cent of those with 60+ vessels are opting for electronic, while 67 per cent of those with fewer than five vessels chose paper.

70 per cent of those without a plan in place for SEEMP believe electronic systems would be the best solution.

The results also suggest however that, even though slightly more respondents are using electronic systems, most are not planning to use the data collected under the SEEMP to try and improve their fuel efficiency.

In fact, the survey found that 60 per cent of the market was unaware that compliance with SEEMP could also create further fuel saving potential.

"It is enormously positive to find that the industry is so prepared for the upcoming SEEMP regulation – however it is important to understand that in utilising electronic SEEMP and modern software solutions savings of as much as 20 per cent can be achieved," said Esa Henttinen, vice president, business development at NAPA for Operations.

"NAPA has long maintained that SEEMP regulation is there to help owners and operators help themselves and it is heartening to see that this opinion is shared by most of our survey participants."

"The survey results highlights that there is still scope for more education around SEEMP before it becomes mandatory. Moreover, the survey shows that there is a significant percentage of organisations that don't realise they can achieve 15 to 20 per cent in bunker fuel savings – the opportunity is there for owners and operators to substantially reduce operating costs and emissions. Unless this is widely known SEEMP may not live up to its potential and fully benefit the industry."

One vessel operator that has taken steps to introduce electronic systems to manage SEEMP compliance is EFNAV Company of Athens, which has recently taken delivery of a SEEMP system from FutureShip, the maritime consulting arm of Germanischer Lloyd (GL)

Despite the results of the survey indicating a general lack of enthusiasm for software systems, FutureShip notes that this delivery in fact marks the 1,000th SEEMP package that it has provided to shipping companies around the world.

The FutureShip SEEMP Solution is designed as a template-based form that allows a shipping company to select measures appropriate to its own business and convert these into vessel specific SEEMPs.

Every SEEMP is checked by FutureShip personnel to minimise the chance of error, and the SEEMP Solution comes with a vessel specific EEOI calculator for every ship in a fleet.

"Excellent service and the shortest lead-time were, alongside a competitive price, the main reasons to go with FutureShip as our partner for implementation of a SEEMP," said EFNAV's technical manager, Pantelis Chondros.

"We ensure that we will have zero hassle with Port State Control after implementation, while at the same time my team is supported in making energy saving part of their daily routines."

The SEEMP was adopted by the IMO in an effort to encourage innovation and reduce CO2 emissions, and is now a part of MARPOL Annex VI.

A SEEMP is mandatory for all sea going ships (both new and existing ships) larger than 400 GT from 1 January 2013.

Envisioned as a management tool to assist a company in improving energy efficiency of ships in operation, a SEEMP must be specific for each ship in a fleet and should be used together with established environmental management systems.

Ideally, it will allow companies to reduce fuel consumption through simple changes in operational measures.

The SEEMP is a cyclic process with four steps in each cycle: Planning, Implementation, Monitoring, Self-Evaluation and Improvement.

"More than just a paper tiger, as well as allowing owners and operators to maximise the efficiency of their fuel saving measures, the SEEMP has the potential to enhance the deployment of data sharing and the modern software tools that go along with the sophisticated analysis of ship performance," said Till F. Braun, managing consultant with FutureShip.

"Vessels with a SEEMP in place have already shown to make marked improvements in fuel consumption and as the processes and systems become more familiar to the shipping industry this will certainly grow."

The FutureShip SEEMP Solution is currently available in Russian, English and Spanish, as SEEMP requires that the plan should be established in a working language or languages understood by a ship's personnel.

Sunoco to use dock management and tracking system

www.portvision.com

PortVision has signed a three-year agreement with Sunoco Logistics to provide the company with its TerminalSmart platform.

Sunoco Logistics will be deploying the platform at multiple terminals throughout the US.

TerminalSmart integrates dock management, scheduling, reporting and analytics with PortVision Automatic Identification System (AIS)-based vessel tracking services, and offers a predictive ETA of inbound vessels as well as real-time alerting of stakeholders based on dock schedule changes.

"PortVision's TerminalSmart platform is expected to bring important capabilities to our business operations," said Dave Chalson, Sunoco Logistics' vice president of operations.

"It is anticipated that this product will help our marine transportation managers improve scheduling, vetting, logistics, loss control and demurrage management, and streamline and enhance activities associated with front-line dock activities and dock management."

TerminalSmart also gives terminal operators access to PortVision's database of both real-time and historical vessel movements based on AIS vessel-tracking data, combined with management, analysis and reporting tools to enhance terminal operations.

"We are pleased that Sunoco has selected TerminalSmart for its busy US terminal operations," said Dean Rosenberg, PortVision chief executive officer.

"Sunoco Logistics is widely regarded as having among the most efficient and attractively located pipelines and terminals in the Gulf Coast, and we are committed to helping the company further improve operational performance with the TerminalSmart platform."

By joining forces with Vizada, we have created the new Astrium Services. Now, as the world's number one communications provider across the major commercial satellite networks in the maritime sector, we offer you more. More choice thanks to our multi-satellite technology strategy. More productivity from our convenient solutions and efficient services. More engineering power as part of the world's leading aerospace company. Now more than ever, we support your smooth business operations at sea. Connect. Inform. Protect. **www.astriumservices.com**

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Loading software for 55 Bourbon vessels

www.napa.fi

Software provider NAPA Group is to provide loading computers for 55 offshore support vessels (OSV) under a contract with BOURBON.

The software aims to enable BOURBON to improve loading and unloading with maximum cargo intake while improving assistance to stability and longitudinal strength for operational efficiency.

NAPA is also providing BOURBON OSVs with 3D systems offering 'real time' onboard loading calculations and ship stability analysis, as well as an emergency response system during loading.

The software will be installed on twenty Bourbon Explorer 500 series vessels, fifteen Bourbon Liberty 150 series vessels and twenty Bourbon Liberty 300 series vessels commissioned by BOURBON and built by Sinopacific Zhejiang Shipbuilding shipyard in Ningbo, China.

Five of the Bourbon Liberty 300 vessels have already been delivered.

"BOURBON does not compromise with safety," said Olivier Daniel, BOURBON managing director newbuilding.

"Our relationship with NAPA has been fruitful and should mature with the numerous coming installations. The effective loading of a vessel is absolutely critical, as the movement of heavy objects onto the ship during loading impacts stability and increases the risk of harm."

"The installation of NAPA's Loading Computers will help our crews to improve preparation for and management of loading procedures, maximising safety at every stage."

The software will be installed across a range of Bourbon Liberty series vessels

Safety management reporting from GL

www.gl-maritime-software.com

Germanischer Lloyd is releasing the successor to the Incident Management module in its GL ShipManager software package, to be named Safety Management Reporting.

The new application allows for fleet wide recording of all types of findings and incidents, to allow users to perform cause analysis and monitor follow up actions.

It follows a form based approach, which GL says shipping companies are more familiar with as they are generally coming from a paper based Quality & Safety Management environment.

Based on the results of an investigation, the Safety Management Reporting module provides only two different types of reports - incident or finding.

An incident will be specified by its type and sub type; type covers (as a default) accidents, near misses, and security breaches, while sub type includes things like grounding, personal injury and damage.

A finding is the report of an inspection, survey, or visit, and is specified by the authority and the type, for example Port State / Port State Control.

The content of the various categories, including report types/sub types, can be configured by the user (depending on the user rights), though the module will be delivered with a default set of data based on best practice in the maritime industry.

This is the second module in the software package, after the Certificates module, to be significantly updated and GL says that it is also working on a new risk assessment module to add to its software's Quality & Safety Management functionality.

Denmark added to Digital Regulations product

www.regs4ships.com

Regs4ships Limited reports that it is set to launch the sixteenth flag based product for its Digital Maritime Regulations service.

The new Denmark flag product is available as of early December, and contains flag state and international legislation in a web-based solution.

The product contains all Danish flag state Acts, orders, regulations, circulars, guidance and notices, along with interlinked and keyword searchable copies of SOLAS, MARPOL and STCW from the International Maritime Organization (IMO).

The company says that it already has "thousands" of users worldwide currently subscribing to its Digital Maritime Regulations services, which provide access to 15 additional conventions, 30 additional codes, over 1,200 resolutions and 1,800 circulars from the IMO, alongside conventions, protocols and guidelines from the ILO and legislation from the EU.

ECDIS training certified by ClassNK

www.classnk.or.jp

ClassNK has certified the type specific ECDIS training courses provided by the newly established Philippines-Japan Maritime Training Management (PJMTM) ECDIS training centre.

The centre has been established with funding from the International Mariners Management Association of Japan (IMMAJ), an association of 96 Japanese companies who collectively employ almost 50,000 seafarers on more than 2,300 vessels.

PJMTM's new facility in Manila will boast 56 dedicated ECDIS simulators, and will provide type-specific ECDIS training for Filipino seafarers who serve on Japanese merchant vessels.

The ECDIS training course certification provided by ClassNK covers type specific ECDIS training for systems from all four of the manufacturers used by the centre, including Japan Radio Corporation (JRC), Furuno, Tokyo Keiki, and Transas Group.

In related news, ClassNK also reports that it has certified the type specific ECDIS training course provided by Philippine Standard Shipmanagement Inc (PSSI).

PSSI is an affiliate of Japanese ship management company NS United Marine Corp, a part of NS United Kaiun Group.

ClassNK says that the new course has been set up in order to address new requirements from oil majors and Port State Control (PSC) authorities, that are now requesting evidence of Type-Specific ECDIS training during vetting and PSC inspections.

This has pushed NS United Marine Corp, with the cooperation of ECDIS system manufacturer Tokyo Keiki, to establish a new ECDIS training centre at Manila-based PSSI.

The certification from ClassNK is used to confirm that the training centre's ECDIS training is carried out in accordance with the society's independently developed rules and maritime education standards.

ClassNK executive vice president Koichi Fujiwara presents a certificate to PJMTM president Eduardo U. Manese

UK MCA approves ECDIS CBT

www.videotel.com

The Maritime and Coastguard Agency (MCA) in the UK has given its formal approval to the Videotel CBT ECDIS blended learning package, the company reports.

The Videotel course is intended for all deck officers as part of their mandatory ECDIS training, and should provide an understanding of the principles of ECDIS, the fundamentals of ECDIS capability and operation, and knowledge of how to use the system for route planning and monitoring.

Importantly, Videotel says that students should also learn about the limitations of ECDIS and the dangers of over-reliance.

Once this part of the training has been completed successfully, candidates can progress to an ECDIS Training Consortium (ETC) centre for generic and type-specific simulator training. Alternatively, type-specific training can be conducted online at a later stage through Videotel's collaboration with Safebridge.

The course is delivered in a modular form, using self-paced CBT (Computer Based Training). The CBT contains English text and narration, short video sequences, graphics and interactive capabilities.

"As ECDIS becomes part of the navigational landscape, the industry has responded with a wide range of training options targeted at the seafarer," said Nigel Cleave, CEO of Videotel.

"But how does the shipowner or shipmanager sift through the bewildering array of alternatives and select the best route through complex training and ISM compliance issues? The answer must be to select a course tried and trusted by the industry, from a quality training provider and with third party endorsement."

"The Videotel CBT training package covers perhaps one of the most important subjects we have undertaken in recent years, which delivers a course that provides the very mind-set and understanding so essentially required on the principles of the ECDIS system and how it should be used to facilitate navigational safety."

ChartWorld ECDIS added to Safebridge

www.safebridge.net

Online ECDIS training company Safebridge has released its third online ECDIS familiarisation course, covering the ChartWorld eGlobe.

Structured in the same way as earlier courseware for the Sperry Marine VisionMaster FT and the Raytheon Anschuetz Synapsis, NSC and the Retrofit ECDIS 24, the content follows the competencies set out by the recommendations of various Flag States and requires 16-18 hours of study (a completed IMO 1.27 generic training course is a pre-requisite).

The course costs €185 for a single log-in, with fleet training or prepaid packages also available.

"The cost of training is proving one of the most significant factors determining shipping companies' approach to ECDIS familiarisation training," said Ulf Steden, managing director of Safebridge.

"New solutions have come to market to reduce expenditure and we are especially pleased to have been chosen as ChartWorld's preferred partner for online type-specific training because of its revolutionary approach to the whole issue."

Safebridge says it is currenlty developing courseware for a further five leading ECDIS manufacturers and that these will be released over the coming months.

Radar simulator for Florida training centre

www.buffalocomputergraphics.com

Maritime License Training of Florida, US, has purchased a radar simulator from Buffalo Computer Graphics (BCG) to increase its maritime training capabilities.

Maritime License Training will use BCG's PCRDP emulation software as part of its training service following the deal.

The PCRDP is an emulation of the RDP-139 Furuno radar commonly found on smaller vessels and vessels that primarily operate in a coastal environment.

The emulation software, coupled with BCG's GUI2 user interface, will allow Capt Bob Russo, MTL's owner and founder, and his instructors to offer radar and ARPA training at their Atlantic Beach, Florida facility.

This training can also be extended to other locations if the need arises.

Training centre opens in Southampton

www.e-navigation.org.uk
www.nautissim.com

A new training facility called The Enav Centre, located near Southampton in the UK, has opened for business.

The focal point of the centre is a new VSTEP NAUTIS Full Mission Simulator (FMS), which the centre hopes will offer a high level of realism for trainee bridge teams.

The simulator offers a 315° viewing capability, and is to primarily be used for Bridge Team training, though it has been fitted with four different ECDIS systems all integrated with the NAUTIS software.

The bridge simulator has been set up with two radars and four ECDIS systems and is capable of displaying RADAR, AIS and ARPA overlays onto the ECDIS. Equipment from OSI, Kelvin Hughes, JRC and Transas has been integrated, though the simulator can also be integrated with other ECDIS manufacturers as required.

The FMS is to accompany the six smaller NAUTIS simulators already used to offer visual channels as part of the IMO 1.27 Model ECDIS Course.

Other bridge related courses, such as BPC, BRM and BTM courses, and additional courses such as Human Factors and Anti-Piracy, will also be offered at the Enav Centre.

Course bookings for the Enav Centre for 2013 are already being taken, with two more centres in Asia and the Americas also planned to be opened next year.

"These are exciting times," said Joe Sloly, customer development manager at the Enav Centre.

"We are now delivering a new and exciting range of courses in addition to the traditional bridge courses. The additional courses on offer vary between studies on the subject of Human Factors right through to Anti-Piracy."

In related news, the ECDIS reference website www.ECDISRegs.com reports that it has now reached 100,000 downloads.

The website offers ECDIS related information for the mariner including updates from manufacturers about approved ECDIS currently on the market. The website was first launched in 2011.

This full mission bridge simulator will be used to offer courses at the new Southampton training centre

Thomas Gunn sold to start-up

www.thomasgunn.com

A new maritime navigation start-up named Global Navigation Solutions (GNS) has taken a major step forward in its entry into the market with the acquisition of Thomas Gunn Navigation Services, and its Poly Thomas Gunn subsidiary.

Thomas Gunn is a distributor of UK Hydrographic Office/Admiralty marine navigation products and services and an ECDIS reseller, with its own brand chart management and route planning tools including Voyager and TGT eData.

Consideration for the acquisition has not been disclosed.

GNS was formed in November 2012, with the aim of providing a range of maritime services to shipping companies worldwide.

The company is headed up by Mike Robinson, formerly chief executive officer of the UK Hydrographic Office (UKHO), and is owned jointly by its senior management team and Phoenix Equity Partners.

Phoenix is an independent private equity fund management business, itself also owned by its executive team and with an investment focus on mid-market UK private businesses valued at up to £200 million.

Thomas Gunn, current managing director of the Thomas Gunn Group, will assume responsibility for business development in the GNS group.

"It is an exceptionally exciting time in the marine market," said Mr Robinson.

"We are looking forward to working with Thomas Gunn to develop progressively more intelligent navigation solutions that give our customers increasingly tangible operational benefits."

Mike Robinson, CEO at Global Navigation Solutions

$1M in Korean orders for emissions monitoring system

www.martek-marine.com

Martek Marine has won a series of orders to supply its MariNOx Evolution onboard emissions monitoring and engine efficiency system to Daewoo Shipbuilding & Marine Engineering (DSME) and Hyundai Heavy Industries in Korea.

Martek says that the shipyards have agreed seven orders for these systems, worth more than US$1 million.

Amongst the orders is a request to deliver what Martek describes as "the largest and most complicated emissions monitoring system ever to measure SOx, NOx, CO2, CH4, NO2, THC, H2S, Benzene and N2O."

MariNOx Evolution is designed to enable automated Marine Equipment Directive (MED) certified compliance with the MEPC 177(58) NOx Technical Code 2008, as well as MARPOL Annex VI and MEPC 103(49).

All engines are monitored via a single sample line, which the company says removes the need to install a dilution arrangement requiring dry air supplies at each engine.

"Korean yards continue to choose Martek over other fledgling competitors because of our vast experience and the unique features of MariNOx Evolution," said Martek Marine managing director, Paul Luen.

"Over 100 of our systems have already been installed and have clocked up millions of operating hours. None of our competitors can even come close to this level of critical application experience across many different ship types, hence the confidence our customers enjoy in their choice."

"Yards are building more fuel efficient and less polluting ships and so are turning to our world-class solution to help them achieve this. We have a team of local experienced Korean MariNOx engineers who are able to install and commission MariNOx Evolution systems and have developed a particularly close working relationship with the Korean yards."

MariNOx Evolution was introduced in 2010 following further development and engineering on the original MariNOx system, launched in 2005.

ChartCo PassageManager updated

www.chartco.com

ChartCo has released a new version of PassageManager, its passage planning and product management platform.

The graphical management tool was first introduced in 2011, and the new release builds on the existing product which is already installed across approximately 50 per cent of the ChartCo subscriber base.

PassageManager allows the ChartCo subscriber to plot routes, attach navigational products to those routes and then produce passage plans combining product, port and route data.

The software follows maritime best practice for creating passage plans and can be tailored to meet the specific demands of bridge procedures.

"PassageManager has been a great success and was another first for ChartCo in the maritime data world," said Steve Mariner, business development director at ChartCo.

"Following this enthusiastic reception we have consulted with a number of leading Ship Operators to refine the passage planning tool which now provides a fully tailored and comprehensive passage plan in a matter of minutes, saving hours of work. Coupled with industry leading compression and data management techniques that reduce data sizes to a minimum, it makes a compelling offering."

"The new software has been exhaustively trialled by a select number of fleets prior to release. The feedback received has been very positive and the benefit of vessels having this sort of functionality available is evident. All the end-users of PassageManager have commented on the ease of use and considerable time saving the functions of the software deliver."

Vela is one of the shipping companies that has been using the system, with the Master of the Matar Star, Capt Paul Armitage, commenting that the application "reduces passage planning from 2 to 3 hours to about 10 to 15 minutes including exporting the route from ECDIS."

Valeriy Baranov, Vela's fleet support group superintendent, also noted that "the ability of PassageManager to bring together product information with passage planning and then provide such a comprehensive passage plan document is very impressive."

"Nowadays time is valuable and ChartCo provides key labour saving tools while ensuring we have the most up to date navigational data possible. The detailed port data, which is updated every week, means that it will become a vital tool within our fleet."

The new version of PassageManager is currently being rolled-out across the ChartCo fleet, and is free for existing subscribers.

Simulators installed in Greece and Georgia

www.transasmarine.com

Transas reports that it has recently completed the delivery of a range of simulator training systems to facilities in Georgia and Greece.

The Batumi State Maritime Academy (BSMA) in Georgia has upgraded its training facility with the installation of a range of new simulators.

The simulators included a full mission engine room simulator (ERS 5000) that simulates a MAN B&W 6S50MC-C Diesel Engine Product Tanker Ship Model.

The system is integrated with the existing NTPRO 5000 navigational simulator and provides for joint training of engine room and bridge teams, replicating the operation of product tanker machinery, bridge and power systems.

Batumi State Maritime Academy has installed a range of new simulators

Within the second part of the project, the Academy was equipped with an ECDIS simulator class, which will allow BSMA students to receive mandatory generic ECDIS training.

This project is a continuation of an ongoing relationship between Transas and Batumi State Maritime Academy, dating back to 2006 when Transas supplied an integrated simulator complex to the Academy.

In Athens meanwhile, Costamare Maritime Training Services has been supplied with a Navigational Simulator Complex including the latest version of the NTPRO 5000 Full Mission Bridge Simulator with 240 degrees visualisation, an ECDIS class and a Debriefing Area.

The full mission bridge will be used for training and certification of watch officers and chief officers in ship handling, while the ECDIS class will enable Costamare Maritime Training Services to carry out conventional ECDIS training and issue certificates of competency.

The installed systems meet the requirements mandatory for STCW 2010 compliant ECDIS training, such as an ECDIS backup station; use of official S57 charts; fictitious area; and instruments for route planning, work with licences and chart updates.

Dubai unveils plan for navigation aids

www.dmca.ae

Dubai Maritime City Authority (DMCA) reports that it has introduced new initiatives governing the deployment of navigation aids by various entities engaged in maritime activities, to ensure the safety of Dubai's waters.

DMCA, the government authority charged with regulating, coordinating and supervising all aspects of the maritime sector in Dubai, says it conducted meetings with relevant authorities to discuss the requirements and processes involved in the deployment of navigation aids prior to their introduction.

Under the new initiatives, a No Objection Certificate (NOC) from DMCA will be required before any entity can deploy navigation aids in Dubai's waters.

A deployment plan and an annual maintenance plan for the navigation aids are also required before the NOC is issued. Monthly updates of the navigational aids will also have to be submitted to DMCA.

"Navigation aids are essential tools in our continuing efforts to maintain the safety of Dubai's waters. This is particularly true as we are now witnessing numerous offshore projects and other large-scale development initiatives being undertaken across Dubai's marinas," said Ali Al Daboos, executive director of operations, Dubai Maritime City Authority.

"The recent meeting with leading entities who are engaged in various maritime activities gave us an opportunity to explain in detail the processes and requirements covered by the new regulations. The support of Dubai's maritime stakeholders is certainly crucial in our mission to maintain maritime safety and security through the optimal use of navigation aids."

Dubai Maritime City Authority says that, in the future, it will issue detailed maps for deployment of navigation aids in Dubai and distribute them to all stakeholders and relevant bodies.

AIS satellite enters service

www.exactearth.com

Satellite AIS data services provider exactEarth says that it has successfully added its latest satellite exactView-1 (EV-1) into commercial service.

According to the company, EV-1 is performing with increased detection rates of up to 40 per cent better than any previous satellite sensors monitoring AIS signals.

Daily detection rates are consistently reaching 45,000 MMSIs (Maritime Mobile Service Identity number), says exactEarth, increasing the ships covered by its global AIS service to approximately 90,000 unique MMSIs a day.

EV-1 was launched into an 810km polar orbit in late July 2012 and subsequently went through commissioning activities to bring the satellite into full operation.

exactEarth says it plans to expand its constellation in the near future with AIS receivers on board the Canadian M3M satellite and the Spanish PAZ radar satellite, both launching in 2013. In addition, two further dedicated AIS satellites will also be launched in 2013.

"We are very excited to announce that EV-1 has joined our operational service offering," said Peter Mabson, president of exactEarth.

"We are thrilled that the advanced sensors coupled with our patented de-collision processing algorithms are delivering results beyond our expectations, making EV-1 a huge leap forward in space AIS detection."

"This single enhancement to our service offering doubles the AIS messages collected from space and delivers an even higher level of performance to our customers around the world, providing the most complete maritime picture available today."

In related news, exactEarth has also reported that the South African Maritime Safety Authority (SAMSA) has recently signed an agreement to renew its exactAIS data service through to October 2014.

SAMSA has been using space based AIS data to try and improve Maritime Safety and Security in Southern Africa.

Working with a number of Government departments in the maritime security environment, SAMSA is involved with marine environment protection, national and economic security as well as search and rescue operations through its Marine Rescue Co-ordination Centre (MRCC) in Cape Town.

With this agreement, SAMSA will now have access to exactAIS Premium data, delivering AIS data as one integrated feed allowing for berth-to-berth vessel tracking.

"The detection level, coverage and reliability afforded by the exactAIS service gives us an invaluable resource in helping to manage the maritime environment around Southern Africa," said Captain Karl Otto, executive head of the Centre for Sea Watch and Response in SAMSA.

"It gives us visibility into sea areas that we cannot achieve with any other sensor or data source."

W R Systems has been awarded a patent for the 'Outside the Stack' Particulate Matter (PM) measurement technology used in its Emsys emissions monitoring technology. The Emsys system is designed to measure gaseous emissions such as NOX, SOX and CO2, as well as PM and opacity.

Imtech Marine has opened a new office in Barcelona, just weeks after adding Valencia to its global network and a year after the company opened its first Spanish office in Algeciras. With the latest Spanish additions the Rotterdam-headquartered company now has 94 offices worldwide, located on major shipping lanes and in shipbuilding centres.

Imtech Marine has also opened a new office in New Delhi to support its Imtech Marine India Pvt Ltd business, which is presently working on various projects for the **Indian Navy** with regard to the supply of HVAC/NBC equipment, Fire Fighting systems and Chilled Water Plants. All of these projects are currently in the bidding stage.

www.emsysmarine.com
www.imtech.eu/marine

Stakeholders publish ECDIS guidance document

Concern among stakeholder groups regarding the current levels of ECDIS training across the maritime industry has led to the publication of a new guidance document that aims to provide a point of reference for best practice for shipping companies looking to provide ECDIS familiarisation training

Following on from the publication of a statement by a group of major industry stakeholders voicing 'concerns' regarding ECDIS competence (see story on page 1, *Digital Ship* November 2012), an expanded organisation called the ECDIS Training Group, including those same stakeholders and a number of other bodies, has published a new document entitled 'Industry Recommendations for ECDIS Familiarisation' with the aim of promoting clarity in ECDIS training.

In the document the ECDIS Training Group recommends that companies should establish clear guidance for the use of ECDIS within their Safety Management System procedures.

It has also produced a Familiarisation Checklist (reproduced here on pages 32-33) that details tasks officers of the watch of ships using ECDIS should be able to demonstrate competency in.

The checklist covers the following areas: initial preparation, basic operation, charts, navigation tools and functions, route planning and route monitoring.

The ECDIS Training Group, which first came together in 2011, is co-ordinated by The Nautical Institute, with industry organisations BIMCO, GlobalMET, International Federation of Shipmasters' Associations, International Group of P&I Clubs, International Maritime Pilots' Association, International Chamber of Shipping, InterManager, INTERTANKO, International Shipping Federation, Marine Accident Investigators' International Forum and Oil Companies International Marine Forum supporting the new guidance.

The document has been described as "an invaluable point of reference for those keen to establish and follow best practice in relation to ECDIS" by Philip Wake, chief executive of The Nautical Institute.

"As our industry moves away from depending solely on paper charts, this guidance provides important clarification in terms of the competencies required for what has become a vitally important navigational and decision support tool," he said.

The text of the 'Industry Recommendations for ECDIS Familiarisation' follows:

Background

Being aware that the implementation of Electronic Chart Display and Information Systems (ECDIS) has given rise to confusion in regards to ECDIS Generic Training and Familiarisation with onboard systems, an industry group, organised and coordinated by The Nautical Institute and comprising leading international shipping industry organisations, has been meeting since 2011 to produce a range of guidance to clarify the requirements for competency in relation to ECDIS.

It should be noted that the term 'type specific' as used by some administrations is not referred to by this industry group. After discussion it was agreed that only the terms 'generic training' and 'familiarisation' are covered by IMO instruments (STCW 2010 and ISM respectively).

This particular guidance deals with the need for competency following Familiarisation with ECDIS specific to onboard equipment and its arrangements. This Familiarisation will be complementary to ECDIS Generic Training.

The regulatory requirements for Familiarisation with ECDIS are covered by the ISM Code (including sections 6.3 & 6.5) and the STCW Convention Regulation I/14 which require the Company to establish procedures to ensure that new personnel and personnel transferred to new assignments related to safety and protection of the environment are given proper familiarisation with their duties.

Familiarisation

It is recognised by all signatories to this guidance that ECDIS, as defined by the International Maritime Organization (IMO) when implemented will be one of the most important navigation and decision support tools.

The complexity of ECDIS should be recognised and the ability of a watchkeeping officer to be competent and confident in the operation of ECDIS, including peripheral equipment and actual version(s) of software and charts, as part of the shipboard navigational system is essential for safety, security and protection of the marine environment.

ECDIS Familiarisation has, therefore been defined as:

Familiarisation: Following the successful demonstration of competencies contained in the ECDIS Generic Training, Familiarisation is the process required to become familiar with any onboard ECDIS (including back-up) in order to assure and demonstrate competency in relation to a specific ship's ECDIS installation, prior to taking charge of a navigation watch.

Familiarisation should cover:

- Initial Preparation;
- Basic Operations;
- Charts;
- Navigational Tools and Functions;
- Route Planning and Route Monitoring.

Familiarisation includes any pertinent information required for the safe operation of the ECDIS, including all updates and alterations. Companies should have clear procedures for using ECDIS and assisting the navigators in completion of the Familiarisation process.

Recommendations

1. Companies should ensure that they have addressed Familiarisation requirements as defined within the ISM Code, taking into account the minimum requirements for ECDIS outlined in Annex I.
2. Companies should ensure that mariners are able to demonstrate the competencies as defined within Annex I prior to taking charge of a navigational watch, and that they maintain those competencies.
3. Companies should establish clear guidance for the use of ECDIS within their Safety Management System (SMS) procedures.
4. Equipment manufacturers should provide materials to companies and training organisations to assist them with the requirements outlined in Annex 1.
5. Flag States and Port States should take the contents of this guidance into account.

Delivery Options

A 'Company' can consider a wide variety of options for achieving Familiarisation both onboard and ashore. These include but are not limited to:

- Shore based manufacturer training followed by installation-specific Familiarisation onboard;
- Independent training on specific systems followed by installation-specific Familiarisation;
- Computer Based Training (CBT), followed by installation-specific Familiarisation onboard;
- Internet / Intranet Based Training (eLearning) followed by installation-specific Familiarisation onboard;
- Onboard training by appropriately trained crew or training personnel;
- Manufacturer provided training mode on the ECDIS, followed by installation-specific Familiarisation onboard;
- Company bridge procedures and manuals.

Full Familiarisation needs to be specific to the installation and may require a mix of the above methods and consideration should be given to allow adequate time for this activity, whether done ashore or onboard or both.

Regardless of the method(s) used, it is essential that all watchkeeping officers must be competent in the use of the onboard ECDIS prior to taking charge of a navigational watch, and remain so thereafter.

It is recognised that manufacturer provided tools for structured onboard Familiarisation will enhance and possibly add value to onboard ECDIS.

The IMO ISM Code requires the 'Company' to establish "Instructions which are essential to be provided prior to sailing [that] should be identified, documented and given."

Companies must therefore make clear in their Safety Management System (SMS) their requirements for ensuring the demonstration of competency for these familiarisation issues prior to officers taking charge of a navigational watch.

[The following Familiarisation Checklist] provides a detailed description of ECDIS tasks the industry expects officers of the watch of ships using ECDIS to be able to demonstrate competency in. These tasks should be considered a minimum requirement.

Pilots should be able to demonstrate relevant competencies contained in Model Course 1.27. However pilots should not be expected to meet Familiarisation requirements.

Reference

1: Definition of Generic Training: Training to ensure that navigators can use and understand ECDIS in the context of navigation and can demonstrate all competencies contained in and implied by STCW 2010.

Such training should ensure that the navigator learns to use ECDIS and can apply it in all aspects of navigation, including the knowledge, understanding and proficiency to transfer that skill to the particular ECDIS system(s) actually encountered on board, prior to taking over navigational duties.

This level of training should deliver the competencies at least equivalent to those given in IMO Model Course 1.27.

(Source of definition: industry ECDIS Training Group. www.nautinst.org/ECDIStraining)

ECDIS Familiarisation Checklist

1 Initial Preparation

		Comments	Y/N
1.1	Establish if the vessel is approved to use ECDIS for navigation		
1.2	Establish whether there are Company Navigational Procedures concerning the use of the equipment and ensure that these are followed		
1.3	Establish whether any passwords are needed for the management of the system and, if so, obtain the details from the Master (if appropriate - see end note)		
1.4	Establish whether there is an onboard approved Familiarisation training package for the equipment, whether as computer based training, an inbuilt training mode or as a book or digital image of a book (eg. PDF file). Use this before completing the checklist items here		
1.5	Identify the primary ECDIS equipment and the facilities for back-up. If the back-up is a second ECDIS of a different type to that of the primary installation, then Sections 2 to 6 of this Familiarisation checklist must be repeated for both systems		
1.6	Understand ship procedures in event that the ECDIS and its back-up fail		
1.7	Determine where the user manuals for ECDIS and its back-up are located – an electronic version of these may be available on each unit		
1.8	Determine where Base and Update CDs are stored on the ship (if appropriate)		
1.9	Determine the procedures to obtain additional chart permits (if appropriate)		
1.10	Determine and understand the position - fix systems that feed the ECDIS. Determine the method of switching between sources, such as primary and secondary position-fix systems		
1.11	Determine what other systems feed into the ECDIS, such as radar (acquired targets, Radar picture overlay), AIS, water speed logs, echo sounders, etc. For each, establish the reference framework, eg. ground-, water- or ship-stabilised (relative)		
1.12	Determine where to find maintenance records related to the ECDIS and service reports, non conformity reports & inspection, validation reports (if appropriate)		
1.13	Determine the power supply modes and their specifications such as UPS duration		

2 Basic Operation

		Comments	Y/N
2.1	Determine how to switch the ECDIS on and off		
2.2	Establish the function(s), position and general operation of the physical controls and switches, including cursor control, and the access and selection of menu items		
2.3	Understand how to access the main menu and select menu options		
2.4	Determine the methods for setting day/night viewing modes, brightness, contrast and colour correction (if available)		
2.5	Determine how to switch between traditional and simplfied symbology		
2.6	Determine how to put equipment in route-monitoring mode and route-planning mode		
2.7	Determine the methods for scrolling and zooming charts, including determining the current scale of displayed charts and setting the display to a particular scale		
2.8	Determine how to select the Display Base and Standard Display		
2.9	Determine how to display other information from ENCs, including the display of All Other Information		
2.10	Determine how to check that information concerning own ship, such as dimensions are correct		
2.11	Determine how to select the safety contour and safety depth		
2.12	Determine how to select two- or four-colour contour mode		
2.13	Determine how to select deep and shallow area		
2.14	Determine how to set all other parameters concerning the safety domain		
2.15	Establish how alarms and other alerts are given by the ECDIS and understand the procedure needed to acknowledge them		

3 Charts

		Comments	Y/N
3.1	Determine how to access the chart directory and to identify whether charts are ENCs, RNCs or unofficial		
3.2	Determine how to select a chart for display on the screen		
3.3	Determine how to load new chart licence keys (if appropriate)		
3.4	Determine how to load base data (if appropriate)		
3.5	Determine how to check the update status of loaded charts		
3.6	Determine how to update charts using the normal cumulative update procedures (if appropriate)		
3.7	If applicable, determine how to apply non-cumulative or electronically-transmitted updates3.8Determine how to apply manual updates (if appropriate)		

4 Navigation Tools and Functions

		Comments	Y/N
4.1	Determine how to display the legend of general information e.g. units for depths & heights, datums etc.		
4.2	Determine how to select information about an object (Pick report)		
4.3	Determine how Zone of Confidence (CATZOC) information can be displayed		
4.4	Determine how to access the Presentation Library		
4.5	Determine what Marine Information Overlays (MIOs) are available and how to access them. (Radar and AIS covered in Section 6 below)		
4.6	Determine the single operator action needed to remove MIOs from the display		
4.7	Determine the single operator action needed to set the Standard Display setting		
4.8	Determine how to view, add, edit and delete Mariners' Notes		
4.9	Determine how to access all navigational elements and parameters, such as past track, vectors, position lines, etc.		
4.10	Establish the facilities provided for the measurement of range and bearing (eg EBLs and VRMs) and determine their use		
4.11	Determine the method(s) used for inserting Parallel Index lines		
4.12	Determine what other navigational tools are available and how to access them		
4.13	Determine how to change to using the ECDIS back-up system		

		Comments	Y/N
4.14	Determine the procedure for identifying and reacting to sensor/GNSS failure.		
4.15	Determine how to switch Chart Text (text for charted objects) on and off.		

5 Route Planning (If appropriate to watchkeeping responsibilities)

5.1	Determine how to load existing routes and enable for editing		
5.2	Determine how to initiate a new route plan		
5.3	Determine how to initiate and plan alternate routes		
5.4	Determine how to save route plan		
5.5	Determine how to add, delete and adjust graphically the position of waypoints		
5.6	Determine how to add, edit and delete critical points		
5.7	Determine how to display time varying objects relevant for the timing of the planned voyage		
5.8	Establish all the features available for planning routes, such as use of straight and curved segments, wheel over positions, turn radii, and inserting pilotage aids		
5.9	Determine the ship's procedures for displaying MSI, T&P Notices and other relevant notes into the voyage plan		
5.10	Determine how to use the facilities for checking the planned route		
5.11	Determine how to load the planned route and alternatives into the back-up system		
5.12	If available, determine how to use RCDS mode where ENCs are not available and as appropriate.		

6 Route Monitoring

6.1	Determine how to load a pre-planned route		
6.2	Determine how to select the primary or an alternate route and how to distinguish between them on the display		
6.3	Determine the single operator action that selects the charted display of own ship's position		
6.4	Determine the available display orientation modes and how to switch between them (eg, North Up, Head Up, Course Up)		
6.5	Determine the available display motion modes and how to select them and change the parameters, such as the position of own ship on the display when Relative Motion is selected		
6.6	If Radar or AIS targets can be displayed on the ECDIS, determine what target vector modes are available and how to switch between and differentiate them		
6.7	Determine how to create time labels along the ship's track		
6.8	Establish familiarity with the Route Monitoring display, including the display of position, heading, course, speed and time		
6.9	Determine how to set the length of own ship's vector and intermediate time marks		
6.10	Determine how to display Radar and AIS MIOs, if available		
6.11	Determine how to use the ECDIS as the input to a track-keeping autopilot. This will also need reference to the autopilot handbook		
6.12	Determine how to input LOP to form the reference for an estimated position		
6.13	Determine how to configure the ECDIS to use this reference (6.12) for subsequent EPs		
6.14	Determine how to switch to DR mode and to identify when the ECDIS is in DR mode		
6.15	Determine how to use the review facilities of the voyage recorder (if appropriate and not essential knowledge prior to sailing)		

Notes: Companies are responsible for ensuring watchkeepers adequately demonstrate knowledge of all identified issues to comply with the Familiarisaton requirements of the ISM Code.

Some tasks have been marked "if appropriate" as they might not pertain to "navigation at operational level" but rather "navigation at management level" as defined by STCW 2010.

Tasks identified in this Annex were originally developed for, and more information can be found in, the book 'ECDIS and POSITIONING', written by Dr Andy Norris FNI and published by The Nautical Institute. ISBN 978 1 906915 11 7

This checklist is annexed to 'Industry Recommendations for ECDIS Familiarisation' www.nautinst.org/ECDIStraining

Becoming familiar

Familiarisation training in the use of ECDIS is becoming an increasingly important topic following the commencement of the first phase of the mandatory carriage requirement – given the potential benefits, perhaps similar training methods could also be extended to other types of bridge equipment, *writes Dr Andy Norris*

Ships' bridges continue to evolve with the growth of knowledge and the application of newer technology.

Obviously, it means that the knowledge required by bridge officers also has to evolve. This has typically involved a steady assimilation of new features but there are occasionally significant step changes that have to be specially accommodated.

The introduction of ARPA, GMDSS and ECDIS are examples of the latter, brought into being by technological advances and subsequent mandate.

These particular examples have been accompanied by significant training programmes for existing bridge staff as well as for those newly qualifying.

Somewhat surprisingly, other important changes have been adopted in the past with perhaps too little concentration on the training of existing staff, a particular example being AIS.

The universal use of GNSS, notably GPS, also came about with little or no training for many already qualified OOWs.

To their credit, the appropriate use of new technology has generally been rapidly introduced into the programmes of many training colleges, benefitting those newly qualifying as well as encouraging shipping companies to send existing staff on relevant courses.

The use of new equipment on the bridge not subject to detailed IMO requirements brings its own issues. In particular, within the last 20 years ECS has been fitted on many ships, often apparently with little or no training – and ECS-related accidents have occurred.

However, it does seem that the climate is changing, primarily because of the thinking arising from the mandatory introduction of ECDIS.

In particular, the need to focus on users becoming familiarised with the specific bridge installation before a formal watch is undertaken has been highlighted.

The need for appropriate familiarisation with safety-related equipment has actually been explicitly embodied within IMO's International Safety Management Code, which came into force in 1998.

This has now been amplified by the recent Manila Amendments to STCW, which includes the emphasis that companies need to allocate 'a reasonable period of time during which each newly employed seafarer will have an opportunity to become acquainted with the specific equipment the seafarer will be using or operating'.

Industry initiative

Although some flag states have additional rules on type-specific training, the shipping industry itself has been firmly tackling the issues of familiarisation, concentrating on the actual equipment on a specific bridge.

This has resulted in the recent jointly released statement concerning ECDIS familiarisation from a large number of influential international organisations representing the shipping industry (mentioned in this month's *Digital Ship* on page 31).

It includes the statement, 'Familiarisation is the process required to become familiar with any onboard ECDIS (including back-up) in order to assure and demonstrate competency in relation to a specific ship's ECDIS installation, prior to taking charge of a navigation watch'.

Those organisations have published a Familiarisation Checklist, developed from the one included by the Nautical Institute in their text book 'ECDIS and Positioning' – OK, I do have a particular interest in that book...

An important aspect in the issued documentation is that mariners should be able to demonstrate the competencies defined within the Checklist and, by implication, not just that they have attended a course or have got a certificate.

There are a whole spread of ways that the competencies could be achieved, including shore based courses, computer based training and on-board training by 'appropriately trained crew or training personnel'.

What is particularly emphasised, however, is the additional need for familiarisation with the ship-specific installation before a watch is undertaken.

The published Checklist therefore includes the identification of essential ship-specific items, such as the back-up facilities, the interconnected navigational equipment and the company's navigational procedures.

It also includes a list of basic competencies on using the model-specific ECDIS equipment, such as demonstrating how to select the safety contour and how to check the update status of loaded charts.

There is a good possibility that the equipment-specific competencies will be used by manufacturers as a basis for their own type-specific training modules, ideally ordered and identified as in the Checklist.

This would help to give uniformity to the training, allowing easier and quicker assimilation by users of each new ECDIS that they encounter.

Manufacturer-specific CBT modules could be available on the ship, as well as being web or office based to allow easy pre-access of new staff to its detailed operation, before being introduced onboard to the ship-specific installation aspects.

Not just ECDIS?

Whilst the announcement by the shipping organisations understandably directs its attention to ECDIS, it is firmly based on IMO requirements, initially arising out of the ISM Code.

It used to be the case that acquiring a radar 'ticket' meant that you were considered competent to use any ship's radar.

In earlier days this was probably true. However, a modern system is software driven and has increasingly greater functionality – and dissimilarity – to other manufacturers' equipment.

Examples include its integration with AIS, its increased tracking options, the use of colour in depicting radar data and the increasing likelihood of the system being able to display charted information and other overlays.

ECDIS familiarisation is currently a hot topic – but should familiarisation training be extended to other technologies?

In particular, AIS integration has brought about a number of additional manufacturer-specific implementations for user set-up. These include target association and target filtering functionality, as well as an increasing number of user options for target track initiation.

Manufacturers adopt different user interfaces to control all these features, including the main settings of the radar, such as range selection, 'gain' and clutter settings.

The main difference to ECDIS is that the functionality of radar has been known to seafarers for a great number of years. It is generally fairly easy to sort out the basic controls but perhaps the more sophisticated functions are being ignored, or – even worse – misused.

Many have attributed the historic fall-off in the use of parallel index lines to the huge dissimilarities of implementation on different radars and, by implication, the lack of familiarisation training.

In comparison to much of the additional functionality on a modern radar the display of PIs is a relatively simple function, suggesting that many other safety-related features of radar are not being properly used on many ships.

To use radar correctly, good familiarisation with the ship specific equipment before taking a watch is surely also essential.

Not least, it is needed to answer such ship-specific questions as – where is the Consistent Common Reference Point? What radar sensors are accessible from each display? Are there any blind sectors? What navigational sensors are connected to the radar? Are there bridge specific instructions for its use?

Total bridge familiarisation

It would surely be logical for the ECDIS model for familiarisation to be extended to cover all bridge equipment.

Many aspects only require a momentary introduction, such as the basic navigational sensors, including GNSS, echo sounder, log and gyro. In general, use of the communications equipment should also be relatively straightforward.

Leaving aside the ship's engine and manoeuvring controls, the main navigational focus will undoubtedly be on the ECDIS, radar and the ship's integrated navigation system, if fitted.

Effective use of all these systems needs a particularly good knowledge of the overall navigation system interconnection and the actual placement of sensors.

In addition, a good understanding of alerts, especially their settings, acknowledgment and control is essential for such equipment.

Alerts are universally acknowledged as being a constant nightmare on modern ships' bridges. A good understanding of the complete system can help in reducing the number of seemingly unnecessary or repeated ones.

However, there is a fear by some that the future familiarisation requirements for a ship's bridge will become as onerous as those needed for the safe handling of a commercial aircraft.

In fact, this is a poor comparison. The handling characteristics of aircraft are very type specific and small operating errors by the pilot can rapidly escalate to a major disaster.

The vast majority of today's shipping accidents have a lengthy pre-warning from multiple sources of information that all is not well, which typically remain unnoticed by the navigator through not applying basic navigational skills.

Sound basic training and specific bridge familiarisation along the lines of those recently issued by the international shipping industry organisations for ECDIS is exactly what is required to significantly improve marine safety. DS

Dr Andy Norris has been well-known in the maritime navigation industry for a number of years. He has spent much of his time managing high-tech navigation companies but now he is working on broader issues within the navigational world, providing both technical and business consultancy to the industry, governmental bodies and maritime organizations. Email: apnorris@globalnet.co.uk

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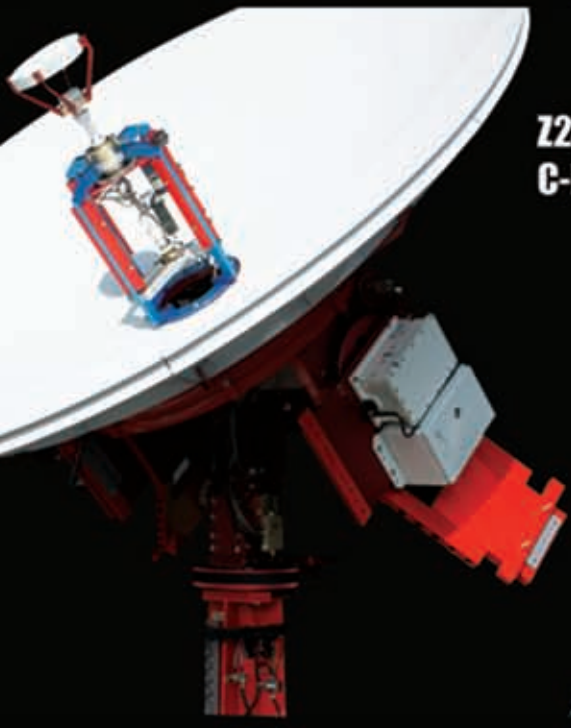

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