Digital Ship

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Astrium CEO drops GX agreement hint

Though a deal between the parties is yet to be formally signed, it seems that an agreement between Inmarsat and Astrium that would see Astrium add Global Xpress to its portfolio is imminent – with the CEO of Astrium Services providing the biggest hint yet on what form that deal may take

Evert Dudok, chief executive officer of Astrium Services, has revealed some significant details about the form a deal between his company and Inmarsat on the Ka-band Global Xpress service might take, at an event in Paris.

Responding to a question posed at a press briefing at the Paris Air Show, Mr Dudok indicated that Astrium is shortly set to agree to contract to purchase a specific amount of Global Xpress service capacity to add to its portfolio of satellite communications services.

"We are Inmarsat's largest reseller and we are going to commit to use a certain amount of Global Xpress," said Mr Dudok.

Such a deal may see Astrium, via its Vizada and Marlink indirect and direct sales channels, able to offer the Ka-band service in a way that is markedly different to other resellers offering the service from Inmarsat on a customer-by-customer basis.

This news follows on from our report in the June/July issue of *Digital Ship*, which confirmed that Inmarsat and Astrium have finally reached a broad agreement on a number of elements of a specially crafted deal that would see Astrium added to the list of GX resellers.

'We are Inmarsat's largest reseller and we are going to commit to use a certain amount of Global Xpress' – Evert Dudok, Astrium Services. Photo: EADS

The content of this deal was described by Erik Cueppens, head of the Astrium Services Business Communications division, as a "strategic partnership which goes beyond current VAR agreements", and signalled the beginning of the end of a standoff between Inmarsat and its largest maritime reseller on the GX service.

The first of the Inmarsat-5 satellites that will carry the GX service is scheduled for launch in 2013. Global coverage is planned for the end of 2014. **DS**

Download record for Scandinavian cruise ferry

www.consilium.se

Consilium says that it has broken a record in terms of volume download for a ship with its Icomera router.

The M/S Galaxy, a Tallink cruise ferry sailing between Stockholm (Sweden) and Turku (Finland), downloaded 706GB in May, says Consilium.

"To our knowledge, it is a record compared to any other ship since only we can provide aggregated traffic over many LTE links simultaneously," the company told *Digital Ship*.

With its 1,000 cabins, the M/S Galaxy can accommodate 2,800 passengers. Consilium says that crew members can use an app on their smartphone to phone for free over the crew Wi-Fi network.

The M/S Galaxy downloaded 706GB in a single month

According to Consilium, the download volume reached 3.5TB in May for the Tallink & Silja Line fleet.

FCC investigating "warehousing" of orbital locations

The US Federal Communications Commission has launched an inquiry to determine whether incumbent satellite operators are operating in ways that inhibit competition, following a complaint by resellers that Intelsat prevented them from obtaining capacity on its satellites.

One of the complainants, Harris CapRock, also accused Intelsat and other satellite fleet operators of "warehousing" scarce orbital resources by failing to replace aging satellites on a timely basis or failing to provide transponder capacity that reflects current technology.

Intelsat believes, on the contrary, that "the satellite industry is fully competitive."

"There is no shortage of evidence supporting our view that the satellite industry is fully competitive, including the number of new entrants launching satellites into orbital locations over the past several years," said Dianne VanBeber, Intelsat's vice president, investor relations and corporate and marketing communications.

"Our decisions with respect to the deployment of our satellite assets, in which we have invested over $3.5 billion over the 2008-2012 period, are based upon the competitive environment and the mission critical communications needs of the customers served by our various orbital locations," she added in e-mailed comments.

The FCC is now calling on space station licensees, customers and interested parties to comment on vertical foreclosure and "warehousing" issues.

It is seeking information about:
- gaps in service (when an operator de-orbits or relocates a satellite without replacing it)
- older replacement satellites (when an operator uses an older satellite to replace a satellite it has de-orbited or moved)
- licence extensions (when an operator requests to extend a satellite's licence term beyond its initial term)
- underutilised space stations (when an operator operates a satellite below its capacity)

The FCC wants to hear information on whether these inefficiencies have occurred and whether they have been passed on to end users.

Financial advice firm Raymond James, however, says that it is "reasonably confident that the FCC will not find any evidence of harm caused by operator warehousing practices."

When they voiced their discontent in 2010, in an annual report on the implementation of the Orbit Act, CapRock and two other integrators had just lost a $500+ million contract to an Intelsat subsidiary, note the analysts, adding that the protest seemed timed to influence the bidding process for a another programme, worth $5 billion.

"CapRock recently buried the hatchet with Intelsat, signing a 10-year lease agreement on Intelsat's first EpicNG satellite," said Raymond James advisors.

"Furthermore, Intelsat has now placed orders for five EpicNG satellites, thus demonstrating Intelsat's commitment to technology innovation and meeting the evolving service needs of its customers."

Astrium adds new Thuraya products

www.thuraya.com
www.astrium.eads.net

Thuraya and Astrium Services have agreed a deal to strengthen their relationship by adding Thuraya's IP+, SatSleeve and newly launched Maritime Broadband (MBB) product (see page 12) to the Astrium Services portfolio.

The companies, having already been partners for over 13 years, hope that this new agreement will help to extend their reach to a more diverse set of customers and service partners around the world.

Astrium Services will now be able to provide its range of value-added services including messaging, prepaid cards and interconnection to corporate networks via the newly launched Thuraya satellite services.

"Our partnership with Astrium Services has grown from strength to strength over the years," said Bilal El Hamoui, acting vice president of distribution at Thuraya.

"Astrium Services has demonstrated strong commitment and tremendous support towards driving distribution of Thuraya's extensive product portfolio to their global customers."

"We are very excited to embark on a new journey with them to drive distribution of Thuraya's voice, land and maritime products and services to an even wider spectrum of global customers and service partners."

In related news, Thuraya has also recently announced that it has secured a new term financing facility through Dubai Islamic Bank (DIB), the proceeds of which will be used to upgrade its network infrastructure and to support further development and expansion of its product portfolio.

"We are pleased to have secured this financing and entering into a long-term, relationship with DIB," said Samer Halawi, chief executive officer of Thuraya.

"This will help us strengthen our position as a leading MSS operator and provide the company with additional financial flexibility to develop our next generation gateway and upgrade our network capacity. It also provides us with the breadth that supports our sustainable growth strategy as well as new business opportunities in key and emerging markets."

In other news, Thuraya is also looking to recruit a head for its newly created Innovation Division, tasked with developing cutting-edge mobile satellite products and solutions for a range of potential customers, including those in the maritime sector.

After launching SatSleeve for the iPhone, the Dubai-based operator says it wants to further pioneer 'state-of-the-art' solutions in the satellite industry, and has thus created the new division to spearhead initiatives for the implementation of innovation in products, services, and business models.

Thuraya says that global recruitment efforts are underway to find its new head of innovation. Until a suitable candidate is recruited, the role is filled on an interim basis by CEO Samer Halawi.

"Thuraya has a considerable track record in the land voice/data sector. We see great opportunities to further innovate in the maritime sector which will be one of the product lines that our new Innovation Division will be focused upon," Mr Halawi told *Digital Ship*.

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Dual FB system from Cobham

www.cobham.com

Cobham SATCOM has announced the launch of a new SAILOR FleetBroadband Dual Antenna solution, designed to secure uninterrupted data and voice communications on vessels.

The new solution consists of two SAILOR 500 FleetBroadband packages and a Dual Antenna Control Unit (DACU), which can automatically switch between antennas without loss of connectivity.

With the ability to position two SAILOR FleetBroadband antennas at different locations on a vessel, challenges experienced when a single antenna may become obstructed by superstructure, masts, rigging and other equipment can be overcome.

Cobham says that this makes the Dual Antenna solution ideal for specialist vessels using critical IP applications over FleetBroadband, where loss of connectivity could significantly affect the outcome of a costly or hazardous operation.

Following installation and configuration where both SAILOR FleetBroadband solutions are connected to the DACU, as soon as the active antenna loses sight of the satellite the back-up will come on line to ensure continuous connectivity.

The two antennas work as a single system, with the same IP address, a single SIM card and one monthly bill.

"SAILOR 500 FleetBroadband is the market leading Inmarsat FleetBroadband solution so we are keen to offer its proven reliability and user-friendliness in a dual solution configuration for vessels where continuous connectivity is vital to operational safety and efficiency," said Casper Jensen, VP maritime business, Cobham SATCOM.

"Whilst developing a technically advanced approach, we have also ensured our solution has only minimal extra hardware costs, in order to enable as many vessels to take advantage of it as possible."

In related news, Imtech Marine and Cobham SATCOM have announced the introduction of a new remote access service that will allow Imtech Marine's 24/7 Global Control Rooms (GTAC, Global Technical Assistance Centres) in Rotterdam, Houston and Singapore to directly connect to a vessel's Cobham SATCOM communications systems for support purposes.

Users of equipment including current generation SAILOR GMDSS products and satellite antennas will be able to make use of the service, which aims to reduce equipment life-cycle costs and maximise uptime.

"Experience shows that remote equipment monitoring and direct access provides significant operational and financial benefits for ship owners," said Dennis Mol, director technology and competence development, Imtech Marine.

"Through our partnership and subsequent technology integration with Cobham SATCOM we can now conduct regular health checks on SAILOR systems from shore, enabling us to conduct preventative maintenance and reduce the time and cost of visiting a vessel for manual servicing. We can also prepare SAILOR products for annual servicing from shore, reducing the time needed on board by up to 75 per cent."

The Imtech Marine GTAC is now able to view, in real-time, the status of SAILOR systems that are running the Thrane Management Application (TMA) – these include SAILOR 6000 GMDSS Series products, such as the SAILOR 6222 VHF DSC Class A, SAILOR 6300 MF/HF and SAILOR 6110 Mini-C GMDSS.

The TMA is a software service made possible by Cobham SATCOM's ThraneLINK network protocol, already in use as the single-point-of-entry for SAILOR products. GTAC can also carry out health checks on Cobham SATCOM's SAILOR 900 VSAT and the SAILOR FleetBroadband family.

"Through the development of the TMA we offered significant time and cost savings for on board maintenance of SAILOR products," said Mr Jensen.

"By integrating the TMA with Imtech Marine's GTAC to allow for remote shore access, we are securing even more uptime for a vessel's communication systems as remote health checks by experts on land increases the opportunities for preventative maintenance."

The integration of SAILOR products and the TMA with GTAC is a joint project that leverages Imtech Marine's current iShare@Sea philosophy, supported by the Dutch maritime industry, which provides guidance on how to collect data from different devices and components with minimal use of hardware and cabling, taking airtime costs, coverage and compliance rules into consideration.

"Our focus is on providing the best technical solution by integrating state of the art components and applications," said Mr Mol.

A Dual Antenna Control Unit manages automatic switching between the two antennas

Marine SIM cards in 1,000 ports

www.ivittamobile.com
www.gac.com

iVitta, which developed a Pay-As-You-Go global roaming SIM card for seafarers, has teamed up with G2 Crew Services to expand its distribution.

Launched in February 2011, iVittamobile was sold up to now in less than 100 ports via Seamen's missions and Seafarer's charities. G2 Crew Services, the joint venture between Griffin and GAC, has a global footprint in over 1,000 ports worldwide.

iVitta has negotiated low rates for international calls and texts on the basis that its SIM is available exclusively to seafarers. iVittamobile SIM cards can be used on any unlocked handset which has 2G or 3G capability. They can connect to 650 GSM networks.

Phone services rely on the call back method. The user dials a destination number, placing a # at the end. Then the network calls back and connects them to the destination number.

To send a text message, the user needs to select the 'send SMS' option in the Roaming SIM Menu/SIM Services of their cell phone.

It usually costs 10 US cents to send a text, while incoming messages are free of charge.

"Web access on board vessels remains the exception rather than the rule and most crew rely on text messages and phone calls to stay in touch while away from home," said Simon Morse, executive chairman of Griffin.

"Currently their choice is to either carry a bag full of different SIMs each with a separate telephone number and credit balance or pay 'roaming charges' of up to $5 per minute ex Europe. iVittamobile offers a single SIM supported by 650 local carriers so crew can make that same call for as little as 9 cents per minute."

Christer Sjödoff, group vice president, GAC Solutions, noted: "Our mission at G2 Crew & Husbandry Services is to provide logistical support to crew and ensure they reach their vessel or rig safely and on time."

"We understand how important it is for seafarers to remain in contact with their family and friends, which is why we are delighted to be able to join forces with iVitta to distribute their marine SIM cards and low cost top-up vouchers across our network of offices."

NSSLGlobal doubles return VSAT speeds

www.nsslglobal.com
www.telemar.se

NSSLGlobal is doubling the return speeds on its VSAT network for Standard and Premium Packages, with the UK-based firm offering the upgrade free of charge to all its customers.

The Standard Package is changing from 1Mb/256k to 1Mb/384k, while the Premium Package is evolving from 4Mb/512k to 4Mb/1Mb.

NSSLGlobal says that, together with Telemar Scandinavia, it is making this move in response to the changing needs associated with internet usage, especially in areas like cloud computing and the need to send data via the likes of Amazon Cloud, DropBox or WeTransfer. It also notes that as tablets and smartphones become more common, there is a necessity for a higher return capacity.

NSSLGlobal says that the recent introduction of ACM (Adaptive Coding Modulation) technology, combined with the introduction of the new DVB-RCS2 standard across its VSAT network hubs, has enhanced two-way satellite link efficiencies as well as reducing the impact of Rain Fade.

Sally-Anne Ray, COO at NSSLGlobal, said: "The introduction of ACM will provide our customers with a noticeable improvement in speed and quality of service, but at no extra cost."

"At NSSLGlobal we understand our customer needs and pride ourselves in supplying them the latest DVB technology."

NSSLGlobal has appointed Sally-Anne Ray as its new managing director replacing Bob Chewter, who retired on June 30th. Ms Ray has held the position of chief operating officer since the end of 2011.

Astrium Services has opened a new office in Rio de Janeiro, to provide sales and support for service providers in the region as well as acting as a link for Norwegian customers of Marlink – Astrium Services' direct sales channel – many of whom have significant operations in Brazil. The office will be run by newly appointed sales director and country manager for Brazil, Fabio Riccetto.

Intellian reports that it has received approval from **ANATEL**, the Brazilian Agency of Telecommunications, for its v80G, v110, and v130 VSAT antenna systems, meaning that the equipment meets the standards and regulations specified by ANATEL and is approved for sale in and installation in Brazil, on Brazilian vessels and vessels operating in Brazilian waters.

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www.astriumservices.com
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Stolt Tankers moves fleet to VSAT

Following the completion of an extensive tender and evaluation process Stolt Tankers has agreed a deal to implement VSAT services from Marlink, with an inclusive L-band back-up, across its entire fleet

Stolt Tankers is to equip its entire fleet of deep sea and regional tankers with the Sealink global Ku-band VSAT service from Marlink, the companies have confirmed.

Stolt had been known to be engaged in an extensive tender and evaluation process as part of its satellite communications upgrade programme, and has expended considerable effort examining the connectivity options available in the market before announcing its decision.

The contract, signed in April 2013, covers the provision of VSAT and backup communications to 90 tankers.

"With Marlink's global Ku-band VSAT service, we get the ability to operate using bandwidth-hungry applications, which helps to improve our efficiency, logistics and administration, whilst providing internet and voice calling for crew," says Mark Martecchini, managing director Shipowning for Stolt Tankers.

"We also have flexibility for the future as the services are prepared for possible future migration to new High Throughput Satellite services based on Ka- and Ku-band."

Marlink says that the deal will include the design of a hybrid network solution using Sealink connectivity as the primary channel complemented by L-band services as back-up for Stolt Tankers.

The service will be provided for a flat monthly fee that will include unlimited VSAT airtime services as well as business data sent over the backup link. An upgrade of the VSAT equipment to next generation technology in the future, should it be required by Stolt, has also been agreed.

"Most requirements for Stolt are fulfilled for this moment, but we've kept options open for future design and future enhancements of the service, whether it's in the direction of Ka-band, HTS or an enhanced Ku-band," said Ron Vollenga, who acts as a consultant to Stolt on the project, talking to *Digital Ship*.

"We have all options available."

Drivers

As Mr Vollenga describes it, the major drivers for Stolt in pursuing this project came from three particular areas – ensuring predictable monthly communications costs; improving the company's ability to maintain software on the vessels; and initiating crew retention services for seafarers.

Having a fixed monthly fee for the satcom systems made sense for the company in two ways, as it expects its data demands to increase substantially in the next few years and also anticipates that price rises on pay-per-use satellite services are likely to continue in the future.

On the software delivery side, having a fixed cost for satcom connectivity will allow the company to move away from its previous distribution method for applications.

As Mr Vollenga notes, it could previously take anything up to four months for shipboard software to be brought up to date – using the new VSAT system will mean that the company will instead be able to send relevant data to and from the ship as it wishes.

The third major area of interest is crew welfare and the introduction of new services for Stolt's seafarers to improve their quality of life on board.

"Stolt will be introducing, with this contract, crew welfare facilities for seafarers at the company. Further details of these facilities will be agreed later, as some modalities still need to be defined," said Mr Vollenga.

"We need to bear in mind that seafarers need to have their rest according to watchkeeping hours, that needs to be taken into consideration. We expect a time-managed system to be part of the future setup."

The XChange solution from Astrium Services, provided as part of the package by Marlink, will act as the central platform for delivering value-added services for each vessel's crew connectivity and can be used for administration of user accounts, crew and network access, and pre-paid services.

Marlink has also integrated an MPLS connection to Stolt's Headquarters, and will provide global support for all aspects of the multi-layered network in line with a contracted Service Level Agreement. This integration with terrestrial systems results in a fully managed connectivity service for Stolt.

"Stolt Tankers chose Marlink as we are a highly experienced service provider and were able to meet the requirement for fully managed voice and data communication services using a combination of satcom and terrestrial connectivity, whilst providing global support," said Tore Morten Olsen, head of maritime services at Astrium Services.

"We have developed a customised, future-proof solution that enables Stolt to adapt its connectivity to suit new requirements and to leverage new broadband services when they are available."

Marlink will also train Stolt's own engineers to prepare each vessel for installation, ensuring an efficient start-up for the company's new VSAT network.

All vessels are scheduled to be online with the new system by the end of 2014.

VSAT adoption

In related news, international dredging and offshore contractor Van Oord has also chosen Sealink VSAT from Marlink to provide data communication services for three offshore rock placement vessels.

The five year contract covers Marlink's provision of end-to-end services and includes a facility to provide ad-hoc coverage should the vessels be operating in extreme remote areas.

Sealink will be installed aboard the Stornes (26,000Te), which has been operational since late September 2011, Nordnes (24,000Te) and Tertnes (9,785Te). The vessels are used for Subsea Rock Installation (SRI), for the protection and stabilisation of offshore structures within a subsea construction field.

The Sealink connectivity is delivered through stabilised 1.5m Ku-band antennas with dedicated bandwidth of CIR 512 kbps duplex and accommodation for temporary bandwidth provision up to CIR 4,096 kbps duplex.

The service features multiple carrier support, which provides the ability to switch from the Sealink Ku-band VSAT to any of Van Oord's alternative carriers already installed. As part of the contract, Sealink will support VoIP traffic over VLAN and automatic beam switching between different satellites.

"Sealink meets Van Oord's very specific connectivity requirements for these specialised vessels and offers improved possibilities for both crew and operational connectivity," said Ab Argam, area manager Benelux, Marlink.

"The solution we have developed is extremely flexible. Marlink will act as a one-stop-shop, providing hardware and services, as well as managing ad-hoc bandwidth and coverage when needed, which is vital for Van Oord as it is well known for operating in very remote regions."

"Although Sealink offers near global coverage, if a particularly remote region is not covered, we will source temporary capacity from our satellite operator partners to ensure Van Oord's ability to communicate, and therefore operate safely and efficiently."

Stolt Tankers' fleet of deep sea vessels, including the Stolt Capability, will implement the new hybrid VSAT and L-band service

Astrium's XChange box will be used to manage the onboard networks

KVH expands into content

VSAT provider KVH has made a significant change in its market strategy, with the recent acquisition of a major maritime media content provider the first step in a new approach that will see the company add a new content delivery capability to its existing mini-VSAT services. KVH CEO Martin Kits van Heyningen told *Digital Ship* about the company's new plans

K VH has begun the roll out of an ambitious new strategy that will see the firm extend its capabilities beyond the provision of satellite connectivity to deliver content, such as entertainment and charts, to ships by the end of the year.

The first step in this process was the company's recent acquisition of Headland Media, through which it gained access to licensed films, sports and music, which was followed shortly after by a deal with Jeppesen to include the distribution of electronic navigational charts and other data.

With these foundations in place, KVH says it is now in the process of preparing its mini-VSAT network to be able to distribute all that data through a new IP-MobileCast service.

One of the most fundamental differences for KVH in using this IP-MobileCast service to deliver content to its customers will be its application of a 'multicast' system, rather than the more usual one-to-one 'unicast' direct connection to a single ship.

"Unicast is everything on the internet today," KVH CEO Martin Kits van Heyningen told *Digital Ship.*

"If you want to look at a web page, you click on the page, you send a request, a server on the internet sends you the page. If I am sitting next to you in the same office and I want to look at that page, I click on it, I send a request, and it sends a whole other copy to me. Now imagine that by 1,000 people. That's unicast. Everybody gets their own copy."

"Multicast is where I send the same file to everybody all at once. It's a one-way broadcast. It goes to all the vessels in the globe at the same time and it is stored locally. They can choose to watch it if they like. If they don't want to watch it, or if they haven't subscribed to it, they don't."

The IP-MobileCast service will be used to transmit large files through satellite links to ships, taking advantage of additional capacity on the network to deliver content 'over the top' of the mini-VSAT Broadband network in a separate data stream, without impacting customers' contracted data speeds or airtime rate plans.

KVH recently upgraded its network to operate using Variable Coding, Spreading and Modulation (VCSM) technology, which it says more than doubled its forward-link capacity and therefore provides both unused capacity and the ability to schedule its multicasting and other content deliveries to be sent when idle time is available on the network.

The US-based satcom manufacturer is installing new software in its hubs over the course of the summer of 2013, and will, after further trials, update the software in the modems on board the ships over the air.

"The whole IP-MobileCast service will be launched by the end of the year," said Mr Kits van Heyningen, adding that this was a "conservative" estimate and that "it could be sooner."

The IP-MobileCast service will operate using proprietary software designed to provide error correction, compression and validation of data integrity throughout the transmission from shore to ship. Shoreside servers encode files for transmission and queue them for multicast delivery 'over the top' of the mini-VSAT Broadband network.

KVH says that the IP-MobileCast service will also feature Forward Error Correction (FEC) technology to help to ensure that the CommBox servers on ships (installed as part of KVH's mini-VSAT package) receive each file correctly the first time it is transmitted.

The FEC algorithms accommodate intermittent non-continuous transmission, which might occur when large transmissions are interrupted by prioritised network traffic or in poor weather conditions.

The file is transmitted once, and is received by every vessel in the satellite footprint. If the vessel has subscribed to that particular content, the data is stored and decoded using rights management software on the CommBox, and then made available on the onboard server.

KVH says that normal mini-VSAT Broadband ship-to-shore and shore-to-ship transmissions are prioritised over the IP-MobileCast service and are unaffected in terms of speed or added airtime cost.

Content providers

The new delivery mechanism will be used to distribute a range of new content which KVH has gained access to.

KVH has recently struck a deal with Jeppesen to deliver its entire ENC and Professional+ chart databases to mini-VSAT Broadband customers.

Both companies expect that this new service will enable automatic delivery of electronic charts over satellite to eliminate the process of physically shipping DVDs containing chart updates to customers' ships.

Perhaps more significantly however, in May KVH bought Headland Media, a UK-based company which distributes licensed content such as movies, sports and music, for $24 million.

Headland Media's customer base is primarily maritime, currently including more than 9,600 vessels, though the company also serves 1,700 hotels and 1,700 retail outlets.

"Headland had all this content but they had no way to deliver it to the ships," Mr Kits van Heyningen told us.

"They're kind of like where Netflix was 5 or 10 years ago when they were mailing DVDs. And that's the way everybody gets movies today on a ship. Somebody puts DVDs in the mail, they get to port, they get on board the ship, which is a very old-fashioned and very inefficient way to deliver content."

Mr Kits van Heyningen sees this new content delivery strategy as an extension of general current trends in media consumption on shore, but adapting that to provide a high quality experience to the user despite their remote location on the ship.

"Entertainment today is moving more and more towards the internet. Fewer people just watch TV. A lot of people at home are getting their movies over the internet; they can download video on their iPads. So really this is bringing the same type of capability to ships at sea," he said.

"But the experience to the person on board will be so much better than at home. The data will not be travelling over the internet. So as far as the user is concerned, it's just coming from a server on board the vessel. So the users, when they're watching it on their iPad or on a TV on board, will get instantaneous performance and perfect quality because it's not travelling over the internet."

"Even at home, if you watch a movie on Netflix or on HBO GO, that's streaming

'The whole IP-MobileCast service will be launched by the end of the year' – Martin Kits van Heyningen, KVH

over the internet so that depends on your internet connection speed and it takes a while for it to buffer before you can watch it. For the user on board, you won't have any of these delays because content is always stored locally. So 10 people might be watching the same movie at the same time but it's all coming from the same server."

The idea is not just to distribute Headland's current content, but to expand into the addition of new content that will be specific for seafarers in their own native languages, such as news or TV series from their home countries.

"We'll probably have something like 12 different languages, with the top most popular crew countries," said Mr Kits van Heyningen, which he notes will include the Philippines and Ukraine.

TV news that will be delivered on the satellite through this IP multicast "will look like your night news show that you would watch if you were at home," he said.

Terms and conditions

Customers who wish to take advantage of the new content that KVH has to offer will not see these services add to their existing satcom bills. As Mr Kits van Heyningen describes it, payment will be made to consume the content itself and will not be required to cover the cost of getting that data to the ship.

"There won't be an additional cost for the multicast service. There will be an additional cost for the content. So you'll buy the movie but you won't pay for the delivery of the movie," he said.

For example, Mr Kits van Heyningen suggests that a film, licensed to be shown on board, would cost between US$15 and $20 for the whole ship, with crew members being able to watch it as many times as they like.

Sports will also be shown, though seafarers won't be able to expect to follow the

The V3-IP is one of a new range of antennas designed to work with the new content delivery system as standard

MARITIME SOLUTIONS AT SEA

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2014 football World Cup live at sea via the KVH service.

"We probably won't be showing the games live because it's very expensive to acquire the rights to that," said Mr Kits van Heyningen.

"For example, today we have the rights to the English Premier League soccer; those rights allow us to show highlights of all the games, but not the games themselves live. So we show bits, highlights of the matches."

KVH's CEO believes that he can already describe what the service to be launched by the end of the year will look like for seafarers.

"For example in the morning, you might open up your iPad and read your newspaper from home. The newspaper would be in your local language, an e-page news digest which you could read right on your iPad," he told us.

"When you come off shift, you could watch news or sports highlights on one of the channels. At the end of the day, once you're off shift, if you want to watch a movie, there will be movie channels, and also movies on demand."

"So there will be a lot of content available for people to watch. It will be very similar to a hotel-type experience."

KVH says that it will continue to deliver content to Headland's customers who do not use its mini-VSAT, but at the same time it wants to encourage them to switch to its service.

"I'm sure we'll come up with some attractive offer for people who are already customers of Headland, and conversely KVH customers who'd might like to get the Headland newspapers or media products today," said Mr Kits van Heyningen.

"Customers will be able to not only use our TracPhone, VSAT product, our new IP series for the internet, but also be able to get all this new rich media content through the same antenna."

Antenna technology

Another aspect of this expansion strategy has seen KVH recently introduce a line of three upgraded TracPhone mini-VSAT terminals featuring its Integrated CommBox Modem (ICM), which have been specifically designed to work with its new content delivery services straight out of the box.

The ICM combines a range of below decks equipment to create a full VSAT/network management system – antenna control unit, CommBox Ship/Shore Network Manager, ArcLight spread spectrum modem, VoIP, Ethernet switch and Wi-Fi capabilities – into a single 2U enclosure.

The package offers embedded network management tools, with services such as e-mail management, transmission optimisation, assured file delivery, the ability to set up separate networks for operations and crew, and the ability to manage crew use of the system with internet café and crew calling cards already included in the package.

Of the new antennas, the TracPhone V3-IP antenna is 37 cm in diameter, with ship-to-shore speeds of 128 kbps and shore-to-ship speeds of 2 Mbps, while the TracPhone V7-IP is a 60 cm antenna with ship-to-shore speeds of 1 Mbps and shore-to-ship speeds of 2 Mbps.

Both the V3-IP and the V7-IP operate in the Ku-band coverage area of KVH's network. The new dual-mode TracPhone V11-IP also utilises this Ku-band coverage, as well as the network's global C-band coverage with ship-to-shore speeds of 1 Mbps and shore-to-ship speeds of 4 Mbps. DS

Intellian introduces VSAT control software

Intellian reports that it is to launch a new graphical interface based PC software for monitoring and control of its VSAT antennas, called Aptus.

The Aptus PC software is compatible with all Intellian VSAT antennas and can also be used with its 3-Axis TVRO systems. The software is connected via the onboard network, allowing for use with an onboard PC through a one-click installation process.

This then allows for a straightforward IP connection over the internet to the antenna from anywhere in the world for set-up, as well as providing continuous antenna status reporting to maintain the performance of the antenna as well as debug the system. There is also an in-built auto-diagnostic function that can connect to the VSAT ACU by serial or USB cable.

The software displays data via a graphical dashboard that allows logging, recording and fine-tuning of the antenna for optimum performance.

Through logging of the antenna's parameters, both the user and integrator can monitor the system and see performance in real-time. This data logging and performance monitoring will also help the integrator to track the status of all antennas operating on their system.

The Aptus dashboard provides three main views to monitor and control the antenna; Quick, File and View.

These different views provide varying levels of information, such as graphical antenna position, set-up data including sensor inputs, satellite information including tracking frequency and LNB setting, graphs illustrating the signal, heading and elevation angles, and a monitor listing all data that is being received by the ACU.

The Quick Menu includes set-up, restart, and reboot antenna information as well as a 'save satellite' function. Information including antenna details, TX status, signal level and GPS and heading information is shown.

The File Menu also shows the individual backup, restore and load configuration functions.

The Aptus software system allows access to the antenna via the internet

Intellian says that using the data provided by the graphical interface can contribute to improved operational up-time, with icons that show details such as the antenna azimuth and elevation including the visual representation of any blockage zones on board the vessel.

When installing an Intellian VSAT antenna, Aptus can also help with the initial set-up and automatically set the appropriate Bow, Cross Level and Elevation offsets.

In related news, Intellian has also announced the launch of its Intellian Fiber Link system, a single fibre optic cable used to connect an Intellian satcom antenna (VSAT or TVRO) to below deck systems.

Previous connections have been carried out with multiple coaxial cables which are more difficult to install, heavier and less effective than fibre optic. The new Intellian Fiber Link combines several RF signals into a single fibre optic cable, which the company says provides "virtually no signal loss for either VSAT or TV reception."

Intellian says that its own testing regime has shown the new Fiber Link cable to register no signal loss over a 2km run, essentially allowing a virtually limitless cable run when installing equipment on ship.

The system requires just two modules to effect connection, a Below Deck Unit which connects to the Antenna Control Unit and modem, with the Above Deck Unit mounted inside the radome base.

Intellian also reports that it has launched an iOS app which allows smartphone or tablet users to remotely control its s80HD WorldView Satellite Television antenna.

Once downloaded from the Apple App Store, it gives access to the list of available satellites by region. Users can thus check the parameters of each satellite and switch to the correct satellite for their region. They can also download the latest antenna firmware and library to update the antenna directly from the iOS App.

Intellian's s80HD WorldView antenna is a dual band antenna system. It can simultaneously receive two Ka-band and one Ku-band satellite signals for DIRECTV configuration. It incorporates a module which automatically switches to the corresponding polarisation and local frequency.

Intellian says that the WorldView Trio LNB system enables reception of worldwide Ku-band satellites along with the DIRECTV channels without requiring LNBs to be swapped out or re-wiring the system.

The new iOS app allows iPhone or iPad users to control the s80HD WorldView wirelessly via the unit's built-in Wi-Fi network.

The app can be downloaded from the Apple App Store by searching "s80HD", or by using the link: http://bit.ly/YIEWLP.

Fleet Operators roll out Boatracs

Boatracs reports that it has completed a fleet-wide implementation of communications and software systems for Fleet Operators, a Louisiana-based marine transportation company.

The new systems will be used to manage vessel communications and tracking as well as logs for billing, HR and maintenance, and includes the Boatracs Narrowband satellite solution for connectivity beyond mobile phone range, Boatracs BTConnect for vessel tracking and Boatracs BTForms for electronic logs.

"Our experience implementing Boatracs across our fleet has been outstanding from beginning to end," said David Barousse, general manager at Fleet Operators, Inc.

"We evaluated a number of other maritime software solutions and decided on Boatracs because it provided a cost effective way to solve our current issues with a clear path to accommodate future growth. Our customers in the oil and gas industry are demanding an electronic version of our vessel logs and we needed a way to maintain constant connectivity with our vessels to collect this data that was low cost, easy to use and didn't require us to maintain our own IT department."

"Boatracs has done a great job in helping us solve this problem in a way that improved our process by easing our employees into a new era with plenty of upside for further advancement."

As Boatracs sells both communications hardware and its own software the company says that it has been able to optimise the system for use with the particular bandwidth and cost limitations of the satellite products. The package is already integrated on delivery, which also helps in getting the service up and running quickly.

"We were pleasantly surprised at how fast our Captains have picked it up," notes Mr Barousse.

"We were able to implement a Daily Vessel Log across our fleet of nine vessels, and almost immediately those logs started coming in just the way we want them – and more importantly, the way our customers want them."

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Thuraya MBB to increase L-band competition

Thuraya has launched a new regional L-band service which it hopes will offer the maritime industry a new alternative for deep sea communications. Kyle Hurst, Thuraya, told *Digital Ship* about the company's plans for this competitive market

Thuraya aims to step up competition in the market for L-band services with the launch of its new Maritime Broadband (MBB) service, which the Dubai-based company says could provide a cheaper alternative for shipping lines which operate between Europe and Asia and do not need global connectivity.

Iridium has already enjoyed some success in the maritime L-band sector with its Pilot service, running on the OpenPort platform, however with MBB providing standard IP throughput at speeds of up to 444 kbps it is more directly comparable with Inmarsat's flagship L-band service FleetBroadband 500, capable of 432 kbps speeds.

These two products are markedly different in terms of coverage. Thuraya's geographic coverage is not as wide as that provided by Inmarsat's I-4 network across the whole globe, with the sole exception of the poles (an area that is covered by Iridium).

Thuraya's satellites cover the busy routes between Asia and Europe, as well as the Middle East, though not transatlantic routes and trade in the Americas. However, to counterbalance this Thuraya says that its services will be cheaper than those offered by its direct competitor.

"I would expect to be looking at packages that are up to 50 per cent less than what you might find on current broadband offerings. That's for the airtime packages," said Kyle Hurst, director of market development – maritime.

"If you're someone who operates completely within the Thuraya coverage and you look at a package where you might be paying 50 per cent less than with someone else, you do not need a global service, so why pay more?"

"I was on a vessel in Australia for a number of years and if someone had come up to us and said: 'here's a regional service that's half the price of something you're currently trying', we would definitely have taken it because we didn't go outside of national waters. So we would have had, as far as we were concerned,

complete coverage and a great price. And we could have used that very happily."

In an interview with *Digital Ship*, Mr Hurst said that he expected MBB to appeal to "vessels that do rounds from Northern Europe or Scandinavia, down the Mediterranean, vessels that go from Europe to the Middle East, or even vessels that go all the way from Northern Europe straight through to Asia."

"We expect to have good success with a crossover of subsectors such as container, bulk, and even things like product carriers who often operate regionally," he added.

Price plans for MBB will be initially available bundled with the Thuraya IP broadband terminal and a Spacecom IP321 antenna, and will range from low volume to unlimited use.

For the hardware, Mr Hurst suggested that "you'd be paying something less than US$7,000", though he is unable to provide specific prices as Thuraya distribution is managed indirectly, through its service providers.

"There are obviously going to be different packages where you pay less per hardware, and a little bit more per airtime to amortise the hardware," he noted

Usage

Thuraya is bullish about the performance of its network, claiming that it features "the most powerful L-band satellites currently available to maritime users."

The company says that it uses dynamic resource allocation to ensure that traffic congestion is minimised in areas of high communications volume, such as major ports or busy shipping lanes.

MBB has also been certified to work with value added services provided by Thuraya's service partners, who can set up optimised email and web browsing, VPN, VoIP, Instant Messaging and M2M applications.

"The market is going to be very refreshed in relation to the competitive price we have on airtime and hardware," Mr Hurst said, adding that he believed that the product would fit perfectly into

the VSAT backup market – an area where Inmarsat has aggressively re-priced FleetBroadband services to try and exclude itself.

"It's going to be a fantastic fit," he said.

"The VSAT model has now merged into a position where L-band backup is considered a standard. And I think right now people who are using VSAT are definitely looking for an L-band backup that can give a good robust service at a decent throughput for a fair price."

"From our perspective at Thuraya, we definitely have the network to be able to offer that."

Between 200 and 300 vessels are already using Thuraya's Maritime Broadband, he said, expecting that figure to rise to 700-800 by the end of the year.

Ongoing development

The launch of MBB is a welcome success for a company which had suffered some frustrations in trying to get an earlier Thuraya-based product into the maritime market.

In 2010 Thuraya had announced that it would be launching a maritime terminal in conjunction with Comtech, which was slated to be available in March 2011. However, changes within the Comtech organisation had caused that company to re-evaluate its strategy and signalled the end of the road for this particular offering.

"Thuraya has had a broadband capability for several years now and offers coverage over some of the world's major shipping routes and regions. As a result of the huge market potential and growth in this sector, we decided in 2011 to examine in more detail the feasibility of providing a broadband service to the maritime market with Comtech as a potential hardware partner," explained Mr Hurst.

"In the first part of last year Comtech had undergone a reorganisation and decided they were no longer interested in building a maritime broadband satellite product. As such, we had to look at other options."

"Given the changes going on in the market, in particular growing demand and pricing issues, we decided to build a package around existing hardware but with price plans that better matched what the customers needed."

The newly launched MBB service shares a number of the same features of that Comtech system, though Mr Hurst notes that further development has occurred since that product was withdrawn.

"In terms of the service itself there is no difference, the two products have the same broadband data capability (444kbps) and, in fact, the same Spacecom antenna assembly. The difference is that the below decks unit is the Thuraya IP terminal which is configured for maritime use," said Mr Hurst.

"We have hundreds of these terminals currently deployed in the land mobile and small vessel market and they have performed so well we decided to make

'I would expect to be looking at packages that are up to 50 per cent less than what you might find on current broadband offerings' – Kyle Hurst, Thuraya

the same equipment available to maritime users."

To some extent Mr Hurst sees the previous false start as something of a blessing in disguise, in that he sees the current market as potentially being better suited to the introduction of this kind of product, particularly with regard to some of the strategic pricing moves made by other competitors in the last 18 months.

"I believe the market conditions are more favourable right now as there is more pressure on pricing and we have heard concerns about performance and reliability with some of the competing offers in the marketplace," he said.

"In maritime, many people just want a reliable product with a good performance at the right price and we believe we are offering a superb offer for the maritime sector with Thuraya Maritime Broadband."

"The Thuraya Maritime Broadband package has a real potential to offer reliability and value to those companies that want to keep costs under control but still have a reliable service that can be tailored to their needs (low usage, VSAT backup, high usage). We offer a pay as you go package as well as a fixed-fee for unlimited use package which we feel are very well positioned to address the maritime sector's requirements."

In the end, Mr Hurst believes that both the company and the development of this new product have benefitted from the learning curve the company has been on in the last few years.

"I think anyone who has worked in product development for the maritime market would attest to the idea that all experience is valuable!" he said.

"One of the biggest lessons we have learnt over the last couple of years is that the maritime market likes choice. We have gained a lot of knowledge since 2011 and I think that will assist us as we move forward, offering our network and L-band capacity to more users in some of the world's busiest shipping centres." **DS**

MBB includes a Spacecom antenna and Thuraya IP broadband terminal

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SPO and Chemfleet agree new FB deals

Shipping companies in Singapore and Turkey have agreed deals to increase their usage of FleetBroadband as Inmarsat prepares for the approaching launch of Alphasat and the subsequent enhancement of its network

Singapore-based Swire Pacific Offshore and Turkish chemical tanker company Chemfleet have both agreed new contracts to extend the use of FleetBroadband across their fleets.

Swire Pacific Offshore (SPO), a service provider to the offshore oil and gas industry, is upgrading from Inmarsat's FleetBroadband (FB) 5GB service to the FB Unlimited plan.

Inmarsat says that the "all-you-can-eat" service will be provided on 65 of SPO's vessels by its partner Station711, the mobile satellite arm of RRsat Global Communications Network, and its service provider SMTS.

The agreement comprises SAILOR FB500 terminals, maintenance and support services, as well as Station711's smart@sea communication gateway, which was originally installed as part of the FB 5GB contract awarded back in 2011.

SMTS will install the antennas and FleetBroadband terminals, as well as the on-board Local Area Networks (LANs).

Station711 will provide the satcom management and control toolset based on its DPlatform solution. This is in addition to smart@sea for Unified Threat Management (UTM) security, the crew welfare voice and data module, IP traffic real-time compression, acceleration, caching and filtering, a shore-side unified POP facility, and a control system.

SPO says that operational efficiency and crew welfare motivated the upgrade.

"Reliable communications with good through-put rates is of great importance in our industry," said Colin Payne, HR director for Swire Pacific Offshore.

"The upgrade to FB Unlimited from our current FB 5GB plan is expected to meet the immediate needs of the ever growing demand for connectivity to friends, family and shore-based management."

"New technologies are increasingly 'bandwidth hungry' and while we have enjoyed excellent download and upload speeds with our FB 5GB service, to remain competitive and to deliver enhanced crew welfare, we needed to increase data allowances whilst keeping strong cost controls in place."

"FB Unlimited will assist in areas such as purchasing, and encouraging officers and others to use internal and external online services to support the management needs of the vessel. Additionally, it meets the growing demands of our customers who require robust and data heavy communication with our vessels 24/7," continued Mr Payne.

SPO provides internet access free-of-charge to all members of the crew, averaging 15 persons per vessel. It has allocated a number of computer terminals to ensure that everyone gets a chance to go online during the day.

"With unlimited access to the internet, we can allow the crew to connect with their family and friends through email and social media platforms," said Mr Payne.

Ohad Har-Lev, managing director of Mobile Satellite Services at RRsat, said: "Maritime broadband services have opened up a wide range of commercial, operational and personal crew communication uses."

"The ongoing and challenging economic environment for the shipping industry has driven the need for efficient and cost effective satcom solutions. FB Unlimited, along with the enhanced smart@sea solution, allows SPO to manage its communication costs, while meeting the growing demand for bandwidth."

Frank Coles, president of Inmarsat Maritime, also commented: "Partners like RRsat Group have been helping to change the face of communication services for the

SPO vessels will move to the FB Unlimited service. Photo: SPO

maritime industry with innovative services like smart@sea. We continually look at ways in which we can support them by providing greater value to our award-winning FleetBroadband service."

"FB Unlimited is another way in which we are empowering vessel owners and operators to take advantage of the latest on-board technologies, confident in the knowledge that their communications costs are fixed."

Chemfleet

In Turkey meanwhile, tanker operator Chemfleet is to implement Inmarsat FleetBroadband services across 21 of its vessels.

Delivered in conjunction with Inmarsat service provider Deckhouse, the roll out will mark the culmination of an evaluation process whereby Chemfleet reviewed a range of connectivity options before selecting FleetBroadband.

"Chemfleet has a fleet management software solution called 'Nozzle' which enables our office onshore to monitor, in real-time, a broad range of operational information from our vessels," explained Chemfleet operations manager, Bariş Samur.

"To realise the value of this investment, we required reliable broadband connectivity, regardless of where in the world our vessels are sailing. FleetBroadband offered the capacity and reliability we needed, whilst enabling us to keep close control of our costs. Put simply, the alternatives were more expensive and not as effective."

The 'Nozzle' software developed by Chemfleet is designed to synchronise a broad range of onboard data sources - along with the company's Safety Management System - with Chemfleet's head office in Istanbul. This includes engine readings, fuel readings and daily vessel reports.

The company says that this investment is improving the management of fleet-wide systems, by allowing for the tracking of any outstanding maintenance jobs and the identification of any defective systems.

'Nozzle' also enables the result of any vessel inspections to be relayed ashore in real-time, information that Chemfleet uses to conduct continuous analysis of vessel performance across the fleet, identifying trends and common problems.

In addition to the installation of the new satcom system, Deckhouse is providing IT support across all of Chemfleet's vessels and, using the FleetBroadband service, aims to be able to fix a wide range of technical issues remotely without having to schedule maintenance visits to the vessels and without interrupting the tankers' schedule.

"An increasing number of fleet owners and operators are looking to enhance the efficiency of their vessels through the application of new technologies," said Inmarsat's Frank Coles.

"As in the case of Chemfleet, the ability to maximise the return on their technology investments is dependent upon the effectiveness of the broadband connection. FleetBroadband has become the world's leading service for maritime voice and data broadband because it is simply dependable, seamless and reaches across every ocean."

As part of the solution being delivered to Chemfleet, Deckhouse is also providing a mail platform, a virus protection solution, which regularly updates itself via the new mail system, and a daily newspaper sent to every Chemfleet vessel via the broadband connection.

Alphasat

The FleetBroadband service to be used by SPO and Chemfleet will shortly enjoy a capacity enhancement with the upcoming launch of the Alphasat satellite – sometimes affectionately referred to by Inmarsat as a sort of 'Inmarsat 4.5' - to supplement the Inmarsat-4 network currently providing the backbone for FleetBroadband.

Alphasat, designed and built by Astrium for Inmarsat and the European Space Agency (ESA), recently left Astrium's facilities in Toulouse after completion of its final integration and test campaign en route to Kourou, French Guyana, to be prepared for its launch aboard an Ariane 5, scheduled for the end of July.

Alphasat carries a new generation of geomobile communications payload in L-band that will be used to augment Inmarsat's broadband network service across Europe, Africa and the Middle East, providing new capabilities in terms of performance and resource availability for services like FleetBroadband.

The new satellite also delivers additional L-band space segment redundancy and consolidates safety of life services. The payload design and production was led by Astrium in the UK.

This payload features eight new generation digital signal processors, which are used to efficiently manage multiple communications with flexibility in both frequency and beam power allocation, and an 11 metre antenna reflector.

Alphasat also carries four Technology Demonstration Payloads for ESA, including a laser communications terminal, developed under a contract with German space agency DLR.

This is a precursor of the operational system for EDRS (European Data Relay System) which aims to enable very high speed transmission between LEO and GEO to enhance Earth observation applications and services.

Alphasat has been designed for 15 years of in-orbit lifetime, will have a launch mass of 6,650 kg and will have a wingspan of 40 metres once its solar arrays are deployed in orbit. Launch and Early Orbit Phase operations will be conducted from the Astrium spacecraft control centre in Toulouse.

GL's FutureShip sets up ECO Research Centre in Singapore

www.futureship.de

FutureShip, Germanischer Lloyd's (GL) maritime engineering and consultancy subsidiary, is setting up a research centre in Singapore to conduct studies on energy efficiency.

Supported by the Maritime and Port Authority of Singapore (MPA) under its Maritime Cluster Fund (MCF), the ECO Research Centre will embark on "Analytical Ship Performance Evaluation and Management" as its first project and will conduct a number of R&D projects over the next five years.

In April, Singapore unveiled an investment programme to support maritime technology R&D. The Maritime Innovation and Technology (MINT) Fund is to receive S$50 million ($40M) over the next five years to support the development of maritime technologies by universities, research institutes and companies in Singapore.

A new S$25 million ($20M) Productivity Programme was also introduced under the Maritime Cluster Fund (MCF), to co-fund initiatives like automation and business process re-engineering.

FutureShip says that its ECO Research Centre in Singapore will be the first R&D centre to benefit from the enhancement to the MCF.

"We feel honoured to receive such a solid support from MPA," said Albrecht Grell, senior executive vice president of GL.

"With a variety of initiatives to promote sustainable shipping and energy-efficient ship designs, Singapore is developing into a centre of excellence for maritime research and development. This provides us with an ideal operating environment, while fitting well with our long-term strategy to maintain our leading-edge position in maritime consulting services."

Lam Yi Young, MPA's chief executive, said: "MPA has been actively promoting maritime R&D and innovation development over the past decade."

"The setting up of R&D and test centres in Singapore will further strengthen our maritime R&D capabilities and position us as a centre of excellence for maritime tech-

nology. We are thus happy to welcome the setting up of FutureShip's ECO Research Centre in Singapore."

The ECO Research Centre will be an arm of FutureShip Singapore Pte Ltd (FSPL).

"Since the FSPL office was registered last October, we've seen a rapidly growing client base as we continued to roll out solutions to enhance the energy efficiency of ships," said Khorshed Alam, managing director of FutureShip Singapore.

"The Centre will surely sharpen our capability of addressing our clients' needs with tailored products, backed by a global network of over 100 high-calibre engineers and consultants. Singapore's uniqueness as a green shipping hub also allows us to fan out from here to other areas in Asia."

Marine Software lands planned maintenance contract in Australia

www.marinesoftware.co.uk

Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) has awarded the planned maintenance contract for its 94m research vessel RV Investigator to Marine Software.

Software installation with initial crew training will be conducted on site at the Sembawang Shipyard, Singapore.

Marine Software stresses that CSIRO required a Classification Society type-approved computerised Planned Maintenance system to comply with the ISM code, statutory and classification certification requirements.

The UK-based developer says that, together with supplying the Planned Maintenance software, it has been commissioned to construct a fully populated and scheduled Planned Maintenance database, ready for use upon installation.

The RV Investigator will be installed with the planned maintenance software system

WaveSentry project aims for commercial service

www.marinesoutheast.co.uk

WaveSentry, a research project on maritime forecasting backed by several industry stakeholders, is now aiming at commercial service.

The research was launched two years ago to provide an improved information and forecasting tool for managing the risks of marine operations in adverse sea states. Marine South East, which initiated the project, says that the then available tools were insufficient to display wave height, period, direction and steepness at an appropriate temporal and spatial resolution.

WaveSentry, which received funding from the Technology Strategy Board, looked into exploiting data sources such as satellite remote measurements of wave steepness and real-time buoy and ship data as part of the project.

In late April the project presented the advances it had achieved in sea-state

measurement, data processing and presentation. Now, for Marine South East, time has come to build on that research and move towards a commercial service.

The Southampton company says that various datasets can be used for real-time modelling so as to provide sea-state information and forecasting. A commercial service could be made available to subscribers with forecasts targeting specific areas or routes, according to the clients' requirements.

Applications could include marine renewable energy installation/servicing, shipping, search and rescue operations, cable/pipe laying, marine operations coordination, oil and gas activities, fisheries, coastal management, flood management and coastal leisure activities.

The WaveSentry consortium includes: HR Wallingford, Fugro EMU, Surrey Satellite Technology, National Oceanography Centre, Chelsea Technology Group, and Marine South East.

CargoDocs cross the Atlantic

www.cargill.com
www.essdocs.com

Cargill reports that it has begun to use CargoDocs, an electronic bill of lading solution (eB/Ls), for agricultural shipments between South America and Europe.

CargoDocs, by Electronic Shipping Solutions (ESS), used to be available only in the energy and liner segments, and for barges in the ARA region (Amsterdam, Rotterdam, Antwerp). The system entered the bulk market earlier this year, when Cargill used it for a grain shipment between the United States and Mexico.

Now CargoDocs eB/Ls has crossed the Atlantic ocean with Cargill having used the system when it shipped soybeans on a Carras (Hellas) managed vessel from Argentina to Spain.

Cargill says that it has commenced work with BHP Billiton on using eB/Ls for

bulk iron ore cargoes from Australia to China. It also wants to expand the use of the electronic bill of lading to Asia-Pacific markets.

"We are delighted with the progress being made and the roll out so far," said Ernst Herger, Cargill's global project manager for eB/Ls.

"The time is right for the implementation of this new technology as it is a win-win for all concerned. Reduced administration and increased efficiencies save time and costs at every step of the supply chain for every participant - from ship owners, to charterers and trading companies."

"Electronic bills of lading make it easier to manage any changes or splits along the way and also protect the bill of lading from the risk of being lost or misused. We are confident that this is the right solution for the future of the shipping industry."

Pegasus 2.0 released

www.gl-group.com

The latest version of classification society Germanischer Lloyd's (GL) thickness measurement software Pegasus has been released.

To verify the structural integrity of a vessel, hull thickness measurements must be periodically taken, with each measurement point documented. GL notes that the number of required measurement points can reach up to 20,000 - all repeatedly measured over the life of the vessel, creating a vast amount of essential data which must be managed and assessed.

Pegasus can be used in the preparation, recording, assessment, storage and reporting of such measurements, with the latest release extending the current hull integrity management package to include combined functionality with the condition monitoring package GL HullManager.

3D models utilised in GL HullManager can be used directly for recording thickness measurements with Pegasus, while thickness measurements recorded with Pegasus can be integrated and used in GL HullManager.

GL says that using these kinds of systems to accumulate an accurate long-term database of thickness measurement results allows more precise scheduling and planning for repairs, as well as predicting future corrosion.

Release 2.0 of Pegasus offers an integrated software solution supporting thickness measurements independent of whether or not a 3D structural model is available. Partially incomplete 3D structural models are also supported by using tabular input for the missing parts.

GL notes that, independent of which method is used, assessments like hot spot lists and statistics as well as reports in IACS format are presented in a unified manner.

In summary, new features in version 2.0 include: integration of 3D model-based and table-based recording of measurements and assessment functionality; a revised navigation panel which gives a better overview of the measurement content and program functionality; and support for table based measurement recording and assessment for bulkers and tankers built according to IACS Common Structural Rules.

First released in 2008, GL Pegasus was introduced for recording thickness measurements on 3D structural models. Two years later, GL Pegasus Lite became a mandatory tool for all GL certified thickness measurement companies, able to handle thickness measurements without requiring a 3D structural model of the vessel.

GL Pegasus and GL Pegasus Lite will now be replaced by the integrated version of Pegasus 2.0.

Pegasus 2.0 is available free of charge. Program licences required to use a structural 3D model are available from GL on request.

Pegasus 2.0 includes improved integration with 3D models among its new features

Fortune Technologies has announced that its Planned Maintenance System (PMS) software has passed **ClassNK** testing to gain its 'Software Conformity Certificate'. This is the second Type Approval obtained by the module, following on from the **Lloyds Register** Certificate.

Rafael Martínez-Abarca has been appointed operations manager of the marine strategic business unit (MaSBU) of **SENER**, replacing Rafael de Góngora, who becomes MaSBU general manager and head of SENER's engineering and marine systems departments.

The MaintStar Planned Maintenance System by **Buss Data** has been certified by the Japanese ship classification society Nippon Kaiji Kyokai, also known as **ClassNK.** The MaintStar software allows vessel owners or crews to schedule maintenance at regular intervals in line with the manufacturer's and class requirements.

www.frtntech.com
www.sener.es
www.buss-data.de
www.classnk.or.jp

AWT launches BVS 7.0

www.awtworldwide.com

Applied Weather Technology (AWT) has released a new version of its Bon Voyage (BVS) marine voyage optimisation system, BVS Version 7.0, featuring a number of new developments intended to help vessels find safer and more fuel-efficient routes.

The company says that BVS 7 includes access to high-resolution weather and ocean data via broadband, enhanced voyage optimisation and new safety features.

The program can generate compressed colour-enhanced maps and graphics to allow ship captains to view and interpret potential problem areas. Access to 16-day forecasts is available, updated four times per day, with other parameters such as pirate attack information, port vicinity forecasts, satellite imagery and high seas bulletins delivered in near real time.

BVS automatically fails over to e-mail data delivery in the event of an internet interruption so the data continues to be sent to the vessel.

The new version of the software also has an improved optimisation algorithm that now includes customisable speed down and consumption curves, which AWT says should deliver more accurate estimates of fuel cost and time en route.

The algorithm takes into account ECA areas and the cost differential of fuel types when providing the optimal route, and the route can be customised to take other parameters into account, including load-line restrictions and user-specified no-go areas. Traffic separation lanes are also displayed.

For planning voyages longer than 10 days, BVS 7.0 includes AWT's weather speed loss model called Climatological Ship Resistance.

This model uses historical weather from the past 12 years that evaluates the day of the year, vessel location, heading, ship type and the appropriate weather pattern (El Niño, La Niña or Neutral) to calculate the best long range speed loss due to weather.

AWT says that this model gives superior results for short or long term strategic route planning when optimising a voyage and also when calculating the vessel arrival time.

"Having access to the best quality weather and ocean data is imperative for making informed routing decisions onboard a vessel," said Richard Brown, AWT's vice president of product management.

"With BVS 7.0, captains have fast access to the highest resolution data available. This frequent access to data gives captains the data they need to make critical decisions regarding safety and efficiency while en route."

BVS includes additional safety features such as resonance alerts to inform captains of the potential for severe motions, and environmental modelling that AWT says enables it to accurately forecast storm
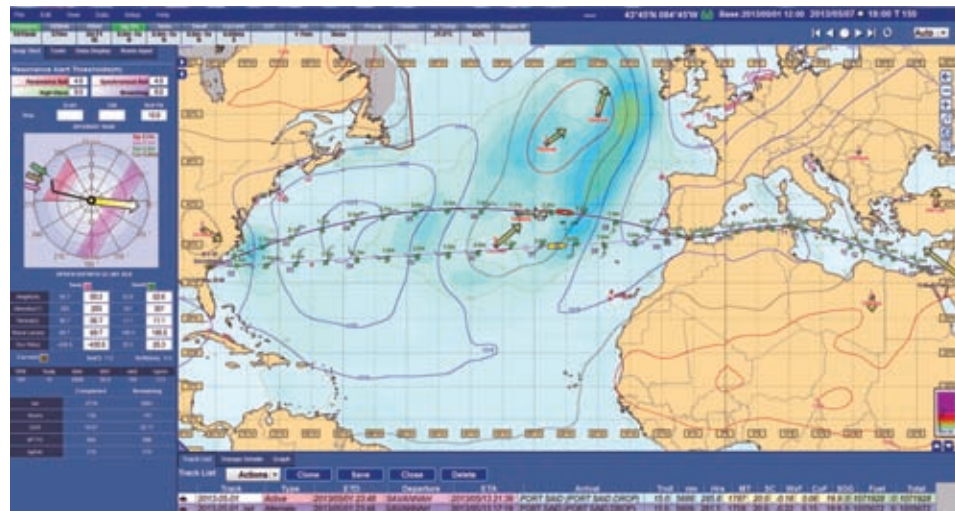
BVS 7.0 includes improved features for voyage optimisation

strengths and effects.

BVS 7.0 also includes a forecast indicating where rogue waves are more likely to occur, as well as adding near real-time access to data on global pirate attacks from the IMB that are supplemented with reports from NATO. This information is displayed on a colour-coded chart indicating where, when and what type of attack, and a detailed summary can easily be accessed.

"AWT's goal is to continuously innovate and provide our customers the best tools possible to achieve safe and fuel efficient voyages," said Haydn Jones, AWT's director of international operations.

"In the present shipping economic environment of high bunker fuel costs, ship operators and suppliers across the world are looking at a wide range of initiatives to enhance efficiency. Although still valid efficiency solutions, many of these initiatives involve high capital investment or complex installations."

"Voyage optimisation based on present and forecast weather conditions on the other hand is a low investment approach which we believe makes it an essential tool for ship owners and operators alike."

BVS users now also have access to port vicinity forecasts for over 2,700 ports around the world. These forecasts include the air temperature, precipitation amount, visibility, winds and humidity near the port and the winds and waves that might affect the pilot.

This data can be used to help captains evaluate if conditions on arrival might be a problem and to plan weather windows for loading or discharging cargo.

ABS Nautical Systems wins three customers in Greece

www.eagle.org

Texas-based ABS Nautical Systems has won three new customers in Greece, with Sun Enterprises, Quintana Shipping, and Nautilus Marine Acquisition signing contracts to use its Energy & Environmental Manager software module.

The ABS Newbuild Program, which was launched in July 2009, offers free NS5 Enterprise fleet management software to all ABS-classed vessels built after 1 January 2009.

Sun Enterprises, which operates a fleet of tankers and dry bulk carriers from Piraeus, will implement the ABS Energy & Environmental Manager module on three of its newly-built vessels.

Nautilus Marine Acquisition, based in Athens, owns and operates offshore supply vessels (OSVs) serving oil and gas exploration. It will use the same module on five of its OSVs and plans to incorporate additional modules from the NS5 Enterprise software suite in the future.

Quintana Shipping, headquartered in Kifisia, will use the Environmental Manager as well as the Hull Inspection modules on four of its dry bulk vessels.

EU patent for FuelTrax

www.fueltrax.com

Nautical Control Solutions (NCS) has announced that its FuelTrax marine fuel management system has been granted patent protection by the European Patent Office (EPO).

The onboard, ABS type approved FuelTrax system monitors fuel flow, captures fuel burn rates, can measure and alarm fuel tank levels, and is used to prove bunker quantities. It gathers a broad range of fuel-related information and presents it to captains, operations, maintenance, and fleet management so that problem areas and inefficient activities are identified.

NCS, which is headquartered in Houston (Texas), was granted its first patent for FuelTrax in the United States in 2006, and announced a Canadian patent last year.

The EU patent for 'Apparatus and Method for Fuel Measurement and Accountability' includes nine European countries: United Kingdom, Germany, France, the Netherlands, Denmark, Italy, Austria, Switzerland, and Greece.

"Under the EPO we selected the countries we believe will offer us the largest blanket of protection within the European community," said Anthony George, CEO of NCS.

"It is important to have these protections in place as we continue to invest in our product offerings and expand globally to serve a growing user community."

GasLog implements Ulysses software

www.ulysses-systems.com

GasLog, an operator and manager of Liquefied natural gas (LNG) carriers, has adopted the Task Assistant Document Management software package from Ulysses Systems.

The software application is designed to assist companies in implementing consistent processes that ensure adherence to regulations.

It aims to provide management support for ship operations consistent with safety and quality management requirements and assists office and shipboard staff with inspections by customers and regulatory auditors.

Gaslog had already been using Ulysses' Task Assistant software since 2007 to manage Technical and Purchasing operations for its 12 vessels.

"Ulysses Systems' team is honoured when Task Assistant's value is once again acknowledged, especially after years of successful collaboration in Technical and Purchasing departments," commented Dimitris Glossiotis, principal business engineer at Ulysses. "We commit (to) delivering a system which will simplify life on board and ashore."

Palantir's KeepUp@Sea for DEME

www.palantir.no

Palantir has announced that it has landed a five-year deal to provide its IT&C infrastructure and management solution, KeepUp@Sea, to DEME, a Belgian dredging and hydraulic engineering group.

The new Vessel IT Infrastructure for DEME will be delivered as a managed service from the Palantir company headquarters in Stord (Norway), it says.

Palantir says that the global roll-out to the DEME fleet is already in progress, with 17 vessels sailing at present with the new IT environment implemented.

Additional deliveries include hardware, logistics, roll-out and migration services, KeepUp@Sea Antivirus and KeepUp@Sea Inventory services.

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

"The core focus on standardisation and automation of IT&C services proves cost-efficient, and will be the major driver for achieving new, international customers."

GAC launches Android version of Mobile Directory app

Gulf Agency Company (GAC), a provider of shipping, logistics and marine services, has launched a free Android version of its mobile directory application, following on from the iPhone app it launched last autumn.

GAC says that its Mobile Directory App is a database of thousands of contact details across its global shipping, logistics and marine services network. Users can search the database by services, locations, or names.

Settings can be customised, to specify 'favourites' for speedy access, and the directory can be used when working offline.

Bill Hill, GAC's executive group vice president, said: "Our Mobile Directory App for iPhone, launched in October last year, has proved incredibly popular. There were many requests for an Android version - we are pleased to now offer this free tool to users on this platform."

"Our shipping and logistics customers operate in a time-sensitive environment. We know how important it is for them to stay connected with GAC, particularly when they are on the move."

"Armed with the Android or iPhone versions of our app, they can find the contact details of the right people across GAC's global network to reach for our range of shipping, logistics and marine services globally in a matter of moments."

The GAC Mobile Directory Application for Android (Version 2.3 and above) or iPhone is available for free download at the GAC website.

Users of Android phones will be able to peruse the GAC database using the new app

Tero Marine acquires Teomaki

Tero Marine, the developer of the TM Fleet Management Suite, has announced that it has taken a controlling stake in rival company Teomaki.

Both Norwegian companies develop IT control and management systems for offshore and maritime activities.

Tero Marine has bought 95 per cent of the shares in Teomaki, with CEO Jan Erik Hårvei noting that the acquisition gives its company the broadest range of applications for maritime operations, procurement and quality control on the market.

"Access to their software will enable us to offer more customised solutions and means we now cover pretty much every need in the shipping and rig markets," he said.

"Teomaki SM is the company's flagship product and will continue to be developed. We have tremendous faith in this application."

"The program is one of the best support tools on the market for control and management and is particularly suitable for larger shipping companies and the oil and gas industry. These companies have more complex operations that require a greater degree of software customisation."

Tero Marine currently has subsidiary companies in Singapore and Great Britain. It is represented in Finland, Dubai and the USA and is establishing a presence in Brazil.

Pål Widerøe, CEO of Teomaki, said after the acquisition: "This will significantly expand our geographical sales area and at the same time enable clients to access a larger support network wherever in the world they are."

In related news, Tero Marine has also recently announced the release of its new TM Dive software package, used to automate legally required reporting of dive system maintenance and certification.

The IT solution, developed in cooperation with diving contractors Harkand ISS, aims at phasing out the Excel-based applications used today.

"With old systems, up to 30 per cent of a technician's time can be spent on maintenance reporting and system compliance. TM Dive will reduce this workload by up to 75 per cent," said Allan Strachan, group diving technical manager at Harkand ISS.

Inghild Arnesen, marketing manager of Tero Marine, noted: "The diving industry is absolutely packed with safety regulations that diving contractors like Harkand must comply with. The less time you have to spend on reporting means more time to concentrate on safety."

Tero Marine says that with TM Dive, technicians can sign off the job and produce their reports and certificates with far less effort.

"All diving contractors want to assure their clients in a timely fashion that their diving systems meet the required safety and operational standards," said Mr Strachan.

"Until now, documentation has been a pretty complicated and demanding process in which it is easy to make mistakes."

AMOS for MAN PrimeServ Academy

MAN Diesel & Turbo has agreed a deal to use AMOS software from SpecTec as a training tool at the MAN PrimeServ Academy in Copenhagen.

Intending to further improve its 'hands-on' training courses, MAN Diesel & Turbo will use AMOS, the CMMS (computerised maintenance management system) provided by SpecTec since 1985, as a teaching tool to show students how to manage and optimise the process of maintenance, inspection and spare part purchasing on board vessels.

The AMOS database for this project has been created automatically by importing MAN Diesel & Turbo engine data standardised in accordance with the Shipdex protocol.

"We are pleased to introduce AMOS in our classroom environment," said Henrik Striboldt, MAN Diesel & Turbo.

"It makes a big difference to be able to present to our students maintenance and inspection of our products via a type of system that many of our customers already use back-on-the-job. AMOS also allows us to quickly upload new maintenance data in Shipdex format, in the event new products are coming into the Academy."

AMOS has been initially installed at the MAN PrimeServ Academy in Copenhagen, and may in future be extended to other MAN PrimeServ academies around the world.

"The SpecTec cooperation with MAN Diesel & Turbo is also aimed at demonstrating that best results can be obtained by merging a powerful CMMS like AMOS with standardised electronic technical information in Shipdex format," noted Marco Vatteroni, SpecTec.

"Shipdex eliminates the need to insert technical data inside IT applications by hand. This means lower costs, better and more complete information, and fewer or no mistakes."

Cosco to implement Octopus Onboard

www.amarcon.com

Amarcon, a member of the ABB group, has received an order for a total of eleven OCTOPUS-Onboard installations for Heavy Lift vessels from Cosco Heavy Transport and BigLift Shipping.

This Cosco deal was the result of a previous leasing agreement whereby the heavy cargo transporter had been using the portable OCTOPUS-Onboard system in a number of instances.

In March 2012 a portable solution of OCTOPUS-Onboard was installed on the m/v Tai An Kou for a one month period to monitor the transportation of a rig. Several other lease installations followed in 2012 and 2013, leading to this order of five permanent OCTOPUS-Onboard systems for five Cosco Heavy lift vessels.

The systems will be used for motion monitoring, response prediction, heavy-weather decision support and weather window evaluation. Amarcon's Motion Monitor system (TMS-3), which collects data from three onboard accelerometers, is also to be installed so multiple critical locations on the vessel can be measured and displayed on the bridge.

Marc Beerendonk, manager engineering, Cosco Heavy Transport said: "After using the OCTOPUS-Onboard system in the portable surveyor box during various shipments, the system proved its capabilities to the vessels' crews."

"Due to more frequent use, we decided to install the system permanently on board the vessels."

In related news, the Dutch heavy lift cargo transporter BigLift Shipping has also placed an order for a total of six OCTOPUS-Onboard installations with similar functionality to those to be delivered to Cosco.

BigLift Shipping operates a fleet of thirteen specialised heavy lift vessels serving the oil & gas, mining and power generating industries. BigLift already uses OCTOPUS-Onboard on four of its vessels, with the first installation completed in 2009.

The OCTOPUS product line is part of ABB's Vessel Information and Control (VICO) systems package which incorporates a range of automation and advisory solutions specifically for marine applications, based on ABB's process automation technologies.

COSCO heavy lift vessels like the Tai An Kou will be equipped with the software. Photo: COSCO

Amarcon, a fully owned subsidiary of ABB, provides monitoring and forecasting software solutions for performance and availability optimisation of sea-going vessels, and vessel motion prediction solutions.

ABB acquired Amarcon in August 2012 to expand its marine software offering.

'Quest for Oil' game launched

www.questforoil.com

Maersk has launched a free computer game called 'Quest for Oil' allowing players to explore the depths of the seabed in search of black gold.

The real-time strategy game can be downloaded for free over the internet. Based on Maersk Oil and Maersk Drilling's experience, it tests both the analytic and practical skills of participants.

Players need to look for oil on a seismic map, assessing a variety of factors – What does the underground look like? Which layers of earth does it consist of? And where is the oil locked?

Then they are tested on how precisely they position their drilling equipment, keeping an eye on temperature and pressure, before they can start extracting and producing the oil they have found.

"We want to use the computer game to tell the story of an extremely innovative business," says Claus Hemmingsen, CEO of Maersk Drilling.

"We wish to engage in dialogue about our oil and energy business through gamification and at the same time give all interested the best opportunity to experience the underground."

"Most people take for granted that we have oil and natural gas and not many people understand what it takes to find and produce it," added Jakob Thomasen, CEO of Maersk Oil.

"The world's need for oil and gas is leading exploration into ever deeper waters and ventures demanding precision and cutting edge technology. It's a sophisticated, fascinating industry and 'Quest for Oil' offers everybody a glimpse of what oil and gas exploration is all about today."
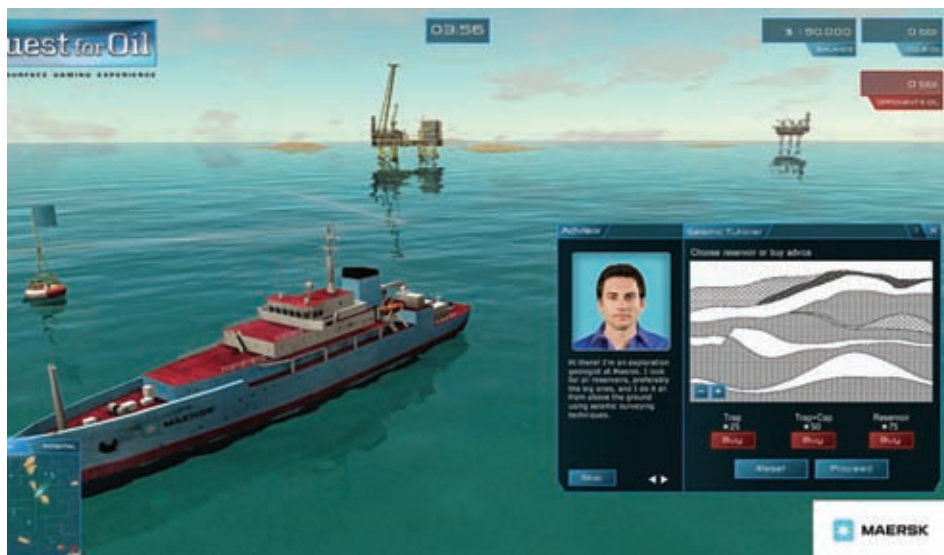
Players can get an inside look at the complex world of oil exploration

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Paramarine V8 announced

www.qinetiq.com

A new version of QinetiQ Maritime's Paramarine software for ship design has been released.

The new functionality in Paramarine V8 includes the introduction of probabilistic damage modelling and assessment, a requirement for all passenger and cargo vessels.

The new version also comes with enhancements to its Emergency Response functionality providing a number of assessment tools for free-floating or grounded vessels.

This allows the user to analyse the current situation and predict the future development of an incident as time elapses, enabling investigation of the effects of tide cycle, pumping and flooding of tanks and spaces, and the movement of solid weights.

Enhanced reporting, with a greater degree of report customisation, has additionally been added.

"Over the last 24 months we have seen a very rapid growth across the world in the number of organisations using the extensive functionality offered by Paramarine," said Vittorio Vagliani, managing director, QinetiQ GRC.

"We are committed to continually enhancing and improving the software's capabilities as demonstrated by this announcement and the addition of some new powerful capabilities in V8."

Veslink upgraded

www.veson.com

Veson Nautical has announced a number of improvements to its Veslink software system, with new tools for users to collect and act on voyage reports and other mission-critical voyage data.

"The focus of Veslink has always been optimising ship to shore data collection," said Per Ostman, product manager for Veslink.

"Nearly 1,500 vessels already use Veslink on a daily basis. Building on this success, the latest version represents a significant investment in the data transfer infrastructure as well as the user interface."

"We've made it easier to collect the data you need, and we've given you the tools you need to aggregate and analyse that data quickly and intuitively."

New features include a redefined fleet map, to allow operators to have an overview of fleet status and the ability to drill down to smaller details, and a network function to allow operators to share critical information with their voyage partners, service providers, and counter-parties.

The software will now also include integrated data feeds with information from hub agencies, weather routing services, bunker suppliers, as well as AIS and other vessel position services, to supplement the data collected from users' fleets.

On the reporting side, Veslink will now require vessel personnel to enter all data into standardised e-mail templates, to remove any requirement on the shore side for further data entry, eliminating transcription mistakes and wasted time.

Japanese yards implement 3D software

Japanese shipyard group Shin Kurushima Dockyard Company Limited (SKDY) has implemented the Intergraph SmartMarine 3D software system for use in the production phase of its ship projects.

The system will be used to manage various parts of the production process, including early, detail and manufacturing design, as well as fabrication planning.

SKDY had previously chosen to standardise its operations on SmartMarine 3D and has now successfully incorporated its specific requirements into the software package, which are fully automated across its production processes.

SKDY is the first shipyard in Japan to implement SmartMarine 3D for the production stage, using its own built-in, automated rules, and will in future use SmartMarine3D for all ship production, starting with its flagship shipyard, Onishi, and then expanding to all its other shipyards: HashiHama, Kochi, Toyohashi and Higashihiroshima.

"SmartMarine 3D's rule-based, automated technology fits with our sophisticated design," said Isshin Fuji, managing officer general manager of the ship design department at SKDY.

"As we continue to customise SmartMarine 3D and build our technical strength, the Intergraph solution's advanced capabilities and workshare feature enable us to share our technical expertise and know-how with the newer generation of engineers. This ensures that we maintain our leading position in a highly competitive global shipbuilding market."

Gerhard Sallinger, Intergraph Process, Power & Marine president, also commented that "SKDY is one of the world's most productive shipyards and is a pioneer in the Japanese shipbuilding industry."

"SKDY is yet again a leader with its latest technological advances through the use of Intergraph SmartMarine 3D. We are honoured to support SKDY in the implementation of SmartMarine 3D for production of real ship projects. SmartMarine 3D will deliver enhanced safety, quality and productivity for SKDY's global ship projects."

News of this deployment was followed by another Intergraph announcement that it is to consolidate its SmartPlant 3D, SmartMarine 3D and SmartPlant 3D Materials Handling Edition software packages into a single solution called Smart 3D, slated for commercial release later this year.

Beta testing for Smart 3D began from mid-June 2013 and will involve several Intergraph clients, as well as participants in Intergraph's Agile software development process, as key stakeholders.

The 2014 version of Smart 3D will include Upgraded Model Data Reuse (MDR) capabilities to enable users to reuse FEED or old designs with different specifications. Orthographic drawings are automatically copied and updated.

Enhanced 3D Interop capabilities will also enable the use of 3D data from multiple foreign CAD systems in conjunction with native Smart3D models, to allow for real-time clash reports, view filtering and combined foreign-native orthographic drawings and reports.

64-bit clash detection will additionally be included.

Mr Sallinger commented that, "Intergraph continues to invest heavily in our world-leading 3D solution, and we do it in conjunction with our clients."

"Having many of our customers involved in the beta testing of Smart 3D 2014 provides them with real-world exposure ahead of the commercial release and ensures that this next-generation solution will meet their safety, quality and productivity needs for many years to come."

"While other vendors merely give their outdated products a new look and feel, Intergraph invests in breakthrough technology."

Sexual harassment prevention video

Maritime Training Services (MTS) has released a training video entitled 'Sexual Harassment Prevention for the Maritime Industry'.

The 22-minute programme, produced in cooperation with industry experts, lawyers and government officials, emphasises the emotional and financial costs of sexual harassment and explains how to avoid such behaviour.

Through case studies, it provides examples of bad behaviour and false myths, such as "What happens at sea stays at sea". It also describes proper reporting procedures and record-keeping.

Seattle-based MTS notes that sexual harassment creates unsafe work environments as people who feel harassed cannot focus on their work, experience high anxiety and sometime illness due to stress. MTS adds that sexual harassment claims cost the maritime industry millions of dollars.

Designed to help maritime organisations prevent harassment and reduce liabilities, the training video is available in English, with French and Spanish subtitles. It costs $250.

Sexual harassment can create stress and lead to an unsafe working environment

Optimizer to save fuel

Inatech is set to launch a new software system called Optimizer, that it says will provide guidance to shipping companies on how much fuel to buy at which port, in order to save money.

The UK-based company is the developer of the ShipTECH fuel management system, which supports processes such as bunker procurement, claim submission, risk management, accounting, and advanced reporting.

"We wanted to go one step further and develop on top of that system some business intelligence, which we are calling the Optimizer," CEO Jean-Hervé Jenn told *Digital Ship,* noting that Inatech had already carried out tests of the service with some of its prospects.

"We could come up with potential savings of 2 to 5 per cent of the fuel bill," he said.

Mr Jenn noted that the Optimizer works better for container lines, which run a shuttle service and therefore know which ports they will be calling at, than for the tanker industry which is less predictable as it is more similar to a taxi service.

"Along the voyage, you are planning to stop at a number of ports and we are going to tell you the optimum amount of fuel that you should be buying at each port along the voyage, depending on the quantities and depending on the price," he said.

In its first version, which will be launched on September 1st, the Optimizer takes into account 20 parameters, such as the number and size of the tanks, or the depth of the port, "but we've got a list of up to 100 parameters that we think we can input into the Optimizer at some point in time," notes Mr Jenn.

Clients can install the software on premise, on their own computer, or opt for the cloud version and let Inatech operate it on their behalf. Two further steps are then necessary before it can be operational.

"The software is going to interface with some of your systems, like the accounts payable and the accounts receivable traditionally. So there is some integration to be done," said Mr Jenn.

"And of course, to capture the intelligence you need the data, so you're going to need to load the historical data from the company. These are the two things: integration and uploading the data. But once you've done that, you can be operational."

Mr Jenn notes that, as fuel costs today represent up to 60 per cent of the operating cost for shipping companies, and with a company operating 100 ships potentially spending one to two billion dollars a year on fuel, saving two to five per cent of that represents a handsome amount.

In comparison, the Optimizer will cost approximately US$8,000 to $10,000 per vessel, annually.

Inatech is already working on the next version of the Optimizer, and with regulations on new sulphur fuel coming into force in 2015, "it's not just one type of fuel that you need to optimise, it's two or three different types of fuel – that makes it even more complex," says Mr Jenn.

"Multifuel will be the next version."

KR and Dongkuk Steel sign MoU for technology exchange

The Korean Register (KR) has signed an MoU with steel producer Dongkuk Steel regarding technology exchange between the companies, to cooperate in improving the process of building ships and marine structures.

Kim Chang-wook, KR executive vice-president said: "This agreement consolidates the relationship between KR and Dongkuk Steel, one of the great steel companies of the world and the second largest in Korea."

"We expect to generate many synergies from this MoU and I look forward to working together to deliver enhanced products and services to the international and domestic maritime sector."

Upgrades to AVEVA Marine

www.aveva.com/marine

AVEVA has upgraded its AVEVA Marine software portfolio with enhancements to better manage production information.

New features have been added to AVEVA Outfitting to better control Pipe and Steel Outfitting fabrication. The company says that these features will enable shipbuilders and offshore engineers to better manage the entire production process from design to workshop, resulting in a more production efficient design and increased accuracy of production information.

Within AVEVA Outfitting, Pipe Fabrication enables a piping designer to create cost-optimised, production-ready pipe designs at the outset. Steel Outfitting enables steel parts to be directly generated in the same way as hull parts, reducing design time and further improving the quality of production.

"To deliver cost efficient projects, production processes need to be considered early in the design process," said Bruce Douglas, senior vice-president, EDS Strategy & Marketing, AVEVA.

"With these new features, production engineering can now be done earlier within the design model, leading to a design that is more efficient for production."

"AVEVA Marine is already proven as the best-in-class hull and outfitting design solution for production, but we are continually improving the performance and efficiency of our systems to ensure that they meet and anticipate the needs of the industry. We worked closely with customers to develop these new product enhancements to improve production efficiency."

Stéphane Neuvéglise, head of business management – Marine Systems, told *Digital Ship* that the enhancements will be made available at the end of the June to Aveva Marine customers who have subscribed to its maintenance service.

The Pipe Fabrication and Steel Outfit modules will be part of Service Pack SP4,
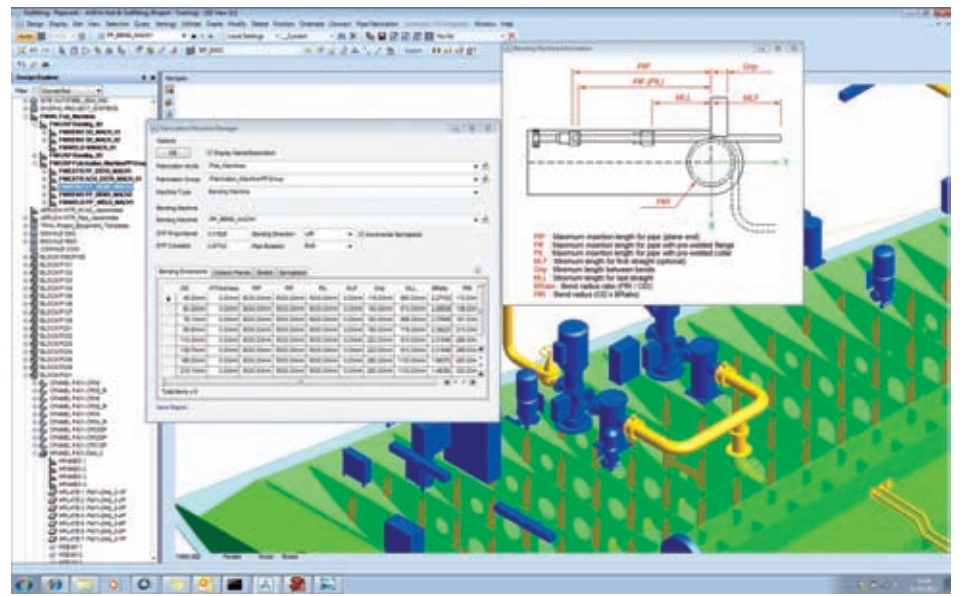
Pipe fabrication enhancements have been added to the AVEVA Marine program

as well as an automated plate nesting module and a Mechanical Equipment interface. They will be delivered by CD or available for download on the Aveva Marine website.

First commercial installation of ClassNK-NAPA GREEN

www.classnk.or.jp
www.napa.fi

Japanese classification society ClassNK and Finnish software company NAPA have announced that Taiwan-based Wan Hai Lines has chosen their ship efficiency software for use on a recently delivered containership.

This marks the first time that the ClassNK-NAPA GREEN system will be installed commercially on a vessel. The software offers a set of tools for trim, speed and route optimisation in order to save fuel.

It is already in use as part of verification testing on a container vessel operated by Japan's Shoei Kisen, but will be commercially installed for the first time on Wan Hai 516, a 4,680 TEU vessel delivered by CSBC shipyards in April 2013.

ClassNK and NAPA say that they developed the software to help owners and operators reduce fuel costs and CO2 emissions, and to comply with new IMO SEEMP (Ship Energy Efficiency Management Plan) requirements which entered into force at the beginning of 2013.

"Improving the fuel efficiency of our vessels is one of the most important challenges we face as an operator today," said Sanders Jong, vice president Marine Division, Wan Hai Lines.

"After examining a variety of technologies, we chose the ClassNK-NAPA GREEN system based on its comprehensive and user-friendly set of tools for trim, speed and route optimisation, as well as for the dynamic performance model, which we hope will allow us to achieve a higher level of environmental and economic ship management."

Yasushi Nakamura, executive vice president of ClassNK, noted: "Owners today are facing the twin challenges of new regulations and rising fuel costs. As the world's largest classification society, it is our mission to help owners address these problems, and that is why we teamed up with NAPA to create ClassNK-NAPA GREEN."

"We are already seeing the amazing potential of these systems in our verification tests with vessel owners and NAPA, and this commercial application marks another major milestone in our efforts to help owners improve the efficiency of their operations."

Juha Heikinheimo, president of NAPA Group, said: "Following on the success of our verification tests, we are proud to be able to partner with Wan Hai Lines for this first commercial application of ClassNK-NAPA GREEN."

"ClassNK-NAPA GREEN offers many powerful tools for improving the efficiency of ship operations. We expect the jointly developed Dynamic Performance Model included in ClassNK-NAPA GREEN to open up a new era for real-time monitoring and efficiency optimisation in the shipping industry."

In other news, ClassNK also reports that it is commencing the provision of cloud-based archive centre services for NYK Lines and Mitsui O.S.K. Lines, with the classification society having reached a preliminary agreement with the two shipping companies regarding the use of the As-built Drawings Storage Service (ADSS).

Three vessels from these companies will be the first to use ADSS, which will manage Ship Construction Files (SCF) and store various electronic data for the ship's finished plan. They are two 95,000dwt bulk carriers built by Imabari Shipbuilding – one of them owned by NYK Lines, the other operated by Mitsui – and a 300,000dwt VLCC (very large crude carrier) built by Mitsubishi Heavy Industries for Mitsui.

ClassNK's Archive Centre uses IBM Japan's cloud computing technology.

Talks are still underway on requirements regarding the storage of SCFs in line with the IMO's Goal-Based Standards (GBS), applicable to bulkers and tankers contracted from 1 July 2016, ClassNK says, adding that its onshore SCF Archive Centre will be ready to store electronic information of ship drawings as soon as requirements are decided.

The classification society says that earlier this year it provided the world's first storage service for electronic ship drawings that is not limited to specific ship types, ahead of the application of the above standards.

ADSS consolidates and manages SCFs and electronic data for a ship's finished plan throughout the entirety of a ship's life. Shipowners can access the electronic storage service 24 hours a day, 365 days a year through the internet.

Videotel's new training catalogue

www.videotel.com

Videotel is marking its 40th anniversary by releasing its latest maritime training catalogue, which it says comprises more than 800 new and updated titles.

The London-based company offers a blend of video, computer-based training (CBT) and interactive courses, available in some 29 languages. It also provides tutor-led distance learning courses through the Videotel Academy's virtual classroom.

All courses comply with IMO ISM STCW standards and are available on board using Videotel On Demand (VOD), as well as online and onshore via video, CBT, interactive CD and accompanying booklet formats.

Nigel Cleave, CEO of Videotel Marine International, says: "We began making training products for the marine industry back in 1973, at a time when major shipping companies needed to improve their onboard training and IMCO – the forerunner of the International Maritime Organization (IMO) – wanted to see high quality training materials supplied to maritime colleges, especially those in fast developing countries."

"We were delighted to step in and fulfil the brief, having now achieved well over 100 million training hours to date."

"We still hold true to those values today by carefully researching our programmes, filming on location onboard ships and selectively using animation as and when circumstances dictate (…) What's more, we continually update our material as regulations and operational techniques change."

E.N. Bisso to implement MarineCFO's Enterprise suite

http://marinecfo.com

Software provider MarineCFO has announced that E.N. Bisso, which offers ship assist and harbour service to ocean-going vessels calling in the Gulf of Mexico, has chosen to implement its full Enterprise suite, including Personnel, Operations, Maintenance, and Vessel Live!

A division of Verticalive, a Louisiana-based company which provides development technology for Microsoft platforms, MarineCFO focuses on maritime transport.

Its modules cover traffic management, reporting and billing, personnel (scheduling, certification, incident, training), fleet maintenance, and financial management.

E.N. Bisso provides harbour tug, offshore towing, and heavy lift derrick services.

"We knew that MarineCFO had the ability to efficiently link dispatch, billing, personnel, procurement, and maintenance, but what really impressed us about the software is its ability to provide management with a comprehensive tool that will create proven efficiencies," said Matt Holzhalb, COO of E.N. Bisso.

"We're very excited to know that MarineCFO will soon be fully implemented within our organisation."

Cloud computing at Uniteam Marine

The influence of cloud computing technology, in both our professional and personal lives, is growing – and yet, in the maritime IT sector, use of cloud-based systems is not yet widespread. Some shipping companies have, however, begun to implement this technology, with encouraging results – Warren Gibbs and Marius Paul Coman, Uniteam Marine, shared their experiences in the cloud with *Digital Ship*

It's a pretty safe bet to say that most people reading *Digital Ship* have a better than average knowledge of IT and the internet, and just as probable that most people reading this article will, at some stage in the recent past, have made use of an online service of one form or another to organise and manage the information they use every day.

Cloud computing is increasingly encroaching on every aspect of our digital lives. For business or for personal use, millions around the world today rely on services like DropBox, SkyDrive, iCloud and Amazon Cloud Drive to extend their reach when they need to access their data.

People log in to their Gmail, Yahoo or Outlook Web Access accounts through web browsers in various parts of the world without a second thought, working and communicating whenever and wherever they like without the need for a particular software program to be installed on the computer they are using.

However, in the shipping industry as a whole, many have been reluctant to introduce cloud technologies to their organisations. The reasons for this are manifold, ranging from the unease of hosting data at an external location to the inherent limitations of a company IT infrastructure that includes ships at sea as part of its network.

Despite this, some companies in the maritime sector have begun to explore the potential of these technologies and examine how they could benefit from applying them to the business of operating ships.

Among them is Uniteam Marine, an international ship management company with offices all around the world, from Cyprus and Germany in Europe, via Ukraine to Myanmar and Singapore in Asia.

In 2012 the company made a decision to move to a cloud based system for crew management, having completed an extensive evaluation of the various cloud-based and on premise offerings in the market.

The service implemented was the COMPAS crew management system developed by Netvision, and having now been live with the technology for a substantial period of time Uniteam Marine is well placed to judge exactly how a cloud based deployment has benefitted the company more than an on premise or more traditional crew management system.

"We've been using the system now for just over one year, a cloud-based system, run from a data centre hosted in Asia. We have deployed modules that cover all business processes associated with crew planning and operations," explained Warren Gibbs, group ICT manager at Uniteam Marine.

"We are using the system in two continents, covering five countries, and because of the time difference between the various regions the system is actually operational for 18+ hours every single day."

"To give you an idea of the size of the deployment, we have currently around 100 concurrent users at any particular time accessing the system. In addition to the Uniteam staff members we've also rolled the system out to various third parties and owners."

Benefits

One of the immediate benefits of the cloud based system, when presented to such a wide and varied group of users, is the familiarity of the user experience for anyone already used to using the internet.

"It's a web-based interface in a browser, which means that for us to deploy it to all staff in five countries and various third parties we simply needed to give them a URL, a username and a password," said Mr Gibbs.

"We didn't have to, as an IT department, prepare an installation package and distribute it around, and manage things like subsequent client updates."

"At the same time we're not having to think about any of the incompatibilities that certain operating systems and various hardware specifications might create, and we haven't had to invest in the maintenance of either a Citrix-based or Microsoft remote terminal server."

Using a cloud based system also creates further benefits with regard to the human resources required to keep the IT infrastructure running and up to date. As Mr Gibbs notes, such a change in the company's way of working will significantly alter the role of the systems administrator, and the IT department in general.

"In a traditional environment, your systems administrator would have a very strong, hands on roll with the running of the systems from your data centre, doing backups, database administration, server logs, and so forth," he explained.

"All of these functions are no longer present in the IT department with the cloud-based system, they've been outsourced, and what we've seen over this past year is that the role of the administrator has now become a hybrid one."

"The demarcation of this is that the IT department takes on the traditional role of setting user permissions and also monitoring system security and access control, but it's the business functions which are taking more of a lead when it comes to end user support and the minimal numbers of configurations and small customisations in the system. Generally I believe that this is a very positive thing, because you're engaging the business more in the running of a system which ultimately affects them more than the IT department."

However, while the IT department may face a reduced burden in terms of administration of the system, it is important that resources are refocused to increase attention on security of the infrastructure and company data – an obvious concern when company information is held in locations outside its own offices.

"Data security and system availability were two of the main factors that we had to consider very carefully when we were looking at outsourcing this, for us, core business system which is also externally facing," said Mr Gibbs.

"What this has meant for us, as a department, is that we have outsourced various critical functions such as security management, the actual management of exploits and configuration, as well as redundancy of the systems and the various server administration and database administration work."

Away from the IT department, these benefits have also extended to the operations side of the business, with Marius Paul Coman, fleet personnel department administration manager at Uniteam Marine noting that the cloud based system provides a range of efficiencies for company staff.

"Everything is possible remotely, anywhere at any time – operational enquiries like crewing matters, checking flights, booking those flights and confirmations, " he said.

"The cloud-based system presents a series of advantages in comparison with an on premise one. From an access point of view, the program can be practically accessed from anywhere, using any laptop or tablet or even smartphone, providing the user has a browser, the link and a user account."

"In such cases the user is immediately enabled to check through the crew, vessel accommodation, compliances, and to make any contingency planning when that might be necessary."

Another advantage of the system identified by Mr Coman is the ease of deploying it to a third party, like manning agents, travel agents or owners, with minimal involvement from the IT department.

"You just follow a few steps – create the user account, create the ID and password, establish the security profile and setting up permissions, sending the link and then maybe a bit of training," he explained.

"That user's operations within the system might be extended or limited based on permissions so they will be able to do as much as you permit them to. In special cases, like when deploying the system to a manning agent, our crewing operator needs only to have a validation role check-

'For us to deploy it to all staff in five countries and various third parties we simply needed to give them a URL, a username and a password'
– Warren Gibbs, Uniteam Marine

ing data entry and the documents uploaded to the system by that manning agent."

"Training can be done just with screenshots of the system, shared via Skype or with small movies recorded with annotations on the screen. Ease and speed of deployment constitutes an important advantage, as it enables us to outsource any of the processes we think is necessary."

Of course, allowing such a wide range of users to connect to the system means that the company needs to have processes in place to strictly manage how those people can interact with the program and what level of information they will be able to access.

While basic access to the system is via the public internet, Uniteam Marine is using an SSL encryption layer to add security.

"What we're also doing is, within the application itself, we can set up what we call 'IP White Lists'. These are the public IPs of all of our offices and the offices of our third parties," explained Mr Gibbs.

"When we set up a user in the system we are explicitly stating that this person will either be able to use the system just within the office, or in a few cases will be allowed to have access worldwide."

"The monitoring of access and so on is performed with some built in reports, that can either be through a general enquiry process or at the same time you can also have automated notifications being sent in the event of any access which is not within the rules that have been defined."

These access control reports cover a specified date range and can be filtered to show a range of data.

A list of all of the users is presented and the IP address they accessed the system from, whether the log-in was successful and whether it was from a 'whitelisted' IP, what country it was from and details about when and how long they were signed into the system.

A summarised view can also be created to highlight total attempts, successes and failures, so unwarranted attempts to access the system can easily be spotted.

"You can drill down on that information to find further information and the IP address of the person that attempted to access the system, to see where they tried to access it from," adds Mr Gibbs.

Data population of the system is generally managed by the fleet personnel managers at focal points specially designed for such updates, but it can be done at source or wherever the company might think appropriate.

In this regard, however, Mr Gibbs notes that there is no real difference between a cloud based or on premise solution.

"Let's not forget that, whether it's a cloud based solution or an on-premise solution, that has no effect on how we operate the system as a business, in terms of responsibilities and demarcation for data control," he said.

"Roles are still the same, certain data may have been outsourced to a third party, but the difference here is that we have been quickly able to push that out and the operators who were spending time on data entry are now spending more time on data validation."

'Everything is possible remotely, anywhere at any time – operational enquiries like crewing matters, checking flights, booking those flights and confirmations' – Marius Paul Coman, Uniteam Marine

"Nothing changes, whether it's a cloud based system or an on premise system – it's a crew management system, so the controls and data accuracy will be treated the same."

Ensuring access

Of course, for a cloud based system to work the computer or device in question needs to be connected to the internet – and one of the most compelling arguments against the use of this type of technology is the worry that a company's operations will grind to a halt if that internet link goes down, something that is usually outside of the control of the company itself.

This issue has been carefully considered by Uniteam Marine, and Mr Gibbs notes that, while the basic system is cloud based, there are offline elements built into the infrastructure to allow business to continue, at least to a certain extent.

"If you're going to deploy a system in the cloud you need to make sure you have a very reliable and redundant internet connection, if your internet fails then you're no longer able to access the cloud and for that period of time business will stop," he said.

"Therefore either having duplicate internet links or very good quality internet links is one of the factors that each of our locations using the system have taken into consideration."

"In addition to the web based interface we do have a contingency, which is an offline imaging scanning tool, which can prove useful in the event of any internet disruption. What happens there is that the end users are simply scanning from their

desktop to a local server, and when the internet connection comes back up again there's a synchronisation of all of the information over to the central server and business moves on."

However, this offline operation is clearly a last resort, and Uniteam Marine performs a series of performance monitoring processes to try and make sure that its internet connection is operating at an optimal level and can be redundantly failed over in the event of a problem.

"Since day one we wanted to keep track of key information from the server where the system is running from, and we use a utility called PRTG which gives us statistics for one year's worth of usage in all of our offices," explained Mr Gibbs.

"We have utilised 620 GB of traffic from the central server to all of our offices since going live. Due to various optimisation and compression techniques the bandwidth that was actually seen was very light, less than 500 kbps."

"This is a very important point, because when you're looking at a cloud-based deployment you want to keep up the same levels of performance you would normally see running a system in-house. Most importantly, since going live we've had no downtime."

One important result of this performance monitoring has been in allowing Uniteam Marine to identify areas for potential improvement in the flow of data between its office locations, to make sure this is optimised and to provide the best user experience possible.

"One of the lessons that we learned in certain countries was that we needed to

perform some fine tuning of the routing of the IP packets to the main server. What we found with some analysis was that the most optimal route was not being taken every time we were sending information to the main server," notes Mr Gibbs.

"This was pretty much down to the Internet Service Provider not having certain peering agreements set up correctly. After negotiations with the ISP the resulting latency improved by 25 per cent, with no additional cost."

The ship in the cloud

The last great frontier for cloud computing in shipping will, of course, be the extension of the infrastructure on to the ships – a goal that is obviously hampered by the limited communications options compared with offices on shore.

At Uniteam Marine, the company has not to date begun using the cloud based system as it appears in the offices on the ships themselves, though Mr Gibbs notes that it has begun to introduce some related data transfer elements that feed into the on shore infrastructure.

"Although we've yet to deploy the official on board vessel version of the system, we are using some various technologies to transfer electronically the crew performance evaluation reports as well as payroll records directly from the vessel into the crew system itself. Once it's validated and has been entered in we're also transferring the payroll information out of the system into our accounting system," he said.

"At the moment the data which is transferred from the vessels is done using an existing collection of technologies, all of which rely upon an e-mail exchange from the vessel to a designated e-mail address."

"The deployment of this system via a cloud infrastructure on the vessel is the million dollar question – but from what we've seen looking at the features of the system, and how we'd benefit from getting those processes pushed out onto the vessel, there is a good business case for that."

As Mr Gibbs notes, the biggest issue remaining in making this business case viable is still the costs involved, in terms of the software licensing initially but also in terms of the communications.

"You could argue that the amount of correspondence that goes back from vessel to shore for crew changes and everything else happens anyway, versus having this system deployed on a vessel so data exchange is minimised because it's just bytes rather than entire e-mails," said Mr Gibbs.

"A process has to occur where we have to find out what benefits we, as a company, and the owner will get from pushing this technology out onto the vessels. It sounds great to have a cloud based crew management deployment on the vessel, but who benefits and what are the risks? At the moment we're still not ready to go down that route, especially in the current climate where convincing owners to spend more is very difficult."

"But certainly, from our side, it's a project that's bubbling in the background, as we, in the fleet personnel, payroll and IT departments, feel the benefits of extending the boundaries of the system beyond the office – and eventually on to the vessels."

Thermal imaging for ships

www.flir.com

Thermal imaging company FLIR Systems has released two small night vision systems designed for use on sea-going vessels: MD-625 and MD-324.

The MD-Series outputs standard analogue video that can be displayed on a monitor at the helm or other monitors on the vessel as long as they accept composite video. As it is fixed-mount, once the equipment is installed it always looks in the same direction.

Both versions are equipped with an uncooled Vanadium Oxide (VOx) detector and come with FLIR Digital Detail Enhancement (DDE) to provide thermal images in total darkness and in light fog and smoke.

Equipped with a 25 mm lens that offers a 25° × 20° field of view, the FLIR MD-625 provides thermal images of 640 x 480 pixels. It features a 4x e-zoom, and FLIR says that it can detect a small vessel at a distance of approximately 2,800 metres.

The FLIR MD-324 provides thermal images of 320 x 240 pixels. It is equipped with a 13 mm lens that offers a 24° × 18° field of view and it features a 2x e-zoom. FLIR says that it can detect a small vessel at a distance of approximately 1,340 metres.

Both versions have been designed for harsh maritime environments. Their core is protected against humidity and water,

while a built-in heater is included to defrost the camera's protective window.

In related news, FLIR has also launched a range of new multi-sensor vision systems, which combine thermal imaging with other types of cameras. It says that the top range product in those new series can detect a small vessel from 15km.

All products in the MU- and MV-Series feature active gyro-stabilisation to provide steady imagery, even in rough seas. They come with 'Power over Ethernet (PoE)' capabilities and feature a video tracker, whereby a camera will follow an object as long as it can be seen. A Picture-in Picture mode is also available, in which the images from two sensors can be displayed on a single screen.

A Joystick Control Unit (JCU) can move the cameras (360° pan and +/- 90° tilt), zoom in and out, and switch between images.

The top model in the MU-Series, the MU-602CLW, combines four payloads into one system: a thermal imaging camera with 14 X optical zoom with a cooled Indium Antimonide (InSb) detector; a wide field of view thermal imaging camera equipped with an uncooled VOx detector; a visible colour camera equipped with a 28 X optical zoom, and a black & white low light camera equipped with a 18 X optical zoom. The user can switch between the different cameras at the touch of a button.

Flir's MD series offers night vision video capabilities

The cheaper MV-Series features a thermal imaging camera equipped with an uncooled VOx detector. One model combines this with a visible colour camera, while another one also adds a black & white low light camera.

Handheld thermal imaging units are also available, under the MLS-618 and MLS-317 brands.

Both versions have an InstAlert feature that colours the hottest parts of the scene red to make it easier to spot people in the thermal image, and can operate between -20°C and +50°C.

They weigh 340 grams, batteries included, and work on 4 rechargeable long-life Li-ion batteries that come with the camera, or on standard non-rechargeable Alkaline AA batteries.

Panama Canal using AIS for just-in-time service

www.pancanal.com

The Panama Canal Authority (ACP) is testing a system using satellite AIS (Automatic Identification System) to help vessels arrive just in time for their transit and reduce their fuel consumption.

The just-in-time (JIT) service will allow ships to arrive at the Panama Canal closer to their scheduled transit time. They will thus have to remain at anchor for less time before actually beginning transit.

The concept is being tested on vessels equipped with a type A AIS which have pre-registered, or are going to pre-register, with the canal authority.

The Panama Canal will then use satellite AIS technology to track the vessels within a range of 2,000 nautical miles before arrival and ensure that they can comply with their Estimated Time of Arrival (ETA).

"This new service is part of our efforts to explore new options in order to better serve our customers," Panama Canal Administrator Jorge L. Quijano said.

"The Panama Canal is not only committed to maintaining a high quality service, but also improve in the necessary areas."

Alphabridge for Kotug's Rotortugs

www.alphatronmarine.nl

Dutch manufacturer Alphatron has announced that Kotug has chosen its AlphaBridge Tugboat design as the standard wheelhouse fit for its upcoming new build programme, Rotortugs ART80.

The ergonomic design is based upon two screens showing radar and ECDIS at the fore position. Two extra screens can display information such as CCTV, radar, ECDIS or AMS through a touch screen switching arrangement. The aft position

has a screen showing the same information, selectable also via a switching arrangement.

Alphatron notes that every ship's bridge differs from the other, with items such as the vessel's controls and displays being always different and in a different location.

It adds that a standardisation like its AlphaBridge makes life easier for the crew and makes operations safer, with more than 280 AlphaBridge wheelhouse concept installations currently in service.

The bridge setup includes ECDIS and Radar in the fore position, with additional multifunction screens for other data

Compact BNWAS launched

www.martek-marine.com

Martek Marine has announced the launch of a new BNWAS designed specifically for smaller bridges, to meet the next stage of BNWAS implementation that started in July of this year.

BNWAS (Bridge Navigational Watch Alarm System) regulations state that existing cargo vessels between 500-3000GT must have been compliant by July 2013 and vessels between 150-500GT by July 2014.

The Lloyd's Register MED-approved Navgard Mini offers the same functionality as Martek's Navgard system in a smaller, all-in-one-box unit.

The company claims that it is the only system available which has all IMO-compliant alarms and reset switches in a single enclosure, only requiring a power supply to deliver full compliance with SOLAS regulations.

Existing systems require a button to be pushed to confirm the crew's presence on the bridge. IMO legislation dictates that BNWAS systems' first stage alarm must sound between every three to 12 minutes.

If the reset button is not pressed, the second stage will activate after 15 seconds. If the button is still not pushed, the third alarm will sound between every 90 to 180 seconds.

Although effective in theory, Martek notes that there have been several incidents, including the grounding of MV Karin Schepers in 2009, on vessels which have had BNWAS installed but switched off.

Martek suggests that this is because crew have simply found it too demanding to continue with other necessary work while being disturbed by such frequent alarms and the requirement to push a button so regularly, so it has set out to address this issue with its equipment.

One of the ways it has done this is with the inclusion of a passive infrared (PIR) motion sensor. This is built in to the device's panel and detects movement on the bridge. No alarm sounds as long as movement is detected on the bridge, and crew can work undisturbed.

Only when the system detects no movement for a set time, between the IMO's mandated three and 12 minutes, will the alarms sound. Because the PIR sensor is part of the panel, no extra installation is required and no additional wiring is needed.

The second such feature is a password deactivation capability, also built in to the panel. Where BNWAS models have traditionally been turned off by a simple key, the Navgard Mini can only be deactivated by password. This increases accountability by giving the vessel's Master the sole responsibility for the device's operation.

The system comes with a two-year warranty and uses real-time data logging, providing evidence in the event of an incident and recording when the system is switched on and off so that checks can be made to ensure it is being used continuously.

IENC buoy overlay available in small download files

www.chartworld.com
www.ceact.com

ChartWorld and CEACT have launched a functionality to download buoy overlays for the Inland Electronic Navigational Charts (IENCs) of the US Army Corps of Engineers (USACE).

CEACT (Channel ECDIS, AIS & Course Trajectory) offers navigation software for towboats and workboat operations within the US inland river system. ChartWorld is a value-added reseller of USACE.

A download button within CEACT software allows for updating all river charts, plus now the new buoy overlay.

ChartWorld checks all data prior to its conversion into small size packages and offers automatic distribution. The digital chart agent says that the compressed files have less than a quarter of their original size.

This, it adds, guarantees that all chart data is loaded correctly and reduces the number of unsuccessful download attempts. ChartWorld warns that such incidents might occur when using a standard RSS feed from an unofficial source.
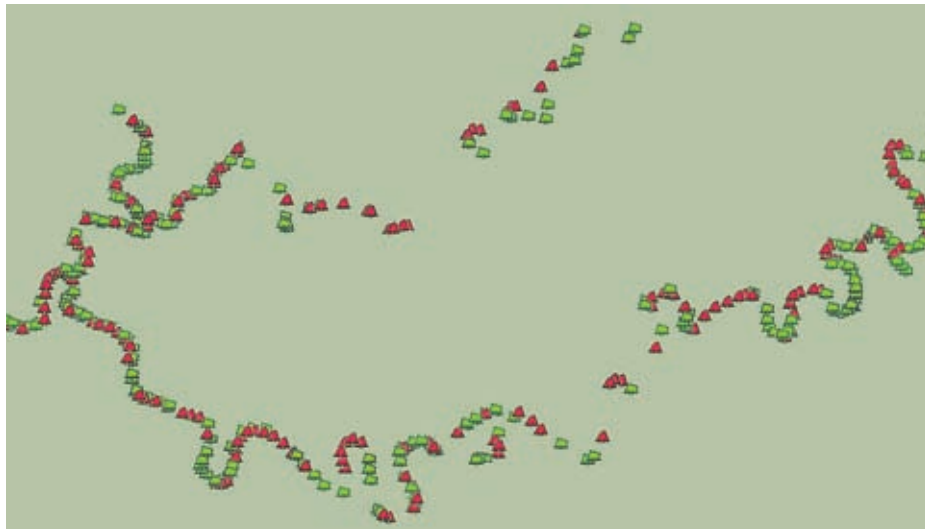
A US river buoy overlay can be downloaded and added to electronic charts

Fugro manoeuvring for giants

www.fugromarinestar.com

Fugro Seastar has announced that the three of the world's largest container vessels currently sailing have been fitted with its Marinestar manoeuvring system to assist in berthing and navigation.

The Marco Polo, and its two sisterships Alexander von Humboldt and Jules Verne, have been equipped with the satellite-aided navigation technology. With a capacity of 16,000 TEUs, the three CMA CGM vessels were the largest container carriers in operation, until Maersk took delivery of its first 18,000 TEU Triple E vessel, built in Korea.

The Marinestar system is based on composite GPS and GLONASS constellation data and measures speeds at the bow and the stern together with quay distances to assist the vessel safely to the berth.

Fugro says that it provides speed and heading information to a higher level of accuracy than conventional navigational aids, such as doppler log and gyro compass. Marinestar can also measure vessel fore and aft trim dynamically whilst underway at sea.

"Feedback from our Captains was that manoeuvring giant container ships in confined port areas required advanced positioning systems," said William Bieguin, navigation and communication engineer at CMA Ships.

"The Marinestar system fulfils such requirements through the installation of two additional GNSS receivers. The distances to the quayside information is displayed on the bridge wing consoles for safer and more efficient berthing."
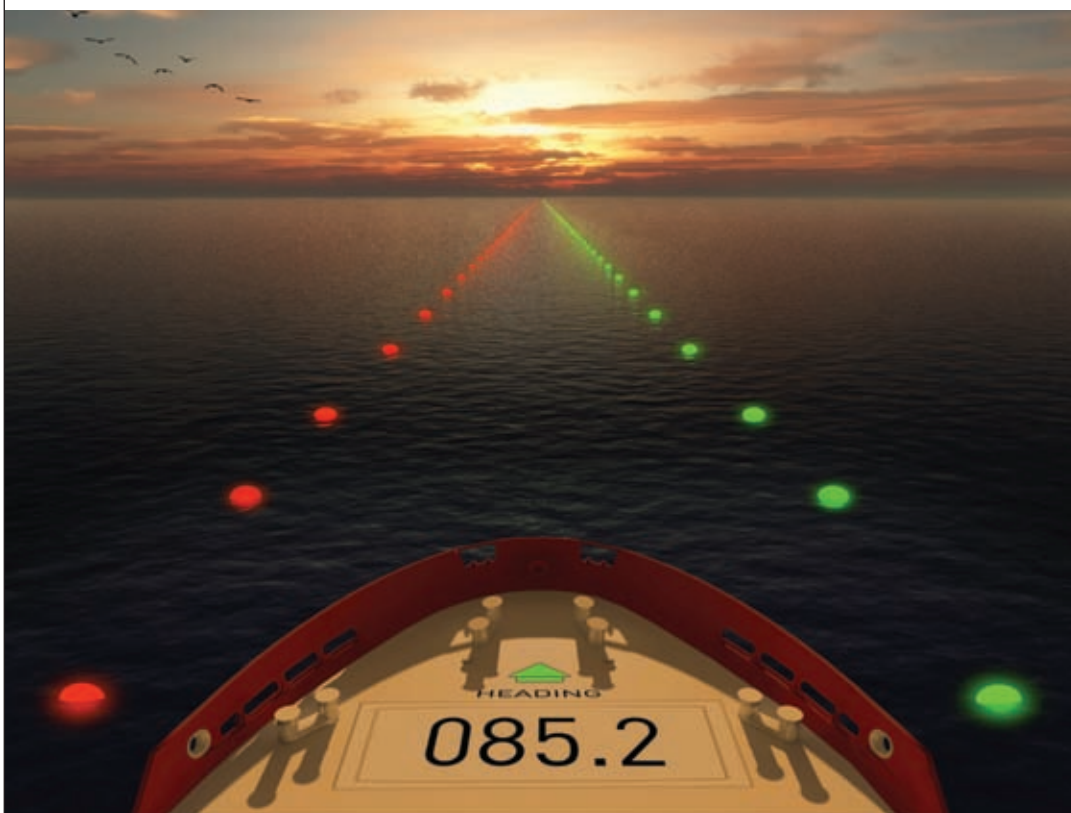
"We appreciated the quality installation performed by Fugro and their involvement to adapt the Marinestar system to the specific container ship's operations. Potential fuel savings can be expected from real-time trim management offered by the Marinestar system and this is right now under assessment by our Energy Department."

Arne Norum, managing director at Fugro Seastar, noted: ''Manoeuvring and berthing large ships in confined port areas has always been difficult. This problem grows as ships become ever larger but ports do not, leaving more mass to manoeuvre in relatively little space.''

"We are convinced that the accuracy of Marinestar will assist the captains and officers in their assessment of speeds and exact distance to the docking position. Marinestar has been in use onboard cruise vessels and tankers and we are now pleased that CMA Ships has chosen the Marinestar system to be installed on their largest container vessels."

In addition to the Marco Polo, Alexander von Humboldt and Jules Verne, the system is being installed on five 13,800 TEU vessels in the CMA CGM fleet.

Kongsberg improves radar data distribution

www.km.kongsberg.com

Kongsberg Maritime reports that it is to introduce a new solution for the distribution of Radar data on board ships, utilising an Ethernet based LAN (Local Area Network).

The system is currently undergoing Type Approval testing at DNV, with a first customer delivery in Autumn 2013.

The LAN topology is based on a newly developed Radar Interface Network (RIN) unit to be located at each antenna, connected to the Multi Functional Display (MFD) units on the K-Bridge integrated bridge system by a Local Area Network (LAN).

The former Radar network topology used analogue cables and an interswitch, which Kongsberg says limits network design, the number of displays data can be sent to and how the data may be handled and presented.

The LAN network architecture uses contemporary networking methodology so Radar data can be shared by an unlimited number of Multi Functional Displays (MFD's) without a dedicated Radar interswitch.

The MFD can be configured as a standard Radar display, or may be configured with additional views combining information from several integrated subsystems. An example of this is the possibility to offer views mixing the Radar image with data from a dynamic positioning system.

Kongsberg says that the new Radar topology provides significant enhancements in how Radar data is presented, made possible because of the digital net-

work, improved signal processing and automatic Radar and picture tuning.

Images from several Radar antennas can be viewed on the same screen, including the possibility to view both X-band and S-band data in the same image.

By presenting a picture compiled in real-time from several Radar antennas, the operator is given a detailed picture that displays seamless tracking of up to 1,000 targets in a full 360 degree view.

Because the Radar LAN is based on standard Ethernet data cables instead of the analogue cables traditionally used for Radar, longer distances between the display and antenna can also be achieved, which enables more flexible network design with lower installation and maintenance costs.

"The new Radar topology introduces digital networking to Radar, so is a significant step-forward in navigation and safety technology," said Gudbrand Strømmen, navigation development department manager, Kongsberg Maritime.

"The possibilities this introduces can transform how Radar is used on board. At the same time, we are able to offer such a wide range of new functionality that will improve navigation safety and efficiency whilst reducing installation costs and providing a highly redundant and easy to maintain Radar system."

In related news, Kongsberg also reports that its next generation of AutoChief propulsion control systems is now officially available.

The new AutoChief 600 (AC 600) is suitable for all 2 and 4 stroke engines, for both fixed and controllable pitch propeller. It
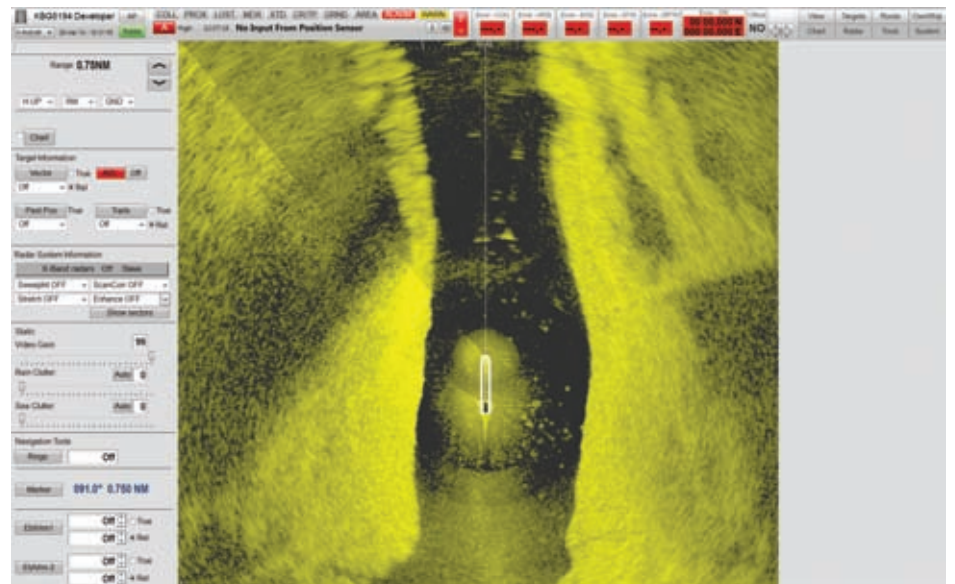
The new LAN topology allows Radar data to be displayed almost anywhere on the ship

offers touch screen operation based on the Kongsberg Maritime standardised Human Machine Interface (HMI).

Users have access to all system functions via the touch screen, with variables available including RPM, pitch, start air and scavenging air pressure, engine state etc. Several levels of control are available to distinguish between user groups.

The AC 600 touch screen interface also meets the NAUT OS/OSV requirements for handling Command Control when adapted as a multi plant engine and Thruster control system. This means control can be handed to other systems in the network at the touch of a button.

The AC 600 supports integration with Kongsberg Maritime's K-Thrust 600, Azimuth control and Rudder Control sys-

tem making the system suitable for a wide range of vessels including OSVs, PSVs, oil tankers and container vessels.

The main components of AC 600 are: Touch screen Control Panel, Engine Telegraph Unit, Engine Safety System, Digital Governor System, Manoeuvring Recorder and Distributed Processing Units.

All interfaces are on CAN-bus; instrumentation, levers, displays etc, while all hardware components in the AC 600 system have a built-in-self-test feature (BIST).

"This is the sixth AutoChief since the series started in 1967 and with the inclusion of touch screen operation it represents a significant technical milestone," said Hans Otto Schjerven, general manager – product, merchant marine, Kongsberg Maritime.

Maintenance-free Gyro from Raytheon

www.raytheon-anschuetz.com

German navigation system manufacturer Raytheon Anschütz has launched a new generation gyro compass which it says can be operated free of maintenance.

Horizon MF is Raytheon Anschütz's new strap down compass system which uses Hemispherical Resonator Gyros (HRG) to measure angular rates for head-

ing calculation.

In a strapped-down system angular rate gyros and accelerometers are not gimballed, but mounted stationary in a housing. The sensor measures angular rates and accelerations in three axes.

Based on these measurements software algorithms are used to compute heading, as well as roll and pitch.

Horizon MF comes as a maintenance-free (MF) sensor with a Mean Time Between Failures (MTBF) of more than 100,000 hours, which Raytheon says is many times the MTBF values of optical or classical mechanical gyros.

As part of a gyro compass system Horizon MF provides regular functions like heading selection, heading monitoring, automatic switchover, an independent transmitting magnetic compass and individual speed error correction, and integrates with the Anschütz Standard 22 gyro compass.

The gyro mas a mean time between failures of 100,000 hours

Virtual reality sim now available on laptop

www.dnv.com

DNV reports that its Sesam SurveySimulator training system, designed to demonstrate potential vessel defects with real life accuracy, is now available on laptops.

The system can be supplied with special training programmes developed to suit inspectors, seafarers and technical managers, and is available as part of a DNV training package or under licence for incorporation into a company's in-house training.

The Sesam SurveySimulator uses virtual reality technology with what DNV describes as "photo quality texture and realistic sound" to present complete visualisations of a tanker, bulk carrier, container ship and mobile offshore drilling unit including engine room, cargo holds and decks.

Users are able to 'meet' on board the simulator to examine and discuss particular features, such as the real-time portrayal of coating degradation.

"Video tutorials and pre-prepared learning scenarios enable step-by-step inspection training that is used to train surveyors and also technical managers and crew in what to expect from the inspections by class or port states," said Dariusz Dabrowski, the DNV

manager in charge of developing the tool.

"The system includes the tools needed to flexibly create training programmes that meet specific corporate goals and is suitable for the practical training of shore-side personnel and seafarers. This has a positive impact on incident-free operation at reduced costs."

DNV says it will be demonstrating the impact of Sesam SurveySimulator throughout the year in support of the organisation's 2013 Fire Safety Awareness Campaign.

"Statistics show that most fires originate in the engine room as a result of oil leaking onto hot surfaces and deficiencies in fire related safety measures are amongst the most common causes for detention by Port State Control," said Tuva Flagstad-Andersen, head of section machinery and systems at DNV.

Sesam SurveySimulator is able to show examples of both acceptable and unacceptable configurations based on the accumulated knowledge of thousands of inspections.

"This depth of experience would take many, many years for a single person to gain on the job. We make it readily accessible with Sesam SurveySimulator in a well-supported, modular learning environment," notes Mr Dabrowski.

More than ECDIS

v Fully in house developed and produced

v Almost 25 years of ECDIS experience

v Complies with 2014 S-63 Edition 1.1

v Meets current IHO standard

v Online TST courses available

v Support of AIO for AVCS

v Close to 10,000 ECDIS TST trained officers

v Global support and after sales service

v AVCS pre-installed & C-Map e-Token standard

v Over 1,000 trained engineers globally

v TST training available in over 30 countries

v Solid State Drive for OS and JRC software

jrceurope.com

ECDIS training modules launched

Norway-based Seagull and German training company Safebridge have both introduced new training modules for Japan Radio Co (JRC) ECDIS systems.

Seagull has introduced an equipment specific training module targeting deck officers, and designed to train navigators in the use of the JRC 701B, 901B and JAN-2000 series ECDIS. It will allow ship owners and operators with JRC ECDIS on board their ships to meet the regulatory requirement for specific training in addition to generic ECDIS training.

This has included the development of a distance learning course whose topics include switching on and setting up a JRC ECDIS correctly, confirming that the ECDIS is in fully operational status, and accessing the menu system. The Computer-Based Training (CBT) will also train navigators in how to use the JRC ECDIS to plan a passage and how to manipulate charts and other information.

"Seafarers can take this course either on board the ship or in a shipping company office ashore. Consequently there is a great deal of flexibility as the training can be carried out at the time and place that is most convenient," said Roger Ringstad, managing director of Seagull.

"Our equipment specific training courses avoid the need for companies to send crew for classroom-based training provided by the manufacturer. There is only limited space on such courses and therefore some companies sometimes have to wait quite a long time before space becomes available. By using CBT there is no need to book, enabling shipping companies to respond quickly to emerging training needs. There are also benefits in terms of cost, as they do not have to pay for seafarers to travel to attend classroom training courses."

"One of the biggest challenges facing shipowners and operators is the need for both generic and equipment specific ECDIS training to comply with the STCW Manila amendments. Companies may have several different systems in their fleet and seafarers will have to have completed the right training each time they join a ship in that fleet. The more systems a company has the more training courses they will have to provide."

Seagull says that it has also developed two new versions of generic ECDIS training courses following the STCW Manila amendments and revised IMO Model course. It has launched the classroom version already, and it plans to introduce the on board version once all the necessary approvals have been secured.

Approved by the Norwegian Maritime Authority (NMA), the ECDIS classroom course consists of CBT modules, class-room lectures, practical exercises using MARIS ECDIS and practical exercises using the POLARIS bridge simulator.

Seagull says that, after completing this 40 hour course, the navigator will be able to demonstrate sufficient knowledge, skills and understanding of ECDIS navigation to undertake the duties of a navigational watch as defined by the STCW code.

Internet-based simulation training company Safebridge meanwhile has also introduced its own online training course for a range of JRC ECDIS units.

E-learning courseware will be available online for training and certification on the JRC ECDIS models JAN-701, JAN-701B, JAN-901, JAN-901M, JAN-901B and JAN-2000.

"We are pleased that the course content could match our own practice," commented Bas Eerden, JRC's marketing and product development manager, "and that it has been brought to market at a time when we anticipate that the demand for online training will start increasing."

"Safebridge will provide us with the capacity to meet this demand, 24/7, anywhere in the world. As training plays an essential role in the correct use of equipment and therefore in safety, the ability to deliver quality courses forms an important part of the service we offer our customers as a reliable partner."

Headquartered in Hamburg, Germany, Safebridge was formed in 2009 to develop online bridge equipment simulation training solutions for the maritime industry. The company evolved from the European Commission's Lifelong Learning Initiative under the Leonardo da Vinci Programme, which ran a project on this subject.

"Safebridge is pleased to be in a position to offer training for the JRC ECDIS to supplement JRC's own training programme and provide its customers with the added benefits of flexibility on timing, location and duration, as the course allows a three-week window for both the training and the online test for certification," said Safebridge managing director, Ulf Steden.

"This courseware is the result of intensive cooperation between the two companies to achieve a product that not only

Both Seagull and Safebridge have added JRC ECDIS training programmes

meets JRC's expectations for training but also fulfils its commitment to its customers by covering the full JRC classroom training syllabus."

In addition to JRC ECDIS training, Safebridge has also recently announced the release of e-learning courseware for training and certification on the SAM Electronics ECDISPilot Platinum model.

The type-specific training course provides officers with the system knowledge required to use this ECDIS for watchkeeping in accordance with the regulations of STCW and the ISM Code. The guided tutorial lasts about 16 hours.

The ten modules cover General User Interface (GUI), ECDIS basic display features, sensors, chart work, route planning, route monitoring, navigational tools, file and data management, chart maintenance, and display of additional information.

Trainees have three weeks to complete the course and to use the 'FreePlay' Mode, which allows them to practice freely on the manufacturer's original, type-approved, software. A final test of no more than one hour leads to an individual certificate.

SAM Electronics and JRC will be added to ECDIS systems by Northrop Grumman, Transas Marine, Raytheon Anschütz, ChartWorld and SevenCs that are already part of the Safebridge learning environment.

Indonesian VTS contracts for Transas

Transas Marine Pacific and its local representative in Indonesia have been awarded new contracts to supply and install Vessel Traffic Management Systems for the Samarinda and Banjarmasin ports.

In addition to this, Transas will upgrade the current VTS system in the Semarang port with a fully redundant AIS Base Station T214.

Transas Vessel Traffic Management Systems are already installed in more than 15 ports throughout the Indonesian archipelago including Jakarta, Surabaya, Semarang and Belawan. The new contracts have been awarded by the Directorate of Sea Transportation, a division of the Indonesian ministry of Transportation.

Transas says that the new VTS systems will be based on its Navi-Monitor solution developed for monitoring and surveillance purposes. The system will collect, assess and integrate data from various sensors to provide VTS operators with a real-time overview of the ship traffic within their responsibility area.

The scope of supply for each port includes the AIS Base Station T214, a VTS Database and Solid-State Radars for small targets detection.

Transas notes that the number of containers handled in Indonesian ports is expected to almost double by 2015.

Banjarmasin port will be one of the locations to implement the new VTS

Anti-theft FuelWatch

PSM, a UK-based manufacturer of marine control instrumentation, has developed a system which detects unauthorised removal of bunker fuel and lubricant oil from storage cargo and service tanks on offshore and river fuel distribution vessels.

FuelWatch uses a level transmitter in each tank to continuously monitor the contents in order to deter theft by crew members.

The level reading is recorded by a central monitor unit, installed in a locked and armoured housing that cannot be accessed by the crew. At defined times, the central monitor unit transmits the tank level readings as a small encrypted report to a designated management office of the company.

Transmission can be via GRPS (cellular radio), e-mail or satellite. PSM says that any attempt to tamper with the system or power supply is recorded for security purposes with the option to send an immediate alert report. A secondary power supply or battery backup system can also be installed.

The office personnel in charge can use an application running on a web-connected PC to compare the vessel reports with the legitimate voyage and delivery schedules. They can thus detect any unauthorised offloading, highlighting a potential theft. It is also possible to flag these occurrences as exception alerts and raise an immediate alarm for investigation.

AVCS on DVD

www.admiralty.co.uk

The United Kingdom Hydrographic Office (UKHO) has unveiled plans to supply the Admiralty Vector Chart Service (AVCS) on one DVD from summer 2013.

UKHO says that this should allow many users to populate chart folios from the 12,000 digital charts on its single disc with faster loading speeds, reduced data handling and fewer warning messages.

All AVCS customers will receive an AVCS DVD upgrade pack for every vessel from their UKHO chart distributor, along with written instructions, technical support videos and installation guides.

UKHO says that a 1.1 CD service will also be available later in the year for those who are unable to support DVD, and that its services will also ensure compatibility with S-63 1.1, the latest standard for data protection from the International Hydrographic Organization (IHO), which comes into force in January 2014.

The DVD service will be offered alongside UKHO's existing online ENC updating service and custom exchange set option delivered through its e-Navigator Planning Station.

"We are committed to continuous improvement in the quality of the navigational products and services that much of the world's fleet relies upon," said Ian Moncrieff, chief executive of the UK Hydrographic Office.

"With the launch of AVCS on one DVD, our customers are assured of their compliance with the latest IHO standard on data authentication. They will also benefit from a faster, more efficient and convenient

way of managing and updating the AVCS library of over 12,000 charts; with weekly data updates also supplied on a single DVD."

Among these 12,000 charts on offer will be those for the seas around China, an area that has recently been enhanced with the addition of the two final digital navigational charts required to complete AVCS coverage of the South China Sea.

The ENCs from the East Asia Hydrographic Commission added to the Admiralty Vector Chart Service (AVCS) now mean that complete coverage for shipping routes from Singapore to China, and beyond, can be provided.

Jason Scholey, senior product manager - charts, commented: "We are delighted to announce the inclusion of these two charts to AVCS."

"This continues to ensure that our customers have the most comprehensive global maritime ENC service available whilst being supported by the unique Admiralty Information Overlay (AIO) to highlight Admiralty T&P NMs and navigationally significant differences between ENCs and paper charts."
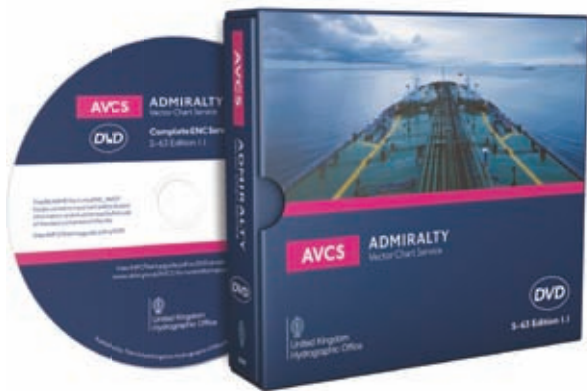
The AVCS DVD offers faster loading speeds

Low-cost space-AIS transponders

www.exactearth.com
http://srt-marine.com

Canadian firm exactEarth has announced that it has entered into a strategic collaboration agreement with British company Software Radio Technology (SRT), aimed at optimising the reception of low-cost AIS transponder transmissions via satellite.

exactEarth is the developer of exactAIS, a vessel tracking system using space-based AIS (Automatic Identification System) detection technology. SRT is a provider of Class B AIS transponders and identifiers.

Coastal monitoring systems can typically detect AIS transceivers up to fifty nautical miles off the shore but many vessels navigate outside that detection range. exactEarth says that the ability to reliably

receive AIS transmissions from Class B and Identifier type transceivers from space – and therefore without coastal range limitations – will enable countries to improve their vessel monitoring capabilities.

Simon Tucker, CEO of SRT, said: "This is an important strategic step for both exactEarth and SRT which will provide the market with a uniquely capable AIS-based tracking system solution. The technology that we are developing with our new partner is complex and will take time to perfect, but has already demonstrated a meaningful improvement on standard satellite reception capability."

"We expect this agreement to enable SRT to develop recurring revenue flows linked to the supply of data via a range of applications and services in the future."

Sim interface for PC Maritime ECDIS

www.nautissim.com
www.pcmaritime.co.uk

VSTEP and PC Maritime have jointly developed a software interface to allow VSTEP to offer ECDIS and radar training on PC Maritime systems.

Having previously created radar video interfaces to work with both Kelvin Hughes and MARIS ECDIS, VSTEP's NAUTIS bridge simulators will now also be able connect to PC Maritime's Navmaster ECDIS to provide training colleges with a DNV-approved generic ECDIS training installation.

The VSTEP/PC Maritime bridge simulators can be provided as a 'software-only' product to run on standard PCs, or with

hardware consoles up to Full Mission Bridge Simulators.

Navmaster ECDIS displays the NAUTIS radar video as an overlay on the chart view, in line with IMO recommendations in the new ECDIS Model Course 1.27, from July 2012. In a classroom set-up, one instructor can provide a number of trainee stations with radar video and NMEA data inputs, while showing the outside view and navigation instruments on other screens.

The companies note that the Navmaster ECDIS software has exactly the same functionality as the integrated, IMO type-approved onboard equivalent.

"The development of the software interface went really smoothly," said Pjotr van Schothorst, VSTEP CTO.

"Students can now see what happens if the GPS position of their vessel is not accurate: the radar overlay image shows the coastline at a slightly shifted location compared to the chart. They learn to respond to that, and take it into account during their navigation and manoeuvring. This helps prevent accidents."

Witherby Publishing Group has published a revised edition of 'Passage Planning Guide – Malacca and Singapore Straits.' The book costs £125.

UK firm **Pole Star Space Applications** has announced a partnership agreement with US company Delta Wave Communications to offer Pole Star services to the North American energy exploration, chemical, and oil & gas markets.

Transas reports that it is opening a new office in Mumbai. The managing director of Transas India will be Shailendra Shukla, who has been holding a similar position with Transas in Dubai, UAE.

www.witherbyseamanship.com
www.polestarglobal.com
www.deltawavecomm.com
www.transas.com

Harvey Gulf contract for Wärtsilä integrated system

www.wartsila.com

Wärtsilä has been awarded a contract by Eastern Shipbuilding Group of Panama City, Florida to supply an integrated solution including its Control & Communication Centre (3C) for a new multipurpose support vessel (MPSV) for Harvey Gulf International Marine (HGIM) of New Orleans.

This offshore vessel is the first in a series of three MPSVs being built for Harvey Gulf. The Wärtsilä contract includes an option for the supply of equipment to the remaining two vessels of the series.

A turnkey installation of the Control & Communication Centre (3C) integrated bridge, navigation, and communication control system will form part of the package supplied, while Wärtsilä has also been contracted to fully integrate the supplied equipment and to further interface them with other onboard systems.

Wärtsilä 3C includes interchangeable multifunction workstations that allow the monitoring and performance of tasks independently and simultaneously from any of the stations.

Voyage planning and monitoring is supported by functionalities such as a Weather Chart overlay, Advanced Weather Router, Econometer, Speed Pilot, Predictor and online NavTex information directly available from an ECDIS display.

Wärtsilä will also be responsible for submission of the documentation required for classification society approvals.

"Harvey Gulf is very pleased to continue the relationship with Wärtsilä for the

supply of their integrated solution for our first of its kind US Flag Multi-Purpose Support Vessel," commented Shane Guidry, CEO of Harvey Gulf International Marine.

"Wärtsilä has shown total commitment to the needs of Harvey Gulf by means of support during the initial design, construction, delivery and service agreements. Harvey Gulf looks forward to continuing this relationship on future endeavours."

The Harvey Gulf ships will have a range of onboard technologies integrated by Wärtsilä

Kongsberg simulators for Nigeria offshore training centre

www.km.kongsberg.com
www.pemoffshores.com

Nigeria-based marine service provider PEM Offshore has ordered various simulation systems from Kongsberg Maritime for an offshore training centre to be located in Lagos.

The Norwegian company says that the multi-million dollar contract signed in early May covers a suite of Offshore Anchor Handling, Dynamic Positioning, Power Management and Crane Simulation systems.

PEM Offshore's new training centre will offer classes for Nigerian and foreign personnel involved in offshore oil and gas operations. It is accepting course registrations now for training commencing January 20, 2014.

Kongsberg Maritime says that it will supply PEM Offshore with simulation training technology, identical to systems found on board many vessels. The deliv-

ery includes both DP Class B and Class C simulation trainers, allowing for dynamic positioning training for certification in accordance with Nautical Institute (NI), Det Norske Veritas (DNV) and International Marine Contractors Association (IMCA) standards.

The PEM Offshore Training Centre will also be certified to DP Class A for use in Sea-time reduction training, where time spent in simulator training reduces time required for live training at sea.

Kongsberg says that PEM Offshore has also invested in an instructor training programme and subscribed to a five-year system support programme.

PEM Offshore senior vice president, Philips Matthew, said: "As the hub of offshore activity in West Africa, Nigeria is a natural location for this facility."

"Kongsberg Maritime is the undisputed leader in the offshore industry when it comes to advanced technology and excellence in delivering training services.

The new simulators will be used in training courses starting from 2014

With Kongsberg at our side, we take great pride in announcing West Africa's first dedicated commercial Offshore Training Facility."

ECDIS and VSAT integrated

www.maris.no
www.orange-business.com

MARIS and Orange Business Services report that they have formalised an agreement to deliver ECDIS and maritime digital services directly to navigators via a fully-managed Multiprotocol Label Switching (MPLS) network.

Through the Current At Sea solution, the MARIS/Orange Business Services partnership aims to facilitate integrated, paperless maritime navigation and vessel operations management using a combination of the Orange Business Services VSAT service with MARIS ECDIS, to make sure ships have the most up-to-date digital chart information available.

Orange already manages a network with connectivity to more than 3,400 VSAT systems deployed on land in 104 countries and on board vessels at sea, as well as via FleetBroadband from Inmarsat.

Current At Sea was originally launched in 2012, as a package including Orange services and ECDIS by Consilium. Consilium and MARIS have since signed an agreement to cooperate on the service and installation of all MARIS products through Consilium's network of subsidiaries and agents, and now MARIS ECDIS can be used as part of the Current At Sea package.

The companies claim that this service is the only VSAT system/dual ECDIS offering with a fixed monthly rate, where customers pay only a fixed monthly fee for access to the Orange Business Services' IP network and incur no further usage charges on voice or data.

The new offering also integrates the MARIS Voyage Decision Support (VDS) service. MARIS VDS provides weather and current data used to optimise planning of voyage routes, with the company noting that use of the service by current customers has demonstrated fuel savings of 4-8 per cent.

"The combination of MARIS ECDIS and

Orange VSAT technology creates a powerful tool in compliance with IMO ECDIS regulatory requirements that delivers voyage optimisation, greatly increased safety and major cost savings in an attractive 'pay-per-month' package," said Steinar Gundersen, deputy chief executive, MARIS.

"No capital outlay is needed and the system pays for itself through choice of faster voyage routes and lower fuel usage."

The IMO's ECDIS regulation mandates that vessels utilise the latest available charts and navigational information, but does not stipulate means of delivery.

In this regard, Mr Gundersen notes that "while delivery of ECDIS updates via CDs or USB drives to vessels in port meet IMO compliance terms, technology has moved on decisively since regulators framed the legislation."

"Businesses rightly consider themselves entitled to receive secure data via broadband connection," he said.

"In line with these connectivity expectations, we can deliver critical chart updates, warnings and admiralty overlays in a matter of minutes, not weeks. Ship owners who want a competitive edge on voyage planning can also be assured that they are committing to 'future-proof' technology."

The Orange Business Services MPLS-based network allows ships to bypass the public internet when accessing corporate systems and connect using a secure, real-time connection. The VSAT bandwidth delivers connectivity rates between 128 kbps and 8 Mbps, scalable as required for both uplink and downlink.

"Current At Sea is about rethinking business processes to improve safety, efficiency and costs," said Nicolas Roy, head of the network solutions business unit at Orange Business Services.

"Customers benefit from a one-stop, flat-rate solution for a fully electronic navigation and communications platform that not only brings their vessels into compliance very quickly, but also offers tangible business benefits."

Furuno ECDIS training in Singapore

www.furuno.com

Type specific ECDIS training for the new FMD-3200/FMD-3300 ECDIS series is now available at Furuno's INS Training Centre in Singapore, following on from the establishment of similar centres in Denmark and Germany.

Furuno says that the training programme, developed by INSTC Denmark, helps to comply with the STCW and ISM Codes as well as current requirements from various flag states.

"The FMD-3200/FMD-3300 ECDIS is the first ECDIS in the market providing task-based operation," says Mads Friis Sorensen, branch manager of Furuno European branch office. He explains that the tools needed for a specific task are made available while other tools are hidden, so that the menu structure shows a maximum of two menu layers at any time.

"The task-based operation philosophy

was developed based on field studies on board vessels and through focus groups testing the user interface and commenting on the intuitiveness of it. It reflects the actual tasks performed by the navigators on board the vessel," says Mr Sorensen.

INSTC Singapore has installed new training workstations for the FMD-3200/FMD-3300, which is based on real equipment. The plan is to have a total of eight training workstations for the new ECDIS.

INSTC Singapore has had its instructors trained through a 'train-the-trainer' programme in order for them to be able to deliver the new training course to the navigators.

The next country where FMD-3200/FMD-3300 training will be available is the Philippines, at the COMPASS (Competent Maritime Professionals and Sea Staff) Training Centre and VERITAS Maritime Training Centre.

CASCADe to design adaptive bridge system

www.cascadeproject.eu

A three-year European Research Project has been launched to develop an Adaptive Bridge System (ABS) that will recognise, prevent and recover from human errors by improving the interaction between crew and machines on the bridge.

Partly funded by the EU, CASCADe (model-based Co-operative and Adaptive Ship-based Context Aware Design) aims to address the lack of symbiosis which it says exists between current bridge design, operational procedures and the end user.

Almost 80 per cent of collisions and groundings occur due to a failure of bridge systems and their usage, says CASCADe. The use of instruments with a range of different user interfaces or the provision of too much information can lead to errors and a reduction in

performance.

For the project's researchers, it is vital that a holistic approach is taken when developing ship bridge design, factoring in the required operational procedures and the subsequent end user interaction.

CASCADe aims to develop a human-centred design methodology to support the analysis of agent interactions at early design development stages.

The research involves seven project partners from five EU countries (UK, Germany, Denmark, Cyprus and Belgium): OFFIS (Oldenburg Research and Development Institute for Information Technology Tools and Systems), BMT Group, Raytheon Anschuetz, Mastermind Shipmanagement, the University of Cardiff, Marimatech, and Symbio Concepts & Products.

Digital Ship

www.thedigitalship.com

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Conference & Exhibition
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3 - 4 September 2013, Capitol Hotel Tokyu, Tokyo
9月3日～4日ザ・キャピトルホテル東急（東京）にて

Who are attending from shipping companies?
· Managing Directors
· CIOs, CTOs
· IT Directors/Managers
· Directors/Managers of Communications
· Purchasing Directors/Managers
· Fleet Managers
· Crewing Managers

船舶関連企業からはどういう方々が参加されますか？
· マネージング・ディレクター
· CIOやCTO
· IT関係のディレクターやマネージャー
· 広報通信関係のディレクターやマネージャー
· 仕入購買関係のディレクターやマネージャー
· フリート・マネージャー
· クルー・マネージャー

Technology, communications and training continue to play a major role in the development of Japan's shipping sector, with stakeholders needing to remain up to date with new technologies and strategies to ensure their operations are as efficient as possible.

In this regard we are happy to announce the launch of the inaugural Digital Ship Japan conference and exhibition. This event will provide you with an opportunity to discuss the latest developments in IT & communications with Japanese shipping companies and industry experts.

テクノロジー、コミュニケーション、トレーニングは日本の船舶セクターの発展における主要な役割を担っています。出資者の方々もご自身の事業が可能な限り効率的であることを確認するためには新テクノロジーと新戦略に関する最新情報を得ることが必要です。

以上を踏まえ、私たちはデジタルシップ・ジャパンのカンフェレンスと展示会の開催を発表します。このイベントは日本の船舶関係企業様や業界エキスパートの方々を対象にIT＆コミュニケーションの最新の展開について話し合う機会を提供します。

Who should exhibit and sponsor?
· Satcom Service Providers
· ECDIS Service Providers
· Fleet Management Solution Providers
· Safety and Training Solution Providers
· Marine Software Providers
· Other Maritime IT related Solution Providers

どういう方々が展示やスポンサーになりますか？
· サットコム・サービスのプロバイダー
· ECDISサービスのプロバイダー
· フリート運営方法のプロバイダー
· 安全や訓練方法のプロバイダー
· 海洋ソフトウェアのプロバイダー
· その他の海洋IT関係プロバイダー

Conference to be conducted with simultaneous translation service in Japanese and English
カンフェレンスは日本語と英語の同時通訳付です。

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Imtech Marine's engineers trained and certified for Maris ECDIS900

http://imtech.com/EN/Marine
http://maris.no

Maris has announced that it has trained and certified engineers in Imtech Marine's service network covering US and Caribbean ports to install, commission and support its ECDIS900-series.

Imtech Marine centres in New York, Jacksonville, Miami, Houston, Long Beach, Seattle, Point Lisas (Trinidad & Tobago) and Curacao can now offer

Equipment maintenance on Maris ECDIS can now be carried out by Imtech representatives

expertise in Maris ECDIS to customers calling at US East Coast, Gulf Coast, West Coast and Caribbean regional ports, says the Norwegian company.

Also, Imtech Marine has recently bought Maris spares and back-up equipment to enhance availability throughout its US and Caribbean network. Maris says that it is recognised as a 'preferred supplier' by Imtech Marine, which co-ordinates spares support through sea, air and truck freight.

"Demand for the Maris ECDIS900 continues to surpass expectations, and today 20 per cent of the vessels in service worldwide that are fitted with ECDIS have Maris technology installed," says Willy Hansen, director Special Projects. "The enhanced set-up in North America and the Caribbean brings critical technical support for long-established customers, and ensures that the growing number of new customers can call on the same call-out response excellence."

"Comparable ECDIS training support has been delivered in Europe via Imtech Marine's facilities in Rotterdam, while Maris Singapore office trained Imtech Marine engineers centred in Singapore, Hong Kong and Shanghai."

Free ENC viewer now available

www.geomaris.com

Hamburg-based e-navigation software company Geomaris has released an ENC viewer which is available for free download at the company's website.

The Geomaris ENC Viewer is a tool for displaying unencrypted Electronic Navigational Charts (ENCs) available in the S-57 exchange format. S-57 files are imported into the viewer's dataset repository and can then be selected for display.

Data is displayed in compliance with the ECDIS Presentation Library Edition 3.4 defined by the International Hydrographic Office (IHO). Features for Pick Reports and object highlighting are included.

Geomaris also plans on releasing another product in October: e-Navigation Kernel SDK, which aims at enabling OEMs to develop applications displaying navigational vector charts (ENCs).

GNS continues shopping spree

www.globalnavigationsolutions.com

Global Navigation Solutions (GNS) has acquired three companies from the Harrison Maritime Group: Lilley & Gillie Charts, DPM Europe, and DPM Singapore.

The deal, the price of which has not been disclosed, also covers the Harrison Group's 50 per cent stake in DPM Middle East. DPM is an Admiralty chart agent and a provider of other nautical publications.

GNS was formed last November when Mike Robinson, former CEO of the UK Hydrographic Office (UKHO), bought the Thomas Gunn group with the support of Phoenix Equity Partners.

The London-based company provides both paper and digital navigation services, as well as developing electronic naviga-tion aids for commercial shipping.

GNS says that this new acquisition strengthens its global presence, especially in the key market of Singapore. It adds that it is not acquiring any of Harrison Maritime Group's equipment businesses.

Mike Robinson, CEO of GNS, said: "We are excited at being able to extend access to our increasingly sophisticated navigational products, services and support to DPM and Lilley & Gillie customers and to further develop our international business."

Richard Pilkington, CEO of Harrison Group, added: "GNS's vision, experience and resources make it the ideal organisation to build on the success of Lilley & Gillie Charts and DPM and continue the Harrison Group tradition of delivering industry-leading navigation services to shipping companies worldwide."

ECDIS trainer on one laptop

www.nautissim.com
www.vstepsimulation.com

VSTEP, a Rotterdam-based developer of simulators, has announced new function-alities for its NAUTIS line, including a portable ECDIS trainer and 3D glasses for a 110° immersion.

DNV-certified maritime training simu-lator NAUTIS has been redesigned to be compatible with Alienware laptops, which can drive two screens in addition to their own built-in display.

This makes it possible to create a portable NAUTIS ECDIS trainer compli-ant with the IMO Model Course 1.27 on just one laptop with two additional screens. Thus, part of the course can now be run on board of a vessel.

As for NAUTIS desktop simulators, they are to be compatible with the next generation Oculus Rift HMDs (Head Mounted Displays). These wearable items display a virtual 3D world in a 110° angle across the wearer's field of view to create an impression of immersion.

The Oculus Rift HMD uses advanced motion sensors that are responsive to the wearer's cranium, allowing them to look around in the selected environment by actual movement of the head.

VSTEP says that NAUTIS users wear-ing the HMD will have a visual and immersive experience similar to that of a Full Mission Bridge 360° simulator.

Finally, VSTEP has developed an Assessment and Analysis tool, which can be used with all its NAUTIS simulators, from desktop trainers to DNV Class A FMB. It allows an instructor to define var-ious student assessment criteria and to generate performance evaluation reports.

PC Maritime ECDIS for 50 Chinese newbuilds

www.pcmaritime.co.uk

British company PC Maritime has announced that China Shipping Group had decided to equip 50 newbuild bulk carriers with its Navmaster ECDIS (Electronic Chart Display and Navigation System).

The vessels vary in size between 46,000dwt and 76,000dwt. Ten vessels already have single Navmaster ECDIS installed and the remaining 40 bulk carri-ers are to be equipped during the next 12 months.

PC Maritime says that China Shipping Group intends to fit a second ECDIS on board these ships at a later date, in order to allow them to travel 'paperless'.

The contract, whose amount has not been disclosed, was negotiated by the Chinese subsidiary of Bogerd Martin.

Bogerd Martin China's technical sales manager John Yang said: "Navmaster ECDIS was selected because it is easy to operate and comes with a simple training method."

Navmaster ECDIS hardware is manu-factured in Birmingham by PC Maritime's partner, John Lilley & Gillie.

50 ships, such as the Shen Hua 521, will be equipped with the technology

ORBCOMM ready to launch its first second-generation satellites

www.orbcomm.com

ORBCOMM has said that the first eight of its second-generation satellites could be launched between October and December, if the new Falcon 9 rocket which is supposed to carry them completes its first two flights on time and successfully this summer.

Satellite machine-to-machine (M2M) messaging service provider ORBCOMM has two small AIS-dedicated satellites in orbit. All 17 of the second-generation satellites are being fitted with AIS terminals, which receive data on ship identity, heading and destination for forwarding to maritime port authorities.

The first eight of these satellites are ready to be shipped and are waiting only for a firm launch date from launch services provider SpaceX (Space Exploration Technologies Corporation), the Californian developer of the Falcon rockets.

The inaugural flight of the new Falcon 9 rocket is scheduled in July from Vandenberg (California) to carry Canada's Cassiope satellite into polar low Earth orbit. A second launch, tentatively set for August, from Cape Canaveral (Florida), is to carry the SES-8 commercial telecommunications satellite into geostationary transfer orbit.

In a May 9 conference call with investors, ORBCOMM chief executive Marc Eisenberg said that, if July's inaugural launch of the new Falcon 9 occurs on schedule and with no major glitches, the ORBCOMM launch could take place between October and December.

The remaining nine second-generation satellites currently under construction are scheduled for launch in mid-2014, also on the new Falcon 9 rocket.

ORBCOMM says that, in addition to providing a fuller AIS capability, its second-generation satellites will provide faster M2M links and better coverage of northern latitudes because they will orbit at higher inclinations relative to the equator than its 26-satellite first-generation system.

During the conference call with investors, Mr Eisenberg said that ORB-COMM generated $700,000 in AIS revenue in the three months ending March 31, a period during which it signed four new AIS contracts and issued 13 new AIS-related licences.

That is more than double the AIS revenue from a year ago. Mr Eisenberg said he expects AIS revenue to reach $800,000 for the three months ending June 30.

ORBCOMM said that as of March 31 it had 777,000 billable subscriber units deployed, a net increase of 19,000 from the same period a year ago.

Once a firm date is confirmed the satellites will be ready for launch

HELM course at Enav Centre

http://ecids.org

The UK Enav Centre has partnered with Total HLM Solutions to provide a Human Element Leadership and Management (HELM) course at its Hampshire facility in the UK.

Inspired by similar training in the aviation industry, the course has received the approval of the UK's Maritime and Coastguard Agency (MCA) and has been available since June 10th 2013.

The five-day course for Masters and Chief Mates is in line with the Manila Amendments 2010. Later in the year, a three-day operational level course will be launched for newly qualified Officers and Officers under training from all branches.

The Merchant Navy Training Board (MNTB) has recently established the course profile, which provides an opportunity to expand on human aspects, notes the Enav Centre. Unlike previous leadership and management courses, such as Bridge Team Management and Bridge Resource Management, the HELM course also includes engineering officers in its mandate.

"We believe this course marks a key stage in the development of training for all maritime deck and engineering officers," said Ben Howard, director of Total HLM Solutions.

"The aviation sector has had three decades building on lessons learnt from human factors, command and leadership training, many of which are directly translatable into the marine sector. This is what we will distil, and teach, with the help of ECDIS Ltd."

The Enav Centre is home to training provider ECDIS Ltd.

Mark Broster, managing director at ECDIS Ltd, adds: "This is a way of transferring a well-established and proven training course within the aviation industry into a maritime environment enabling mariners to reach beyond expectations within their roles on board."

"It is great to announce that it has been approved by the MCA, and in my opinion it is undoubtedly one of the most comprehensive HELM courses out there."

Maritime telemedicine service launched

www.digigone.com

Software developer Diginonymous and the Maritime Medical Access Program at The George Washington University (GWU) have teamed up to offer a shipboard video telemedicine service for the maritime industry, to help clients meet the International Labour Organisation's (ILO) Maritime Labour Convention (MLC) 2006 requirements for crew healthcare.

The Digi+Doc service can be used to provide immediate phone and video medical consults for ships at sea, allowing Digi+Doc subscribers, including current shipowners such as Maersk Line, to have immediate access to a team of approximately 550 physicians and specialists at the GWU Medical Faculty.

In 2012 Maersk Line and Diginonymous announced that they had established "a strategic working relationship" to support the development of IT solutions for shipping, including applications for telemedicine, crew calling, CCTV and piracy interdiction.

Digi+Doc communications systems are based on the DigiGone software platform, which offers encrypted video and audio conferencing, video streaming, Voice over IP (VoIP), IM Chat and file transfer, optimised for maritime satellite channels.

The DigiGone software can be installed on most PCs, laptops, tablets or smartphones and can work over VSAT, Inmarsat, Thuraya IP and other networks. The partners claim that satellite airtime costs for using the service come in much lower than commercial teleconferencing services such as Skype.

In addition to teleconferencing, Diginonymous' Remote Viewing Station (RVS) for Telemedicine offers access to medical services and transmission of medical data.

The kit facilitates the real-time transmission of data from the ship to a remote clinician through instruments such as a handheld electrocardiogram device, blood pressure machine, electronic thermometer and microscope camera.

"Digi+Doc is an ideal solution for shipowners to meet the new international regulations for crew health and medical treatment required by MLC 2006," said George Spohn, Diginonymous' senior vice president for global sales and marketing.

"By offering real-time teleconferencing with experienced emergency physicians, many crew illnesses and injuries can be treated on board without an expensive helicopter evacuation or port diversion."

Title 4 of MLC 2006 requires that health protection and medical care for seafarers must be as compatible as possible to that which is generally available to workers ashore, including prompt access to the necessary medicines, medical equipment and facilities for diagnosis and treatment, and to medical information and expertise.

Having been ratified by more than 30 member states reflecting more than 33 per cent of world gross tonnage, MLC 2006 comes into effect August 20, 2013, and applies to more than 1.2 million seafarers, including those working on ships whose flag states have not ratified the Convention.

"There is general agreement among emergency clinicians that seeing the patient greatly improves correct diagnosis and treatment for illnesses or injuries," said James Betz, program manager, Maritime Medical Access.

"The combination of real-time diagnostic sensor readings with a visual inspection of the patient can reduce misdiagnosis or over-triaging a problem, increasing the likelihood that the vessel will stay on course and not have to divert for a medical emergency. With follow-up teleconferences, the remote physician can determine when the crew member can safely resume work."

Mr Spohn notes that the DigiGone video software and hardware kit can also be used for other shipboard applications, such as troubleshooting equipment failures and real-time anti-piracy security, in addition to telemedicine.

To begin using the Digi+Doc services, users need to install the DigiGone software on a shipboard computer, and sign up for an annual subscription to the Maritime Medical Access Service at GWU.

"The entire cost of the system, including software licence, medical access subscription and satellite airtime, is far less than the expense of a single incident requiring medical evacuation or port diversion," said Mr Spohn.

"In addition, the telemedicine service can reduce time off for a sick or injured crew member, and will provide important documentation in the event of a crew claim."

ECDIS upgrade for Arklow Shipping

www.sperrymarine.com

Arklow Shipping is to upgrade 12 container vessels with Sperry Marine's VisionMaster FT Electronic Chart Display and Information Systems (ECDIS) to enable paperless navigation.

Arklow Shipping operates a fleet of 44 ships that transport project cargos, grain, and both general and bulk commodities. The 12 ships being upgraded are multi-purpose vessels ranging in capacity from 3,000 to 5,000 gross tonnage.

Sperry Marine will install all of the systems by the end of 2014, replacing existing NaviECDIS systems utilising a Voyage Management System supplied by Sperry Marine.

"With Sperry Marine's VisionMaster FT ECDIS, these vessels not only meet the International Maritime Organization's requirements for paperless navigation, but will now have improved long-term cost efficiency," said Alan Dix, managing director of Northrop Grumman Sperry Marine.

VisionMaster FT allows information from all navigation sensors to be brought together and merged into multifunction workstations.

In related news, three new VisionMaster FT ECDIS have also been delivered to ECDIS training company ECDIS Ltd, which have been installed in their e-Navigation Centre.

The new systems will allow ECDIS Ltd to offer Nautical Institute accredited Type Specific ECDIS Training on the Sperry equipment, now one of nine different systems on which training is available.

"The VisionMaster ECDIS has been in high demand for training requests over the last year so I am proud to say we can now offer the highest of standards training on the ECDIS equipment," said Joe Sloly, customer development manager at ECDIS Ltd.

"By including the Sperry Marine ECDIS in our facility it allows our instructors to learn yet another system which can be discussed on our Generic ECDIS courses. The Type Specific Course has been included in our accreditation by the Nautical Institute."

Training on VisionMaster FT ECDIS can now be performed by ECDIS Ltd

BCG virtual GMDSS simulator for Oregonian college

www.buffalocomputergraphics.com

Buffalo Computer Graphics (BCG), an American provider of maritime training solutions, has announced that Clatsop Community College, in Astoria (Oregon), has recently purchased a series of Virtual Global Maritime Distress and Safety System (VGMDSS) simulators.

The system comprises six student stations and one instructor station. It replaces an older BCG GMDSS simulator.

The simulator supports voice communication using VHF and MH/HF radios, along with text communication using radio telex and Inmarsat satellite terminals. Additionally, the VGMDSS package supports NAVTEX, SART and EPIRB capabilities.

Voice communication between student and instructor is supported through Audio Amplifier hardware and Voice over IP software, both developed by BGC.

All simulated features of the system are controlled by the GMDSS Graphical User Interface (GMDSSGUI), including the ability to role play. The simulator also allows for the recording and playback of a training exercise.

When purchased with optional USB 'dongles', the system can be used on different computers; the same software can be installed on desktop computers in a classroom and laptop computers.

For exportable training, the dongles can be removed from the classroom computers and installed on the laptops, which can then be set up at any location.

ShipGuard 4 released

http://transas.com

Transas Marine has launched a new version of its Ship Security Alert System (SSAS). It says that ShipGuard 4 is four times faster than its predecessor as it uses the SkyWave IsatData Pro transceiver.

The IsatData Pro (IDP) series operates on the Inmarsat I-4 constellation which provides increased network speed, says Transas Marine, adding that polling request

and response times are now 30-45 seconds.

ShipGuard 4 is type-approved by Germanischer Lloyd and provides regulatory SSAS functionality. It includes modem / GPS receiver, two alert activation circuits and on-board OFF/ON/TEST key switch.

Transas says that the system can be reset remotely via FleetView Online, its web-based SSAS-tracking service, allowing for daily position reporting and polling.

Marine computer to monitor wind and solar power

www.kei-system.co.jp
www.ecomarinepower.com

Japanese companies Eco Marine Power (EMP) and KEI System (KEI) have announced that they will release later this year the Aquarius Monitoring and Automation System (MAS), a marine computer system capable of monitoring and/or controlling equipment on ships including wind and solar power devices, as well as monitoring fuel consumption.

The Aquarius MAS is based upon the KEI 3240 Data Logger platform, which can monitor the performance of on-board equipment and record data for later analysis. Already in use on vessels such as tug boats, training ships and bulk ore carriers, the KEI 3240 can also be configured to control equipment and automate processes to turn on/off equipment.

The Aquarius MAS will build upon this and incorporate new features. It will for instance be able to monitor the amount of energy provided by marine solar and/or wind power systems and compare it to fuel consumption in order to verify savings. It will also be able to record this information for later analysis.

Based in Fukuoka, Eco Marine Power designs solar, wind, electric and hybrid marine power and propulsion solutions, while KEI, headquartered in Osaka, develops computer systems for the shipping industry.

They plan on installing the first Aquarius MAS in co-operation with AIMS Global Engineering of Malaysia, before marketing the system globally.

EMP says that the Aquarius MAS will also be incorporated in the designs of the Tonbo Hybrid Ferry and Medaka Eco Commuter Ferry.

Greg Atkinson, director at Eco Marine Power, said: "After years of development work with KEI System we are now bringing solutions to the market that will help make sustainable shipping a reality."

Wireless AIS gateway

www.digitalyacht.co.uk

Digital Deep Sea is launching PilotLINK, a wireless interface for Class A Automatic Identification Systems (AIS). It allows mobile devices such as iPhones, iPads, Android tablets and PCs to connect wirelessly to the ship's AIS/GPS system.

PilotLINK, which will be available from late May, has been produced for use with the iNavX and iSailor applications. Digital Deep Sea, a brand of UK-based Digital Yacht, says that it can be connected to any Class A AIS transponder regardless of manufacturer.

PilotLINK creates a Wi-Fi hotspot aboard the vessel with an on board range of typically 30m, according to the company. AIS target data and GPS navigation information are transmitted from the Class A device, and the program or app on the mobile device can tap into this data.

Digital Deep Sea offers a free app called iAIS but PilotLINK can also operate with such apps as iNavX and iSailor.

Digital Deep Sea says that PilotLINK is self-contained, operating from an internal 9V PP3 battery which offers around 15 hours operation. Fitted with an industry standard 1m interconnect cable, it can alternatively be connected to any USB compatible external power pack. The USB connection can also be utilised with existing on board AC/DC outlets through a suitable adaptor.

PilotLINK is priced at £200 plus VAT.

New Online Data Galleries for satellite AIS

http://horizon.exactearth.com
http://gallery.exactearth.com

exactEarth has announced the release of a set of web galleries to provide an online environment for the exploration of satellite AIS data.

Through this interactive platform users are given access to selected subsets from the exactAIS 3-year global archive through interactive maps, sample web services for use in GIS platforms, and downloadable sample files.

exactEarth Horizon provides an interactive map of a sampled single day's position reports for the whole globe, allowing users to gain an understanding of the information available from the exactAIS data service, while the exactEarth Gallery provides sample maps, OGC certified web services, and downloadable files from the exactAIS Archive and Arctic Archive including historical points and tracks, as well as density maps.

For Esri users specifically, the Gallery is replicated on ArcGIS Online.

These galleries offer the ability to explore sampled ship movement information with the full AIS collected attributes available such as heading, course over ground, and flag.

The vessel density mapping feature shows how it is possible to use the AIS data to analyse shipping patterns and trends at differing scales while the data from exactAIS Arctic Archive provides vessel traffic patterns for this remote region.

"We have seen a steadily growing awareness of satellite AIS and the benefits of receiving global ship movements over the past few years and earlier this year we released our ShipMaps website to highlight the growing uses of satellite AIS data," said Graham Stickler, global marketing director at exactEarth.

"We have had a very positive response to this site, but we recognise that there are many more potential uses for satellite

exactEarth Horizon is one of the new galleries available for the review of satellite AIS data

AIS data, especially as our global archive grows."

"We have released these galleries to now provide an interactive environment where the actual data can be explored in

more detail and to allow interested parties to experiment and see for themselves how such data may help across the whole maritime operations, analysis and planning domain."

Telemar bridge systems maintenance deal for 90 Teekay ships

www.telemaruk.com

Telemar (UK) Ltd has landed a three-year contract with Canadian corporation Teekay to maintain bridge electronics on 90 ships operating from the United Kingdom, Brazil, Singapore and Norway. The deal is valued at approximately $8 million.

Telemar (UK) Ltd's historic clients include major companies such as Frontline, OSG and E.R.Schiffart.

For Teekay, it will provide bridge electronics support worldwide and set up Key Performance Indicators. These KPIs will be reviewed quarterly to monitor and manage both the onboard equipment handling and the performance of Telemar

(UK) Ltd itself.

"We are proud to have been chosen by Teekay. They are part of a growing number of companies which rely on our global bridge electronics support services," said Rodger Perks, managing director of Telemar (UK) Ltd.

"It is an endorsement of both the service itself and the value gained by our cus-

tomers, which includes a full disclosure of costs, detailed statistical analysis of all services and locations as well as other indicators and performance criteria."

"This gives clients comparisons across their fleets, providing a better understanding and helping them to make cost-effective purchasing decisions on current and future procurement."

E-navigation – it's all about harmonisation

For IMO's e-navigation programme to be successful an increasing focus must be placed on defining data standards and harmonising information exchange between different systems, *writes Dr Andy Norris*

IMO's definition of e-navigation is centred on the 'harmonised collection, exchange, presentation and analysis of maritime information'.

In fact, although unstated as such, these aims have effectively been pursued for many years, simply because they reflect what is required from good legislation of navigation-related equipment, data and training.

The level of achievement of such goals will obviously always be limited by the available knowledge and technology. E-navigation is directed at taking full advantage of the higher levels of harmonisation that are now possible, simply because we have entered a much more mature, capable and knowledgeable digital world.

Maritime navigation is currently at a stage that requires the use of a rather clumsy mix of processes. Some remain firmly based on older 'analogue' thinking and even those that are digitally-based are generally far from meeting the ideals of harmonisation now achievable.

In particular, much important data remains paper-based, even if displayed as page-by-page replicas on a computer screen – and grouped as analogue in this debate. Most ships still base navigation on paper charts, the traditional focus of analogue navigational practice.

Virtually all navigation equipment fitted to ships today can digitally intercommunicate but generally at a fairly basic level, conforming to pre-21st century concepts. However, the interaction does permit modern radar and ECDIS equipment to provide a reasonable degree of integration, particularly in using and displaying digital data from various sensors.

Formal communications for navigation remain predominantly voice-based. Although some quite long established services, such as NAVTEX, are digital they use somewhat out-dated concepts making it difficult to fully integrate their data into wider applications.

User interface

The ever-growing capability of digital processing has allowed systems, not least radar and ECDIS, to offer a considerable array of facilities and user options. Unfortunately, this has tended to increase the operating differences between models, especially from different manufacturers.

Lengthy, specific-equipment familiarisation before use is now really needed to compensate for these differences, with ECDIS being singled out by IMO for special attention. This emphasises the need for e-navigation to improve the existing levels of harmonisation, both in presentation and analysis.

A number of essential navigation sensors, such as the pelorus, generally remain stubbornly traditional in concept with no physical interconnection with any other equipment. This tends to limit

their regular use.

Also, many user interfaces on equipment are designed for stand-alone functionality, rather than as a component of a digitally-based integrated system, optimised for usability.

It is all creating an increasingly confusing situation for the user. E-navigation is the formal structure that can steadily remove these inconsistencies as part of its overall contribution to improved safety.

Unfortunately, the concept is proving surprisingly difficult to sell into some segments of the maritime world. Is it a way for coastal states to put extra controls on shipping? Is it just the ruse of manufacturers to get more sales?

Maybe it's because the basic concepts of e-navigation are easily obscured by the enthusiasm of supporters getting into over-complex details.

For whatever reason, many do not really seem to understand the essence of the concept, perhaps thinking that e-navigation is only the adoption of increased electronics in navigation.

This leads to the assumption that all existing issues with electronic equipment would be exacerbated, rather than an understanding that the concept is instead directed at eliminating them.

Although the publicity given to the recent problems with some ECDIS equipment has been entirely justified, it has certainly strengthened the views of many that e-navigation will just make things worse.

In fact, the ECDIS problems were centred on issues of harmonisation, underlining the necessity to concentrate on meeting the ideals of e-navigation.

Data streams

E-navigation is directed at appropriately analysing and consolidating relevant digital data to enable enhanced interaction with the bridge team. The data variously comes from ashore, is generated on the ship or is received from remote sources such as other ships and AtoNs.

It therefore needs digital communication systems that are able to deliver data both securely and reliably. Communication channels onboard will generally remain as wired networks to enhance security.

The data used for e-navigation processing and display needs to exactly replicate the transmitted data, whether from an onboard or a remotely situated database or sensor. This puts stringent conditions on the integrity of the complete communications path.

In particular, the information being sent should include items such as its source, expected accuracy and validity, as well as the fundamental information contained within the data stream.

As an example, a future position sensor should be uniquely identifiable, for instance by serial, type number and physical position, perhaps even including its

type approval status. Internal checks identifying potential errors should be flagged and accuracy estimates regularly given.

The effective time of the sensor measurement should be accessible to enable any latency to be taken into account when its data is integrated with other sources.

A database of port information should readily show the source of any particular data, together with information that assists the evaluation of data integrity, for instance its temporal validity, its compilation date and the accuracy of any given positional coordinates.

Much of the new detailed information would not normally be visible to the user, except when specifically requested. However, automated processes would continuously look for any relevant issues that would need to be flagged as an error or a caution.

An important aspect is that all alerts from the system need to be timely and appropriate. It must prevent confusing multiple alerts occurring from a single issue, such as a GNSS outage, and also prevent numerous disconcerting alerts being generated from trivial circumstances, as so often occur today.

To achieve all this there needs to be a significant concentration on the definition of the data streams needed from all sources.

It has already been agreed that the IHO S-100 data model, which meets the latest internationally agreed engineering standards for data definition, should be used to help optimise the process for e-navigation.

Implementation

The principles of e-navigation are commendable – the difficulty is in its actual implementation.

A great deal of work has been coordinated by IMO to understand the real requirements of users for an e-navigation future, but a programme now needs to be identified that allows a practical migration to its principles.

There needs to be major concentration on how communications should evolve to become entirely compatible with e-navigation. Some of the issues involved were discussed in last month's article in *Digital Ship*.

A huge capacity is not essential for the foreseeable future. When very large amounts of data are required, such as base ENCs, these can generally be downloaded in port or from delivered physical storage devices, such as digital discs.

What is required in the shorter term is the means to receive such things as ENC updates and digital Maritime Safety Information. In particular, facilities are

required for effective interaction with coastal stations and port authorities and to exchange limited digital data with other vessels.

The principles for this may come out of the various research programmes that are looking at some of these issues from an e-navigation viewpoint, such as the European North Sea ACCSEAS Project.

Definition of data streams, similar to that applied to the S-100 ENC standard, will be critical for e-navigation to succeed

In terms of onboard navigation equipment, an important step seen by many is to concentrate on introducing equipment for integrated navigation, being particularly aimed at increasing the integrity of position, including giving the navigator a continuous estimate of accuracy.

Such a programme needs to redefine the data requirements to allow improved digital interaction between the navigation sensors and other e-navigation equipment. However, early e-navigation implementations need also be compatible with existing sensors to ease the transition.

The early programme should perhaps also define the presentation and analysis requirements for new e-navigation compliant radar and ECDIS displays. This could follow the concepts of the Standard Mode (S-Mode) model to provide a common operational mode across all ships.

It would allow manufacturers to offer additional modes for optimising navigation, not least allowing highly innovative solutions to evolve.

A real issue for IMO to resolve is how the highly detailed work needed for e-navigation is to be carried out and agreed internationally. For e-navigation, is there a conflict between goal-based standards and the need for harmonisation? **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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