A special event on board the Regal Princess cruise ship, operated by Carnival’s Princess Cruises brand, has set what is thought to be a new maritime satellite bandwidth record with a 1.5 gigabits per second link established on board the vessel in conjunction with satellite operator SES Networks.

The link was used to power the ship’s newly developed guest connectivity service MedallionNet. The 1.5 Gbps connection was achieved off Princess Cays, located on the southern tip of the island of Eleuthera in the outer Bahamas, and was powerful enough to allow 1,500 Netflix subscribers to stream TV shows or movies simultaneously, the company said.

The previous maritime VSAT bandwidth record is believed to be the 580 Mbps connection recorded on the MSC Seaside’s maiden voyage in December 2017.

“With MedallionNet, the best Wi-Fi at sea, the extraordinary experience of a cruise vacation is further enhanced by superior connectivity and coverage – providing our guests who want to stay connected with a connectivity experience that equals or exceeds what they experience on land,” said John Padgett, chief experience and innovation officer for Carnival Corporation.

“This event gives us the opportunity to demonstrate that guests can have a connected experience that parallels land-based Wi-Fi, making it exceptionally easy for our guests to share photos, videos and messages about their fabulous vacation.”

“Cruise vacations are already the fastest growing segment of the vacation sector, and eliminating any connectivity barriers will make cruise vacations even more desirable.” The MedallionNet service was introduced by the cruise company in November 2017 in partnership with SES, which provided the 1.5 Gbps connection to Regal Princess using the medium Earth orbit constellation of satellites it acquired following its takeover of O3b in 2016.

“MedallionNet puts to rest the notion that connectivity at sea will never be as fast or reliable as your broadband at home,” said Steve Collar, CEO of SES.

“Powered by our O3b fleet of MEO (medium Earth orbit) satellites, and complemented by our GEO (geostationary Earth orbit) constellation, we are not only able to exceed average land-based bandwidth capabilities, but also able to set a new industry apex for guest connectivity experience.”

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Euronav begins Aura VSAT roll out

www.satcomglobal.com

Antwerp-based tanker company Euronav has agreed a deal with Satcom Global to roll out the Aura Ku-band VSAT service across its fleet, following the successful completion of sea trials with the system carried out over the course of 2017.

Implementation of the communications package is already underway, with a significant proportion of globally trading vessels in the fleet now equipped and dry bulk vessels, including TracPhone V7-HTS, are being carried out over the course of 2018.

Installation of sea trials with the system was carried out over the course of 2017.

The investment agreement with SJC was announced shortly after KVH confirmed that it had struck a deal with shipmanager E.R. Schiffahrts, as part of a broader commitment to collaborate on value-added services in the area of ship-to-shore connectivity. The investment agreement with SJC was announced shortly after KVH confirmed that it had struck a deal with shipmanager E.R. Schiffahrts, as part of a broader commitment to collaborate on value-added services in the area of ship-to-shore connectivity.

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The investment agreement with SJC was announced shortly after KVH confirmed that it had struck a deal with shipmanager E.R. Schiffahrts to implement VSAT systems on the vessel operator’s fleet of container and dry bulk vessels, including TracPhone V7-HTS, antenna equipment, under KVH’s AgilePlans subscription-based Connectivity as a Service (CaaS) programme.

Installations for the first 11 vessels have begun, KVH says, with the company planning for a total of up to 60 vessels to be equipped by the end of 2018.

“We chose KVH for the fast data speed, the reliable data management, the global coverage, and our experience with KVH as a trusted and proven professional service provider,” said Christoph Werner, director of maritime & quality for E.R. Schiffahrts.

“We see the very nature and flexibility of KVH’s AgilePlans programme as a great benefit to our business.”

The AgilePlans contract provides the required equipment and airtime under one monthly fee, with no commitment required. Installation at select ports and maintenance costs are also included in the package.

The TracPhone V7-HTS equipment to be provided includes the latest antenna developed by KVH for its mini-VSAT Broadband network, to take advantage of recently added high throughout satellite (HTS) capacity. This combination enables download speeds of up to 10 Mbps and upload speeds of 3 Mbps, KVH says.

SKY Perfect JSAT makes $4.5m KVH investment

www.kvh.com

SKY Perfect JSAT Corporation (SJC) has agreed to invest $4.5 million in its maritime broadband partner KVH, as part of a broader commitment to collaborate on value-added services in the area of shipping digitalisation and improved internet access at sea.

SJC, Asia’s largest satellite operator, already provides KVH mini-VSAT services in Japan under the name OceanBB plus.

“For years, the collaboration of KVH and SJC has developed the Asian shipping market with excellent satellite communications services, and we look forward to continuing our relationship,” said Shintaro Takada, SJC’s representative director, president, and chief executive officer.

“Our investment is based on our conviction that KVH’s superior technology, equipment, and services are crucial at this time of digitalisation in the maritime industry.”

SJC agreed to purchase $4.5 million of KVH common stock in a private placement at a purchase price of $11.95 per share, which represents a 10 per cent premium over the average closing price of the KVH common stock over the 30 trading days before pricing. The transaction is subject to customary closing conditions.

KVH’s current market capitalisation stands at approximately $180 million at the time of writing.

“We are thrilled to be continuing our relationship with SJC, which has been extremely significant as we have grown our mini-VSAT Broadband network into the number one market-share leader in maritime VSAT,” said Martin Kits van Heyningen, KVH’s chief executive officer.

“We are extremely significant as we have grown our mini-VSAT Broadband network into the number one market-share leader in maritime VSAT,” said Martin Kits van Heyningen, KVH’s chief executive officer.

Work together, we can leverage our technologies and strengths in order to provide the faster, reliable global connectivity and the value-added services that the maritime industry needs.”

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Implementation across the entire Euronav fleet is expected to be completed by the end of 2018

Martin Kits van Heyningen, KVH
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Bourbon unveils digital revolution action plan

France-based shipping company Bourbon has unveiled a new strategic action plan it is calling #BOURBONINMOTION, including a focus on “capitalising on the digital revolution to better differentiate by connecting the fleet” which will see the company dispose of vessels unable to be connected. Bourbon aims to create a fleet of ‘smart ships’, selling all vessels which cannot be connected.

The #BOURBONINMOTION action plan unveils the new face of Bourbon, the company’s self-described “smart shipping” programme will see €75 million invested over three years to improve connectivity and data transfer capabilities across the fleet of 132 modern supply vessels operated by Bourbon Marine & Logistics, with the aim of reducing vessel operating costs by optimising operations.

Among the remaining 65 vessels in Bourbon Marine & Logistics’ traditional fleet, the 41 oldest vessels carry systems which the company says cannot be connected. These ships, described by Bourbon as its “non-smart fleet”, will consequently be sold at current market prices – with the planned disposal of these 41 owned vessels expected to generate an impairment loss of about €170 million.

“We are ready to meet the challenges of the transformation profoundly impacting the oil & gas industry and already driving major changes at our key customers,” said Jacques de Chateauvieux, executive chairman of Bourbon Corporation.

“The #BOURBONINMOTION action plan unveils the new face of Bourbon, which is, as in the past, not afraid to reinvent itself and innovate with the commitment of the women and men who contribute to its development around the world. Indeed, beyond the technological revolution lies a personal revolution for all Bourbon team members.”

160 Teekay vessels to implement new e-mail platform

Teekay is to implement an improved vessel e-mail system across its 160-strong fleet, following the agreement of a new contract with Norwegian maritime IT company Dualog, the companies report.

Work has already started on the project, with more than 100 vessels having been equipped in the first three months of the roll out, Dualog says.

“There was a lot of planning carried out across a number of our network of offices – including Glasgow, Manila, Vancouver and Singapore – and after some fine tuning of the systems following the results of the pilot project, we began the process of upgrading the e-mail systems on the fleet,” explained Stuart Mackenzie, regional and sales manager at Dualog.

“We saw the need for a more modern and proven maritime e-mail solution, which included a file transfer solution built in.”

The new e-mail platform is also expected to improve cyber resilience in the network, with security features built into the software that have been designed for the maritime environment. Dualog says it currently delivers service uptime of 99.98 per cent on the platform.

“Teekay contacted us because they needed to find a new and reliable mobile business e-mail solution for their vessels. We took the time to understand and map their needs and have delivered a solution that will result in efficiency gains for the owner,” said Thomas Heide, international sales manager at Dualog.

Ensuring 180 vessels, or two thirds of the project, were upgraded within three months was remarkable and was the result of careful planning and pilot work carried out on a handful of units. The Teekay ships will start to see strong operational benefits from what is a web-based e-mail system.”

GMDSS review central to IMO NCSR meeting

The latest meeting of IMO’s Sub-Committee on Navigation, Communications and Search and Rescue (NCSR) has concluded, focusing on core areas relating to safety at sea including GMDSS, e-Navigation and vessel tracking.

Among the meeting agenda items was a review of progress in IMO’s ongoing work to modernise the Global Maritime Distress and Safety system (GMDSS).

The GMDSS was adopted in 1988 to provide an infrastructure to ensure that distress alerts can be sent from anywhere on the world’s oceans. The modernisation plan aims to update those provisions in line with subsequent advances in technology, including an allowance for the incorporation of new satellite communication services.

E-navigation issues on the agenda included a focus on promoting harmonisation and standardisation across the industry to drive the effective implementation of IMO’s strategy, which aims to harness the benefits of integrated high-tech navigation solutions. Draft Guidelines on standardised modes of operation, commonly known as ‘S-Mode’, were also part of the discussions.

Among the other regular agenda items was a review of proposed new or amended ships’ routing measures and matters relating to the functioning and operation of Long-Range Identification and Tracking (LRIT) systems.

Delegates at IMO’s February 2018 NCSR meetings
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**KNUTSEN EXTENDS VSAT CONTRACT FOR TANKER FLEET**

Knutsen, world’s largest owner of shuttle tankers, has continued its relationships with VSAT providers Marlink and Speedcast for its fleet of 38 shuttle tankers, LNG carriers, and chemical tankers, as well as two planned newbuilds.

The Knutsen VSAT package includes a minimum guaranteed Committed Information Rate (CIR), bursting up to a Faster Maximum Information Rate (FIR) where available. Knutsen has already been a Marlink customer for 18 years, having adopted maritime VSAT in 2000, and is currently employing 1-metre Ku-band antennas with back-up on L-band.

“VSAT has been a standard on our fleet for a long time, but we continue to see new applications and demands with the ongoing digitisation happening within the maritime markets, which means we need a future proof solution to enable our own digitisation strategies,” said Nils Trones, communication and navigation manager, Knutsen OAS Shipping.

“We are reviewing new opportunities to improve our service to clients even further using Marlink’s digitalisation solutions that can help us to maximise our investment in communications.”

In related news, Marlink has announced that all of its customers on Sealink Alliances VSAT service plans are to have their MIR doubled, from 3 Mbps to 6 Mbps, while pricing will remain unchanged. Sealink Alliances packages include up to four voice lines and a choice of eight data allowance packages, from 1 GB up to 80 GB per month, which can be topped-up as required using Marlink’s Portal360 online service management platform.

“Having already doubled the burst rate on Sealink Alliances in September 2016, this latest increase reflects our ongoing programme to deliver more value to our customers, helping them to get more from their investment in maritime broadband both in terms of connectivity and flexibility,” said Tore Morten Olsen, president maritime, Marlink.

**SPEEDCAST TO INCREASE RCCL BANDWIDTH PROVISION**

Speedcast has extended its relationship with Royal Caribbean Cruise Lines (RCCL) to increase the bandwidth available to RCCL’s 37 ships using Speedcast’s VSAT services.

“Speedcast has been an integral part of our long-standing efforts to implement the latest connectivity solutions that allow us to provide enhanced communications for everyone, from our guests on board to our employees onshore,” said Guillermo Muniz, director, network communications for everyone, from our guests using Marlink’s Portal360 online service management platform.

“We are consistently raising the bar on ship innovation and increasing requirements, and Speedcast is right there with us, collaborating to make sure that we have the infrastructure and support to deliver the best experience.”

Royal Caribbean began using Speedcast systems in 2006, when the company installed RCCL’s first Ku-band VSAT antenna for use in the Brazil region. The Speedcast network now serves all 37 Royal Caribbean brand vessels, with multiple antennas installed on each ship to provide automatic failover between Ku-band and C-band.

“We have a true partnership approach to our relationship with Royal Caribbean,” said PJ Beylier, CEO, Speedcast.

“As one of the largest cruise line brands in the world and one of our largest customers, we are proud that they continue to trust our expertise in designing and deploying reliable solutions that connect their ships to shore and provide a premier on board guest experience.”

“Over the past 11 years we have seen tremendous growth in Royal Caribbean’s business, and we look forward to helping them continue to develop their brands as they introduce new ships and look for innovative ways to enhance guest and crew experiences.”

**WORLD-LINK EXPANDS CYBER SECURITY OPTIONS**

World-Link Communications has expanded its ShipSecure maritime cyber security platform, adding new modules to strengthen the cyber defences of its users.

ShipSecure is a multi-layered fleet security management system used to protect, monitor and control a fleet security network, from a single management portal. It can offer real-time visibility of threats and protection, and the ability to control the onboard security infrastructure, the company says.

“Building on our highly successful ShipNet platform, we deploy virtual machine and Cloud-based technologies to integrate onboard unified threat management (UTM) devices and sensors, alongside Cisco’s latest threat intelligence Cloud-based services to deliver an end-to-end maritime cyber security platform,” said Asad Salameh, president of World-Link Communications.

“Integrating with Cisco technologies allows us to offer our customers access to the latest global threat intelligence and the latest in next generation IPS/IDS firewalls.”

ShipSecure delivers policy-based protection, using real-time and historical data analysis. By collecting data from onboard security sensors, anti-virus and anti-malware software, and onboard network firewalls, the system is used to identify threats across the fleet, isolate the problem area, and take remedial action.

“In June of last year, World-Link launched ShipNet, a fleet vulnerability management system, that measures and rates an individual vessel’s critical vulnerabilities, testing against a continuously updated database of more than 50,000 vulnerabilities.

“By adding Cisco’s latest threat intelligence to the ShipNet platform, we can increase the available protection that our customers are provided,” he said.

“World-Link is dedicated to protecting our customers’ networks and we’re excited about the new capabilities that ShipSecure will bring to the stakeholders we serve.”

**NAVARINO TO ADD NEW KU-BAND VSAT PACKAGE**

Navarino is to expand its satellite communications portfolio with the addition of a new Ku-band VSAT service, the company has confirmed.

Currently in the planning phase, Navarino says it is already in talks with several Ku-band providers as it prepares to begin beta testing the new offering before the end of the first quarter of 2018.

“We are looking forward to adding the Ku-band option to our broad portfolio of connectivity services,” said Navarino CEO, Dimitris Tsikopoulos.

“As a highly flexible and well-tested solution, Ku-band fulfills some important criteria that certain customers require and so we see it as an important offering for those sectors of our marketplace.”

“Our intention is to launch the Navarino Ku-band service this summer at Posidonia and we are expecting to see strong demand for Navarino Ku-band offered in conjunction with Infinity.”

Navarino has already been a reseller of Inmarsat’s XpressLink service since 2012, a combination of Ku-band VSAT and FleetBroadband created after Inmarsat’s acquisition of Norwegian VSAT provider Ship Equip in 2011, and is also a Value Added Reseller (VAR) of Inmarsat’s Ka-band Fleet Xpress VSAT product.

**MARLINK REPORTS THAT IT HAS MOVED ITS TOKYO OFFICE TO A NEW PREMISES, MORE THAN DOUBLING THE SIZE AVAILABLE AS IT LOOKS TO ACCOMMODATE MORE FIELD ENGINEERS, TECHNICAL SUPPORT AND SALES STAFF TO SERVICE ITS EXPANDING VSAT CUSTOMER BASE IN THE REGION.**

The Marlink Japan office was first established in 1978, and as a private consultant. Marlink reports that it has moved its Tokyo office to a new premises, more than doubling the size available as it looks to accommodate more field engineers, technical support and sales staff to service its expanding VSAT customer base in the region. The Marlink Japan office was first established in 1978.

Speedcast has appointed John Truschinger as chief information officer (CIO), to be based in Houston, US. Mr Truschinger is a veteran of the US Marine Corps, and has also worked at Transocean and as a private consultant.
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Thaicom adds
Asia-Pac maritime satcom service

Satellite operator Thaicom has introduced a new maritime service platform called Nava, a broadband system for use in Asia-Pacific waters that will be complemented by a range of digital operational support applications.

“Especially at sea, satellite communications is the only way to connect crew and vessel. We launch Nava to address these limitations,” said Paiboon Panuwattanawong, chief executive officer of Thaicom.

“Nava will help create a unique user experience for our customers and will strengthen Thaicom as a leading satellite communications provider. With Nava, Thaicom is able to support the digital transformation at sea.”

Initially, the company says it will introduce three Nava services. Nava Ship Manager will offer asset and engine monitoring, fuel efficiency advice, and maintenance planning alongside the Nava Connect internet connectivity service. Nava Media will provide access to online entertainment, social media, and training services on board.

“These services are powered by our broadband satellite platform to deliver high-speed internet with wide area satellite coverage in Asia Pacific. Thaicom Nava is the result of bringing satellite technology to remote areas without access to communication networks,” said Ekachai Phakdurong, senior vice president, media and retail business, Thaicom.

“In the beginning, we plan to offer Nava service in high growth markets including Japan and Thailand due to our strong market position in the maritime sector there. In the future, we will introduce Nava in other countries as well. We look forward to cooperating with our business partners to develop our new maritime service platform further.”

New Nimbus service levels added

Globecom has expanded the range of options for implementation of its Nimbus ‘smartbox’ communications management system, launching three different service levels – Nimbus Lite, Nimbus and Nimbus Pro.

Nimbus was first introduced in 2013 and has approximately 1,000 installations to date. The system is used to manage networks with multiple satellite/3G-LTE inputs, with automatic switching based on pre-defined priorities.

The unit also supports connectivity to specialist applications such as ECDIS and voyage management systems, and offers smart caching and compression tools to improve internet browsing.

The new Lite and Pro options have been introduced to offer different levels of service to users with varying data traffic requirements, from entry-level users up to ships with sophisticated hybrid networks.

All Nimbus installations can be monitored and managed from any location via Globecom’s Cirrus Cloud portal, which can be used to manage preferred satellite connectivity and redundancy, configure user accounts, establish firewall rules and manage updates, while also providing a remote connection to shipboard PC’s for maintenance.

“The maritime communications landscape is increasingly complex, with new connectivity options coming to market at a time when data demand is spiralling and security concerns are growing,” said Globecom Maritime president Malcolm McMaster.

“The Nimbus range is designed to provide shippers with the right level of control for their communications needs, combining Cloud processes and cyber security with unique features that enable simple, reliable connections.”

Global Eagle agrees Global Eagle connectivity deal

Global Eagle Entertainment has signed a three-year agreement with subsea specialist Swire Seabed, which will see Global Eagle provide connectivity systems to the offshore vessel Seabed Constructor.

Seabed Constructor is currently on long term charter to Ocean Infinity, which is trying to locate the missing Malaysian Airlines Boeing 777 believed to have crashed in the Southern Indian Ocean in 2014 with 239 people onboard.

Installation was completed in Durban, South Africa in January. Services provided under the agreement include C-band VSAT and Inmarsat connectivity as a backup. As part of the deal, crew welfare services with live TV will also be offered.

Global Eagle says that it now provides connectivity to three out of the four Swire Seabed vessels.

“Swire Seabed is one of the well-regarded industry leaders in the market. It is great to see that they go beyond providing basic necessities for the seafarers and are investing great effort to provide added amenities and increased connectivity to enhance the quality of life of their seafarers on board,” said Ole Sivertsen, Global Eagle’s senior VP maritime.

In related news, Global Eagle has also recently expanded its shipping portfolio with the launch of OceanPrime TV, a live TV package designed for crews in the commercial maritime market.

The OceanPrime TV service provides live access to 24-hour news, sports and current event channels. Two channels can be chosen from a list of four for a subscription package of $299 per month, or all four channels can be included for $499. Both package options require a 24-month contract.

Installation is performed in a single day by Global Eagle resellers, the company says, with a dedicated Ku-band antenna, starting at 60cm in diameter, deployed on the ship.

“With the launch of OceanPrime TV, we allow commercial shipping to improve crew morale with a very quick upgrade,” said Mr Sivertsen.

“By offering live TV programming at sea, experiences on maritime vessels will be enriched for the captain and crew.”

GT Maritime in malware protection partnership

GT Maritime has agreed a deal with network-based malware protection specialists Lastline Inc to incorporate its cyber security technologies into the GTMailPlus vessel communication software system.

“The added security that Lastline will now deliver provides immense value to our customers,” said Robert Kenworthy, CEO of GT Maritime.

“It greatly diminishes the risk of malware infecting critical systems that could lead to devastating results. When the risks are this high, only the best technology will suffice.”

GT Maritime has deployed Lastline’s sensor technology in-line in full Mail Transfer Agent (MTA) mode within its e-mail software, to isolate, analyse and block malicious attachments and URLs before they are routed to recipients.

Evidence-based reporting will also be a feature of the integrated system, providing GT Maritime incident response engineers with a transparent record of any activity taking place in the network.

“We’re honoured that GT Maritime selected Lastline for their malware detection,” said Brian Laing, Lastline CRO.

“We have a long history of partnering with market-leading companies that, after extensive vetting, identified Lastline as superior to alternatives. In such a unique market, we’re pleased that we can do our part to ensure the safety of ships at sea, as well as their cargo and crews.”

Robert Kenworthy, CEO of GT Maritime
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SpaceX launches test satellites ahead of global constellation plans

SpaceX has successfully launched the first two demonstration satellites for its proposed Starlink global satellite internet network aboard one of its Falcon 9 launch vehicles, part of a joint payload mission alongside Hisdesat’s PAZ satellite.

The two demo satellites have been named Tintin A and Tintin B, with SpaceX founder Elon Musk confirming on Twitter that both units had been successfully deployed and had begun communicating with their Earth stations following the launch.

SpaceX has outlined its plans for the constellation in filings with the US Federal Communications Commission (FCC), which describe a network of more than 4,000 cross-linked Ku- and Ka-band satellites (the frequency bands most commonly used for maritime VSAT today), as well as more than 7,500 additional V-band satellites in a lower orbit.

The eventual goal for the approximately 12,000 satellite constellation is to make broadband internet available anywhere on the planet at an affordable cost from the mid-2020s onwards.

The hosted AIS payload is owned by exactEarth and is expected to be commissioned in the coming months as the final component in its first generation network, to provide AIS vessel data which is fully time synchronous with radar data provided by PAZ, and near synchronous with Synthetic Aperture Radar (SAR) imagery from other radar satellites.

“Congratulations Hisdesat on the successful launch of PAZ. The launch of our EV-8 AIS payload is a major milestone for our team here at exactEarth as we mark the completion of our first-generation constellation,” said exactEarth CEO Peter Mabson.

“The unique capabilities of this AIS payload to enable high quality radar/AIS data fusion are expected to further advance our reputation as leaders in the AIS industry. When combined with the ongoing roll-out of our second-generation real-time satellite constellation, our AIS service offering clearly provides important differentiation and compelling value to a host of global AIS users.”

First resellers for Iridium Certus announced

Iridium has confirmed the names of the initial maritime launch partners for its next generation Certus L-band satellite service, with Marlink, Speedcast, Applied Satellite Technologies Ltd (AST) and Satcom Global the first four companies appointed as global resellers, while Arion will act as a regional partner focusing on the Asian market.

The Certus service runs on Iridium’s NEXT satellite constellation, which is currently past the midway point in its scheduled launch programme. Four launches of 10 satellites each have been successfully concluded, with eight launches planned in total to complete the constellation of 66 operational satellites and in-orbit spares.

Iridium expects the launch schedule to be completed by the middle of 2018.

“Iridium Certus is creating a marketplace that brings choice and innovation, which is something the industry has been craving,” said Wouter Deknopper, vice president and general manager of maritime at Iridium.

“For many years we have been listening to the market, and we know that mariners are often forced to sacrifice quality for bandwidth, or vice versa, due to high prices. But soon we will be delivering a standardised solution that helps solve this persistent issue. Iridium Certus is a game changer and is directly responding to the feedback we hear from our industry partners and customers.”

Certus is already undergoing live testing on the satellites already in orbit, using terminals built by Cobham and Thales. The new service will offer L-band speeds of 352 kbps at launch, later upgradable to 704 kbps through a firmware update and with eventual speeds of approximately 1.4 Mbps planned.

“Iridium’s signature full global coverage, coupled with the enhanced capacity and speed of Iridium Certus, has created a real buzz in the marketplace,” said Graeme Gordon, global commercial director, Satcom Global.

“We’re excited to bring this new service to our diverse maritime customer base.”

Iridium Certus is planned for commercial availability in mid-2018, with additional maritime service providers expected to be added to this initial list of five prior to its full introduction.

XT Group implements new e-mail application

XT Group and Satmind have agreed a multi-year contract for Satmind’s SeaBrowser WorkMail system, which will become the primary e-mail system for the XT fleet following the successful completion of a month-long trial.

The system had already been successfully deployed and was operational on approximately 20 vessels by the end of February 2018.

“We have been working with Satmind’s SeaBrowser solution for crew welfare and communications since 2014. While looking for a new e-mail solution, my team and I analysed our current needs and crises and then tried to match it with the best solution available today,” said XT Group CIO, Avi Lavi.

“SeaBrowser WorkMail module stood out from the rest in the market because of their centralised vessel mailboxes management, exceptional compression ratios and flexible rules engine, which is exactly what we were looking for.”
BLAZING FAST & UNLIMITED DATA

KVH Introduces the TracPhone® V7HTS

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- Affordable hybrid airtime plans
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The rocket science of maritime satcom

Traditional telecommunications satellites are launched into geostationary orbit, however, the all-electric propulsion systems to reach their geostationary orbit, but this takes longer to reach its geostationary orbit. The downside to the all-electric technology is that it provides a lower total thrust than traditional systems, and will therefore take longer to reach its geostationary orbit. While a chemically launched satellite can get to its location in as little as a week, electrically driven systems take between three and six months.

Despite this additional time required, Eric Rouchose, Airbus’ SES satellite programme manager, says that he expects that up to 50 per cent of future telecommunications satellites will use electric propulsion given its other benefits.

Once launched, SES-12 will use its electric thrusters to orient the satellite’s electric propulsion thrusters and to control thrust direction and attitude during the different phases of the mission. The satellite will join SES’s existing constellation of geostationary satellites, also supported by the 12 MEO (medium Earth orbit) satellites operated by the company following its acquisition of O3b in 2016.

The network services provided by SES-12 will be targeted at different industries in the Asia Pacific region, including oil and gas, renewable energy, and government operations for defence, civil, and humanitarian projects in some of the most challenging situations and remote places on earth. While the maritime industry will be competing with those mentioned for network capacity, SES says that it is committed to providing greater ship-to-ship and ship-to-shore connectivity for maritime networks across Asia on the new satellite.

Mission possible

SES-12 will occupy a geostationary orbit at 95° East, providing broadband services from Cyprus in the West to Japan in the East, and from Russia in the North to Australia in the South. The dual-mission satellite, with its wide and spot beams, will provide TV broadcasting and telecom infrastructure services over six areas in Asia, complimenting the existing coverage provided by SES-14 in Latin America, the Caribbean, and the North Atlantic, and SES-15 across Latin America and North America. SES-14 was launched in January 2018, and SES-15 in May 2017.

SES-12 will replace NSS-6 and be located with SES-8, which also covers Asia Pacific, adding additional beams to support the growing markets in this region. Mr Rouchose believes the next decade will see HTS such as SES-12 support an increasing number of connected vessels and cruise liners, with the total number of maritime in-service terminals in Asia expected to more than double from 75,000 in 2017 to over 175,000 by 2026, according to SES and Airbus figures.

As well as supporting a wider range of capabilities in improving ship operations and performance, satellites are fundamental in enhancing standards of crew welfare, an area which SES says it is specifically looking to support with the launch of SES-12.

Stephen Conley, global maritime segment lead at SES Networks, told Digital Ship that “the crew is generally the bottom of the pile when it comes to internet and packages”. However, a wider variety of internet options and better access to data will “open up and not restrict data passing over networks. Our hope is that data will be able to be split between operational usage and recreational for staff on board.”

As well as the increased contact with family that better satellite coverage provides, SES also expects its connectivity to improve access to education while at sea, and provide a standard of living that can help to keep seafaring as an acceptable career choice for a new generation of mariners.

“Those coming straight out of university and into the seafaring world will have to have it. It is essential to them and so to encourage a maritime career and retain crew, internet connection must be there,” said Mr Conley.

Building an all-electric satellite

The complete satellite schedule, from concept to launch, is a somewhat protracted process that takes years to be completed. Once the satellite has been envisioned with an intended deployment and usage,
the contractor for building the satellite is chosen.

In the case of SES-12, Ms Viau and her team looked at potential market requirements and carried out innovation workshops to refine the company’s goals for its next satellite. They then began to contemplate the design architecture and started discussions with Airbus to refine the design further. Ms Viau cites SES’s strong existing relationship with Airbus Defence and Space as a major reason for choosing them to build this most recent satellite.

Once these elements were all decided, the companies looked at where they could potentially shorten the timescale of construction, while ensuring the satellite remained fully flexible. The spacecraft was then delivered to its chosen facility when ready, with SES carrying out continuous monitoring and quality controls throughout. Approximately five to fifteen people work on this first phase. “We are also looking at other suppliers to see if we can use some equipment that might not come from the space industry but maybe from other industries, to see if we can get some cost benefits from this,” Ms Viau said.

SES-12 took 39 months in total to build, with around three to four hundred engineers and project staff working on it within this time. “They would come in at different times to work on the satellite, day and night. We put ourselves into a shift pattern so that we would be working on the satellite twenty-four seven,” said Ms Viau.

The next challenge is to build similar satellites within as little as a year and a half, potentially even reducing that down to 12 months. “We’re looking at trying to build three years of construction in just 18 months now, so we’re having to completely change our approach. We have to look at different ways of building and testing. In space, the radiation and temperature are very different to here, so testing takes a while but our approach now will have to change to fit this shorter time period,” she said.

Ms Viau admitted that an 18-month time-frame is logistically challenging, but the first step will be to shorten the construction time of the next satellite following SES-12 to just under three years. The next one after that will aim to reduce that to 18 months, so that by 2021 satellites that rival SES-12’s capabilities will be built in half the time.

In addition to reducing the construction period, there is also the concept and design cycle to consider, which can stretch to four years before construction on a satellite even begins. “There is a huge recognition for the changing needs of connectivity and it is important now that satellites are brought to the market quicker and have the appropriate capacity,” said Mr Conley.

The pace of growth in demand is also driving the need for shorter timescales in satellite construction, Mr Conley notes. In the last ten years there has been a phenomenal level of innovation in the satellite industry and in the development of HTS capacity. Each new satellite has completely new features and capabilities that were not possible a decade ago. “Satellites that were useful ten years ago and did what they needed to do, they were not intelligent and were not fast changing. In the last five years of satellite development, each satellite has been pretty similar, but now this is changing. There are new features in this time and we want and need to bring these to the market as soon as possible,” he said.

In Mr Conley’s eyes, it is not about whether it is possible to develop and construct a satellite in a shorter period of time, it is a market necessity. Continuous innovation, supported by an increasingly expanding range of different technological tools will help to drive this process. “We’re lucky to some extent that we already have around 70 (SES) satellites up there, but we are always looking for changes and ways to get creative with deployments of satellites,” he said.

**Final steps**

Following the completion of testing in Toulouse after Digital Ship’s visit, SES-12 was scheduled for transport to Cape Canaveral Air Force Station in Florida to be installed into a SpaceX pre-flown Falcon 9 rocket in preparation for launch during March 2018.

Using its electric propulsion package, SES-12 will be raised to 36,000 km above the equator over the course of the next three to six months, where it will remain in its geostationary orbit for its expected lifetime of fifteen years.

While SES’s current satellites are being built with a decade-and-a-half lifespan, Ms Viau notes that SES and Airbus are now looking into the option of building satellites with seven-year lifespans. While this will obviously require a more frequent construction and launch schedule, the companies’ initial research has suggested that it could potentially work out to be a more cost-effective process.

“One of the things we’re looking at is whether cheaper material could be used to last only seven years in space. We’re not sure yet, but are working out whether this would be more cost-effective than using materials that have a longer lifetime but are more expensive,” said Ms Viau.

“But we still need to consider the cost of launching a rocket every seven years instead of every fifteen. It’s exciting to think about as it’s a different way of doing things but we’re not sure yet. We have seen others doing it with a cheaper launch but we still need to study it.”

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**KR to provide cyber assistance to Songa**

www.krs.co.kr

Songa Shipmanagement has reached an agreement with the Korean Register (KR) for the provision of specialist cyber security technical services to its fleet of 32 ships.


The new deal with Songa Shipmanagement will see the classification society deliver technical consultancy services, and assist in the creation of a management system for the cyber security of the company’s ships. KR will conduct a company-wide risk assessment and develop the new system for the vessel operator.

“KR has steadily increased its investment in R&D focused on cyber security over the years, as technology and digitalisation has increased across the industry. The society is committed to being an industry-leader in this area, and is also conducting advanced technical research on autonomous ships and ship surveys conducted using drones,” said Lee Jeong-Kie, chairman and CEO of KR.

“Our comprehensive cyber security services will protect our customers’ assets and ensure the safety of both the crew and ship at sea. KR continually looks for new ways to provide added-value services to our customers and to enhance their business operations.”

**Dual mode M2M terminal from Thuraya**

www.thuraya.com

Thuraya has launched a new Thuraya Tracking and Monitoring (T2M) service alongside a T2M-DUAL terminal for machine-to-machine (M2M) communications and remote asset tracking and monitoring.

T2M-DUAL is a dual-mode device mixing satellite and GSM connectivity, used for the simultaneous collection of data from multiple points including location information, data from external sensors and peripheral devices, and input gathered from an equipment CANBus.

The system can be integrated with third-party applications and has built-in features such as geo-fencing, network selection based on least cost routing, internal battery backup and location and sensor data.

“Industries and businesses are constantly looking for solutions that give them a competitive advantage with lower risks, higher automation and cost-saving potential,” said Rashid Baba, acting chief commercial officer at Thuraya.

“As more players enter sectors like logistics and transportation, for example, the monitoring of remote assets on the move by managers increase opportunities for faster decision making, deployments, worker safety, and operational efficiency.”

“Thuraya’s resilient network and IoT services already have a strong foothold across verticals that require high-security connectivity for remote, mission-critical operations. T2M-DUAL solution caters to these sectors’ evolving needs and we are confident that it’s well-placed to meet market demands.”
Maersk cyber-attack – a global wake-up call

The $300m cyber-attack on AP Moller Maersk’s digital infrastructure in summer 2017 has been described by the company’s chairman as ‘a very significant wake-up call’ – not just for Maersk itself, but for the entire global supply chain.

The chairman of AP Moller Maersk, Jim Hagemann Snabe, has described the June 2017 NotPetya cyber-attack on the company as a “wake-up call” – not just for Maersk, but for the whole of the maritime industry and the global supply chain infrastructure.

Speaking during a panel discussion at the World Economic Forum in Davos, Mr Snabe described the massive recovery effort Maersk was confronted with after he was awoken by a 4am phone call on June 27th of last year.

“We were hit by the NotPetya virus. In fact, that meant that we were actually collateral damage, probably a state attack situation,” he said.

“The impact of that was that we basically found that we had to reinstall our entire infrastructure. We had to install 4,000 new servers, 45,000 PCs, 2,500 applications, and that was done in a heroic effort over 10 days.”

“Normally, and I come from the IT industry, we would say that’s going to take six months – it took 10 days. I can only thank the employees and partners we had in doing that.”

While the direct impact on AP Moller Maersk’s own business was extremely damaging, the knock on effect for global trade stretched even further – as the largest container shipping company in the world, Maersk transports approximately 20 per cent of world trade in containers, with somewhere in the region of 50,000 boxes delivered at ports across the globe every hour.

As Mr Snabe notes, this makes Maersk a “very significant part of the infrastructure making the world actually run.”

Imagine a company where a ship with 10,000 to 20,000 containers enters a port every 15 minutes, and for 10 days you have no IT. It’s almost impossible to even imagine,” he said.

“We actually overcame that problem with human resilience. We only had a 20 per cent drop in volumes, we managed 80 per cent of volume manually, basically. Customers, by the way, were great contributors to overcoming that.”

While the NotPetya attack was a significant and expensive wake up call for an organisation like AP Moller Maersk – with a financial cost estimated at between $250 and $300 million – Mr Snabe argues that it could prove to be a very important wake up call for an industry that may not have been adequately prepared for such an event, citing three specific lessons learned during the period.

“Number one, we were basically average when it comes to cyber security, like many companies. And this was a wake up call to become not just good, we have a plan to come to a situation where our ability to manage cyber security becomes a competitive advantage. That’s the ambition that we have,” he said.

“Number two, we chose a very open dialogue around this, from day one we were on Twitter telling about what has happened, and we have spent enormous resources on helping other companies. I think that is an important point to make, because with that openness, the experience we had other companies can have, and I believe that we need a very significant level of increase in our understanding of this problem.”

“It is time to stop being naive when it comes to cyber security, I think many companies will be caught if they are naive. Even size doesn’t help you. I think it’s very important that we are not just reactive, but proactive, and I think we can’t be average – we’ve got to be the best we can.”

The third major lesson AP Moller Maersk has taken from the NotPetya attack has been to gain a better appreciation of the criticality of digital infrastructure in modern business, in its own operations as well as in its interactions with the rest of the world, and to develop an increased level of urgency in defending that infrastructure as dependency on these systems continues to grow in the future.

“We are quite a technologically driven company, more than 90 per cent of our orders come through the internet. But the new level of dependency on digital as everywhere is digital, all the documents are digital, the boats will be autonomous. Hence, the criticality of the infrastructure becomes even more urgent and you cannot overcome that with human resilience anymore,” said Mr Snabe.

“So with that in mind, the internet was invented in – what, 1989? – not with the need for dependency. Digital was needed for a radical improvement of infrastructure, and understanding and collaboration between companies, technology companies and law enforcement.”

“Hopefully our incident can be a wake-up call, not just for our company, with big ambitions now, but for everyone that has anything to do with technology – which I presume is all companies in this world.”

Increasing resilience

One of the areas where Mr Snabe believes progress needs to be made in improving protection of the global supply chain’s digital infrastructure is in expanding cooperation between private sector companies and public sector authorities, including law enforcement agencies.

“In our situation we got a lot of very important help from law enforcement, but I think we need to be much more ambitious. If you rob a bank today it is likely that there is a little button on each of the tables in the bank that someone can push, and immediately there is an alert around almost an ongoing attack on that bank. Imagine you had that in cyber. First of all, when you go into that [cyber] bank you get access to all of the branches of that bank, not just one, so the problem is significantly bigger,” he said.

“(There is an opportunity to make) early warning information that might be available (to) law enforcement in the dark web circulated more actively, so that we go from this reactive ‘let’s try and run after the problem and see if we can fix it’, to a much more proactive prevention. Proactiveness in terms of knowing when something happens and then alerting everyone.”

“I think that’s where it will all end, it’s going to be an artificial intelligence war between attackers and defenders, that’s where it’s all moving. I think the use of artificial intelligence requires that the networks are connected so you can collect all the data. This is where it needs to go.”

Promoting this level of active cooperation will not be an easy task, Mr Snabe notes, as it requires a balance between private and public organisations’ own responsibilities to focus on protecting themselves or their own jurisdiction, while at the same time acknowledging that the best way to meet that responsibility is to be part of a wider cooperative effort.

“We’ve taken very serious actions at AP Moller Maersk, we now have a much more safe infrastructure, and we cannot let that responsibility sit in somebody else’s hands. We’ve got to do something. On a national level, countries will look at that and say ‘we’ve got to protect our country’,” he said.

“This is where the challenges come, that’s why it’s a network of networks, because then countries also have to collaborate, because the digital war has no borders. That’s the complexity, it’s three levels, and we need to set the bar really high. We cannot be naive anymore.”

On a more individual level, dealing with these cyber threats will also mean finding an acceptable balance between the right to privacy, and the urgency of sharing data to assist relevant agencies in more readily identifying and neutralising cyber threats.

“My point of view is that there is not a technological limitation, we can solve this problem, there are convoluted ways or designed ways. It’s more about, what are we willing to give up?” said Mr Snabe.

“Are we willing to give up privacy for security, and how far do we want to go with that? How much do we want to give up country control versus global? How much do we want to give up simplicity for perfection? We’ve got to find the right things.”

“We’ve done that in the physical world, when cars began to drive faster than horses they became dangerous, so over time we invented roads that were more safe, and airbags and what have you. If you look at it today probably the next thing will be self-driving vehicles that don’t bump into anything. So we do have responses, but we need to solve these fundamental problems – how far will we go? These are not simple questions, that’s my concern. It’s not a technological problem.”
Service providers wanting to optimize maritime communications and delight customers leverage the performance and flexibility of the Comtech brand. Our range of best-in-class infrastructure solutions include VSAT networking platforms, satellite modems, network & bandwidth management, frequency converters and amplifiers. The solutions blend unparalleled horsepower, efficiency and intelligence, providing the advanced technologies you need to increase profitability, differentiate services and improve quality of experience.

Contact us today. We are ready to evaluate how our unique feature set can provide you with the industry’s highest user throughput, highest availability, and most optimal resource utilization.
Campbell Shipping migrates to FX as portfolio expands

Ship manager Campbell Shipping has become the latest vessel operator to sign up for Inmarsat’s Fleet Xpress VSAT service, as the satellite operator looks to expand its package offerings for the satcom product.

Inmarsat has reached an agreement with ship management company Campbell Shipping, headquartered in Nassau, The Bahamas, to migrate its fleet of dry bulk carriers to the Fleet Xpress VSAT service.

The deal will involve migration from Inmarsat’s Ku-band XpressLink service to Fleet Xpress, which includes Ka-band VSAT and FleetBroadband as a back-up. The new service will be used to enhance the performance of the vessel operator’s management system, the Campbell Target Operating Model (C-TOM).

“This upgrade will mean our ships will benefit from faster connections to the internet, available through a single cost-effective package. It will enable us to accelerate improvements in other areas of vessel IT infrastructure, allowing more activities and functions to be supported and carried out on board. Fleet Xpress will help us to stay ahead of the game,” said Capt Anindya Dasgupta, VP human capital, Campbell Shipping.

“Our success is directly attributed to the company’s philosophy of building better lives for the people we employ. Although we are in the business of moving cargo, we never forget our commitment to our team members.”

“Today’s seafarers want to stay in touch with their families and remain connected to the rest of the world. Reliable connectivity is therefore crucial. Faster on-board internet and low-cost calling options will result in improved morale, contributing to productivity and the retention of talent in the company.”

Campbell Shipping also expects to use the additional bandwidth provided by its new service to facilitate closer monitoring of day-to-day vessel operations, which it hopes will translate into improved efficiency and subsequent cost savings.

OSV plans

As Campbell Shipping begins its FX roll out on its dry bulk fleet, Inmarsat is also looking to increase its focus on the energy sector with the launch of a new set of Fleet Xpress plans designed specifically to meet the requirements of offshore support vessels (OSVs).

The new plans are designed to fit with the frequently changing connectivity needs of OSVs, which are likely to experience more pronounced swings in data usage levels than conventional cargo ships. Inmarsat says it will accommodate these requirements by offering free upgrades and downgrades in service levels during the 36-month contract period.

Using a 1m antenna, Fleet Xpress for OSVs will offer committed information rates (CIR) of up to 3 Mbps for uploads and 6 Mbps for downloads, which can be expanded up to 5 Mbps and 10 Mbps respectively using a larger antenna.

When off-hire, a lower priced 128 kbps/128 kbps link will be available to allow for the transfer of core operational data without the much larger data demands of on-hire periods, while also avoiding early termination costs.

A network service device (NSD) is used to manage the bandwidth and regulate the flow of data traffic. The offer also includes provision for owners to suspend services for up to 180 days, subject to an equivalent contract term extension.

“The global footprint of Fleet Xpress means OSVs can count on reliable connectivity wherever in the world they are deployed,” said Eric Griffin, VP maritime, offshore energy and fisheries, Inmarsat.

“Unlike conventional VSAT installations, Fleet Xpress is designed for seamless mobility and automated satellite and beam switching, supported by the added resilience of unlimited FleetBroadband back-up.”

“Inmarsat satellites are supported by redundant land-based infrastructure to ensure network availability, as defined in the service level agreements that form part of a subscription.”

The new antennas will support both the existing I-4 satellite network, currently used to provide FleetBroadband services, as well as Inmarsat’s planned sixth generation 1-6 satellite constellation, the first of which is scheduled for launch in 2020.

The two companies said that the next generation terminals will be designed to offer significantly lower costs as well as a host of new capabilities, including much faster throughput speeds.

“Inmarsat has maintained its leadership position for many decades by understanding the maritime industry and focusing our resources on continual innovation,” said Ronald Spithout, president of Inmarsat Maritime.

“As we approach the next stage of FleetBroadband’s evolution, we are excited to have partners such as Intellian with a justified reputation for flexible, high quality terminals that are manufactured in the most cost-efficient manner. We selected Intellian for this project also because of their spirit of innovation and passion.”

“It is also important to note that along with lower cost hardware and supercharged capabilities, the next generation of FleetBroadband, with the latest core module technology, will provide not just GMDSS but enhanced safety services; continuing to keep seafarers safe wherever they are in the world.”

“Inmarsat’s sixth generation (Inmarsat-6) satellite constellation will be the first to feature dual-payload satellites, each supporting L-band and Ka-band services.”

“FleetBroadband has been a market leader for over a decade. We are delighted to be working closely with Inmarsat on the ground-breaking enhancements that will be delivered through the Inmarsat-6 satellite constellation,” said Eric Sung, CEO of Intellian.

“Supported by a portfolio of the most advanced terminals in the world, the new capabilities of FleetBroadband will maintain Inmarsat’s leading position in L-band services in the maritime industry.”
Transas has launched the first package of applications built on its Cloud-based maritime operations management platform, TheSIS. This package comprises three core modules: Advanced Intelligent Manoeuvring (AIM), Advanced Intelligent Diagnostics (AID) and Advanced Intelligent Routing (AIR) – and is currently being made available to end-users. Services will become fully operational over the coming months, Transas says.

AIM is a track prediction system and anti-collision support tool that leverages data previously collected on the actions and behaviour of personnel sailing in that specific location, together with a hydrodynamic model of the vessel and programmatic incorporation of the collision regulations. AID is primarily intended to monitor anomalies, both in real-time or during post-voyage analysis, by detecting excessive or unusual manoeuvring patterns in relation to parameters such as speed and rate of turn, as well as unexpected deviations in fuel consumption. The system pulls data from conventional equipment and environmental sensors, and also records how and when operators interact with vessel controls. AIR is used for voyage planning and optimisation, incorporating real time metocean data, hazard data and a vessel’s hydrodynamic performance to calculate expected outcomes, while also allowing for the impact of known and anticipated vessel traffic along the route.

The three core modules will be supported by Transas’ additional Data Delivery (ADD) and Advanced Remote Maintenance (ARM) systems.

ADD manages updating of special electronic charts (SENCs), weather data, and other navigational safety notices, while creating an audit trail for compliance purposes. ARM provides remote diagnostics and performance analytics for bridge and satellite communications equipment, backing up key software together with its configuration data and parameters to the Transas Cloud to support service restoration in the event of a system failure.

For training support, A-Suite also features an e-learning package, Advanced Remote Training for Seafarers (ARTS), with online access to manufacturer-approved, type-specific training courses for Transas ECDIS.

Being Cloud-based, all A-Suite applications can be accessed from ship or shore, though Transas notes that ship-based installations will contain an onboard pre-processing data management server, so that the applications and decision support functions can continue to operate without a live connection to the Cloud in the event of a communications outage. Encrypted processing data management server, so services an e-learning package, Advanced Remote Training for Seafarers (ARTS), with online access to manufacturer-approved, type-specific training courses for Transas ECDIS.

The applications have all been built using the same software kernel that powers Transas ECDIS systems, which the company notes has allowed it to incorporate direct access to data on all user interactions and the operation of various sensors on the bridge in real time.

“With this new version we have a very efficient rule calculation tool on the market. Nauticus Hull V20 has increased approval efficiency, quality and superior design support, and is another big step in making the DNV GL rules the industry’s preferred standard.”

Nauticus Hull Version 20 has a new user interface with improved modelling and rule check capabilities, while the hull scantling design program “Section Scantlings” has been renewed, with modelling, analysis and a result viewer integrated into a single user environment. New functionality for prescriptive cross section calculations has also been added, including bow impact, ice class, and connection area requirements.

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Korean Register updates fleet management software

Korean Register (KR) has launched the second edition of its fleet management software program ‘KR e-fleet v2’, which is now being made available free of charge to all of KR’s ship owning and operating customers, covering more than 3,000 vessels.

The first version of e-fleet was launched in March 2011, and is used to deliver real-time information to shipowners and operators, assisting them in their preparations for ship surveys and audits.

The new software version adds a range of online application functions, as well as an increased selection of content options and an improved interface. In addition, KR says it has also completed the digitalisation of all previous paper documents submitted by shipowners, allowing for the integration of a fully searchable database to assist in managing ship survey and audit processes.

A new management function called ‘Survey Planner’ has also been added to support this process, providing survey information relating to the company’s entire fleet.

KR says it has created an additional platform for vessel greenhouse gas monitoring plans as part of its software development, to allow the class society to provide verification services in accordance with the new EU MRV regulations.

The report generated by the system will contain all of the monitoring and reporting data relating to that vessel’s CO₂ emissions that is required by the regulations.

“The first edition of KR e-fleet was warmly welcomed by our customers, and we are pleased to launch this, the second edition, with enhanced and upgraded functionality, which will assist our customers even more,” said Lee Jeong-Kie, chairman and CEO of KR.

“Designed for their convenience and to support their efficient fleet management, we are now working to provide a cloud service for our clients in the US and Europe, which should be operational in the first half of 2018.”

Rotterdam begins ‘smart port’ project

The Port of Rotterdam Authority and IBM are to collaborate on a multi-year digitalisation initiative to improve port operations through the application of Internet of Things (IoT) and ‘Cloud’ technologies, including an upgrade of the infrastructure of the entire 42-kilometre site to facilitate the hosting of connected ships in the future.

The initial focus of the project, which will also be supported by Cisco and Asianet, will be on the development of a centralised dashboard application that will collect and process real-time sensor data on weather and water conditions, as well as data from communications across the port facility.

This data will be analysed using IBM’s IoT platform with the aim of improving traffic management at the port.

“Here in Rotterdam, we are taking action to become the smartest port in the world,” said Paul Smits, chief financial officer of the Port of Rotterdam Authority.

“Speed and efficiency is essential to our business, and requires us to use all of the technical and commercial data. Thanks to real-time information about infrastructure, water, air, etc, we can enormously improve the service we provide to everyone who uses the port, and prepare to embrace the connected, autonomous shipping of the future.”

The largest port in Europe, Port of Rotterdam handles in excess of 461 million tonnes of cargo and more than 140,000 vessels annually.

Previously, the port relied on traditional radio and radar communication between captains, pilots, terminal operators and tugboats to run port operations, but the installation of new sensors across the site will allow for the collection of multiple data streams about tides and currents, temperature, wind speed and direction, water levels, berth availability and visibility to support key decisions.

This data will be analysed by IBM’s Cloud-based IoT technologies and turned into information that the Port of Rotterdam says it will use to reduce wait times, determine the best ship sizes to effectively load and unload, and enable the entry of more ships into the available space.

This could include, for example, predictions of optimal timings for a ship arriving and departing Rotterdam based on the water level, ensuring that the maximum amount of cargo is loaded on board.

BIMCO launches new software called SmartCon, which aims to simplify work processes for users when drafting contracts and clauses based on BIMCO standards.

SmartCon’s features are connected to Microsoft Word to use within Word documents, allowing the software to more easily integrate with existing workflows.

The contracts can be securely shared until they are fixed, with the documents protected and authenticated by Microsoft’s Cloud security infrastructure.

“SmartCon is a brand-new approach to contract editing, we believe that it will significantly ease the work life of our current users and will attract new users to BIMCO’s contract universe,” said Grant Hunter, head of contracts and clauses at BIMCO.

“Our contracts are widely used around the world, which provide greater certainty of the intended commercial outcome – helping the users manage their contractual risk.”

BIMCO notes that an authentic contract can be opened using the software, and then edited and changed as required without compromising the integrity of the document. The changes can be seen by both parties, while the core features, which make it a binding legal document, cannot be removed.

The updated software also benefits from recent advances in Microsoft’s own software infrastructure, including the advent of Office Groups and its broader range of Cloud technologies, which reduce pressure on internet bandwidth and increase the number of potential users while also improving security.

“With today’s focus on cyber security, we believe this tool is very timely. It provides the best security possible and ensures users always work on authentic BIMCO documents,” said Mr Hunter.

Customers can use multifactor identification, for example through Microsoft’s app, where opening a document requires an additional code to be sent to the user’s phone. BIMCO says that it does not store user information in its SmartCon infrastructure either – everything is in Microsoft’s Cloud and protected by Microsoft’s technology.

Thirty-five of BIMCO’s most popular contracts are being made available in SmartCon at launch, with more to be added over time.
“With guest satisfaction as a top priority, our onboard WiFi is offered free of charge on all cruises. Our Sealink VSAT service from Marlink ensures excellent quality of service, guaranteeing reliable and secure broadband; whilst the customised network supports our business needs.”

Gary Seabrook, Operations Director, VP Operations, AQSC

www.marlink.com
BIMCO relaunch for Shipping KPI system
www.bimco.org

BIMCO has relaunched the Shipping KPI vessel benchmarking system, originally developed by InterManager in 2009 before being passed on to BIMCO in 2015, after two years of redesign.

The Shipping KPI system relies on self-reporting by 300 companies and a total of 6,000 ships, allowing users to compare performance parameters between ships of similar type, tonnage, trades or flag states.

All data is anonymised to conceal which shipping companies are involved, with the lowest level for comparison involving data from a minimum of 10 ships owned by at least three different companies.

The data is hosted with an external service provider, which is independently audited to verify its ability to safeguard the data. BIMCO notes that it does not have direct access to the data provided by the participating companies.

Users of the system can compare 33 different Key Performance Indicators (KPIs), including budget performance, ship availability, contained spills and officer retention. The KPIs are based on 64 individual companies.

BIMCO says that it has improved the reporting tool to make sure that the reporting values conform to IMO rules and industry standards. Its short-term target is to get more than 10,000 ships into the system to create an even better foundation for comparison and analysis.

“The Shipping KPI system enables us, as a shipowner, to make rational strategic decisions on how to run our fleet, by benchmarking with other ships in the segments we compete in. It is an important step for BIMCO in its goal of developing digital solutions for the industry,” said Sadan Kaptanoğlu, owner of Kaptanoğlu Group, president designate of BIMCO and chair of the Shipping KPI steering group.

“We see Shipping KPI as a community diagnostic tool to provide insight, and allow companies to learn from each other,” said Martín Taylor, BIMCO CEO.

WinGD adds Integrated Digital Expert for engines
www.wingd.com

Winterthur Gas & Diesel (WinGD) has launched a new integrated system for the analysis of engine and ship data, called WIDE (WinGD Integrated Digital Expert). WIDE collects ship and machinery data, which is used to proactively predict engine component malfunctions, and offers support through live troubleshooting and diagnostic advice for the crew. This can be done without the need to install additional sensors, the company said.

The platform uses a Data Collection Monitoring (DCM) unit and its Engine Diagnostic System (EDS) software to gather and visualise the various data, in a way that can be used to support operators in getting the most from their equipment.

The DCM is now installed as standard on all new WinGD engines contracted since the beginning of 2018, but can also be retrofitted to older, electronically controlled engines already in operation.

“With WIDE we are able to utilise the power of the machinery data in combination with our engine expertise and advanced data analytic techniques. This allows us to support shipping companies during their day to day operations with valuable insight,” said Carmelo Cartalemi, general manager business development, WinGD.

MSI improves online vessel valuation system
www.msiltd.com

Maritime Strategies International has improved its online asset valuation and forecasting service, Forecast Marine eValuator (FMV), adding new features and the ability to choose preferred data formats.

Changes include a new Indicative Value Range (IVR) assessment feature, which allows website visitors to generate a free IVR estimate for their vessels. The IVR calculator is integrated with a global vessel database so users can receive an assessment of value for the current quarter just by entering a vessel name.

“FMV has proven the need for a tool that can provide forecast data on main shipping market indicators and it continues to be popular with clients and one-off users,” said Dr Adam Kent, director of MSI.

“Integration of the vessel database and the market snapshot provided by IVR are powerful enhancements in functionality and usability that will help to expand the reach of FMV to a wider audience.”

The global fleet database is also now integrated with the full FMV service, allowing users to populate vessel characteristics from a vessel name or IMO number. Using the database as a reference, MSI applies its own methodology to calculate forecast asset value, operating costs and earnings on a quarter by quarter basis.

MSI has also added a Microsoft Excel plug-in to connect with its FMV Portfolio Analysis tool, allowing users to aggregate current quarter values and forecasted cash flows for a batch download of vessels through FMV.

FMV output can now additionally be embedded directly into client internal market risk and credit risk systems through an API, eliminating the need to access the FMV data through the web application.

ChartCo introduces real time vessel data portal
www.chartco.com

ChartCo has launched the new web-based FleetManager software, allowing shore-based customers to access live ship management and tracking data via a web browser, on desktops, smartphones and tablets.

The system includes a range of environmental, piracy and regulatory overlays to highlight potential sources of delay or hazard, and can link with ChartCo’s e-navigation platform, PassageManager, to allow shore-based staff to view an active passage plan so that any deviations from the expected track can be interrogated in real time.

Vessels can be inspected remotely to view and audit navigation and compliance status. Managers can check software versions installed, connection history and data download volumes, and can authorise, approve or reject electronic and paper chart and publication orders placed through PassageManager.

The basic FleetManager system is available free of charge to existing ChartCo customers, with no installation required.

Premium versions are also available depending on requirements.

“FleetManager is the latest addition to our growing suite of software solutions designed to help shipping operators manage compliance, cost and efficiency within their fleet. Amongst its rich functionality, FleetManager is unique in being able to compare real time fleet tracking with each vessel’s planned passage,” said ChartCo CEO, Martín Taylor.

BMT appoints new Guy Tomlinson as group capability and strategy director
Guy Tomlinson, new at BMT

RightShip has appointed a new CEO, with Martin Crawford-Brunt replacing the outgoing CEO Warwick Norman who stepped down from the position at the end of January 2018. Mr Crawford-Brunt joins RightShip from DNV GL, and will initially be based at RightShip’s London office. Mr Warwick will continue to act as a strategic consultant to the board during the CEO transition process.

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Class certificates continue online migration

DNV GL has now passed the threshold of having issued 50,000 electronic class and statutory certificates, with more than 6,000 vessels of the classed fleet now trading with one or more digital certificates, while Bureau Veritas has now also begun issuing both classification and statutory certificates in digital formats, following successful pilots of the electronic documentation with ship owners and flag states.

DNV GL launched its IMO-compliant electronic certificates in mid-October 2017, with digitally signed electronic certificates representing nearly 80 per cent of all certificates issued by DNV GL since that time. 52 flag states accept the DNV GL e-certificates, with further acceptances expected over the coming year, the society says.

“We have been overwhelmed by the positive response from our customers and the industry as a whole. Many owners have opted not to wait for their first scheduled survey to shift vessels to the new certificates, but have asked to move their whole fleet onto the new system. Our goal for 2018 is to have every vessel in the fleet using electronic certificates in conjunction with their periodic survey,” said Knut Ørbeck-Nilssen, CEO of DNV GL - Maritime.

“The administrative savings for our customers have been significant, in particular in the ease with which customers always have access to new and updated certificates on the fleet status portal and through e-mail subscription. And vessels issued with electronic certificates have successfully been through close to 1,000 port state inspections worldwide.”

“The port state process is also made more efficient, by enabling owners to use a secure electronic certificate folder to grant temporary access to authorities through our fleet status portal.”

Certificates are published on DNV GL’s customer portal immediately after an onboard survey is completed, so that all relevant parties can access the latest certificates from anywhere in the world. The electronic certificates are secured with a digital signature and a unique tracking number (UTN), which can be checked online to sign their validity and authenticity.

Users can choose to share access to their certificates with stakeholders (such as charterers, ports, flag administrations and insurers) by using temporary access codes which allow direct access to the certificate folder.

More than 6,000 ships now have their DNV GL certificates stored online

Bureau Veritas meanwhile has confirmed that it is also now issuing digital certificates on behalf of 52 flag states, representing 72 per cent of the Bureau Veritas classed fleet. The e-certificates can be delivered by e-mail or accessed via the My VeriSTAR mobile application or VeriSTAR Info desktop portal.

“With a significant number of flag states providing their support to this project we now expect to see the rapid development of e-certification. The pace of that development should increase as more flag states come on board,” said Patrick Le-Dily, vice-president, legal compliance & regulatory management, Bureau Veritas Marine & Offshore.

The digital documents will feature electronic signatures developed in partnership with Cert Europe. In 2017, Bureau Veritas says that it issued more than 50,000 e-certificates for different services including the inspection of shipping containers.

The e-certificates display the usual content and layout of class and statutory documents. Every time a Bureau Veritas surveyor goes on board a vessel a new version of the e-certificate is issued to reflect either the endorsement or the renewal of the required certification. Endorsement, managed via a certification, will mean that no document will need to be manually signed and stamped.

Certificate authenticity and validity can be verified via a secure online web portal using a QR code, URL, or by searching for the certificate’s unique tracking number.

Evergreen digitises container shipping documentation

Evergreen Line has introduced two new ‘Intelligent Services’ for electronic data transfer among container shipping supply chain stakeholders, including an e-B/L (Bill of Lading) and i-Dispatch, a system that delivers a variety of additional digital documents generated during cargo transactions.

These new services will be provided in partnership with Bolero International, using Bolero’s eBL technology, and can be accessed via the shipping line’s current Shipment.link portal.

Evergreen says that this new integrated system will speed up issuance and transmission of e-B/L documentation for its container ships, which should be particularly advantageous for short-sea shipments when a paper Bill of Lading can sometimes arrive later than the vessel.

The new paperless environment will also allow for reviews and alterations to be undertaken online, to remove paperwork delays and facilitate faster payments.

The new i-Dispatch function can be used for electronic exchange of the wide range of documentation associated with shipments in addition to the B/L, including packing lists, commercial invoices, certificates of origin and other customs-related credentials, licences and inspection reports.

“We are delighted that Evergreen, such a major global container carrier, is partnering with us to help transform an industry on which world trade depends,” said Ian Kerr, CEO of Bolero.

“Bolero’s eBL platform has already been proven in bulk cargo trades and initial container-based transactions by corporates such as Cargill, BHP Billiton and Reliance Industries, but now with Evergreen we are taking a very significant next-step in the digitisation of world trade by putting our technology at the disposal of a wider community of container shippers and NVOCs.”

Fleet performance monitoring system integrates marine insurance module

Wartsila subsidiary Eniram has updated its Eniram Skylight fleet performance monitoring system to version 3.0, partnering with Concirrus to integrate marine insurance underwriting tools that base insurance calculations on accurate actual operational data.

The update to the subscription-based service also adds mobile notifications, regarding speed over ground, speed through water, estimated time of arrival, and charter party compliance.

Also added is a virtual propeller RPM (revolutions per minute) sensing system, which Eniram says does not require integration with other ship systems. This module provides access to propeller RPM data that can be used to improve the accuracy of the speed/fuel curve calculated by the software.

The partnership with Concirrus will see navigation and situational data supplied by the Eniram software integrated into Concirrus’ marine insurance underwriters’ application, Quest, which is used by marine insurers to manage risks in real time. With accurate, real-time operational data actual risk profiles can be better understood, meaning that customers will pay only for insurance they need.

“We are delighted to establish this partnership with Concirrus. With Eniram’s rich history in serving marine customers, and Concirrus’ proposition for the insurance market, this partnership strengthens both offerings and accelerates market adoption,” said Johan Backas, managing director of Eniram.

“By working together, and through the integration of our products, we shall deliver the world’s first connected marine insurance proposition. It will lower operating costs by actively monitoring vessel performance, by allowing insurers to reduce premiums accordingly, and by providing visibility of the insurance policy conditions and compliance to both shore and ship.”

www.dnvgl.com
www.bureauveritas.com
**TFDE (tri-fuel diesel electric) LNG carriers**

TMS Cardiff Gas Ltd has agreed a new Athens-based ship management company years and the solution offered by operational awareness solution for a few operations. Tallink and Silja Line brands.

“We have been looking for a fleet-wide operational awareness solution for a few years and the solution offered by Fleetrange meets all our key needs, such as video feed from Tallink’s 13 cruise ships, weather data, as well as a live on-demand information on real-time ship motion, ship

Fleetrange notes that it has also now begun official trials of its automatic Bridge Operational Quality Assurance (BOQA) system with Tallink, developed using methodologies adapted from the aviation industry to provide systematic tracking and trending of Operational Quality events, such as heavy weather along the route, heavy motion, crash stops, close encounters with other ships, and ECA/PSSA and restricted area entries.

**TMS Cardiff Gas agrees engine optimisation deal**

Estonia-based Tallink Grupp has agreed a deal with Fleetrange of Finland to roll out a real-time IoT-powered operational awareness system across its fleet of ships, to share operational information in between vessels and with shore-based organisations.

The Fleetrange IoT (Internet of Things) system to be provided to Tallink will offer information on real-time ship motion, ship weather data, as well as a live on-demand video feed from Tallink’s 13 cruise ships, fast ferries and RoRo vessels sailing under the Tallink and Silja Line brands.

“We have been looking for a fleet-wide operational awareness solution for a few years and the solution offered by Fleetrange meets all our key needs, such as

Tallink to roll out IoT-based operational awareness system

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“We have been looking for a fleet-wide operational awareness solution for a few years and the solution offered by Fleetrange meets all our key needs, such as

The agreement is an expansion to an earlier Technical Management Agreement signed between Wärtsilä and TMS Cardiff Gas in 2014, adding Eniram’s platform alongside other new additions as part of Wärtsilä’s overall Dynamic Maintenance planning system.

Wärtsilä will manage the maintenance and optimisation of the vessels’ engines, providing all necessary spare parts, as well as field service resources for scheduled maintenance planned according to the actual running hours of the engines.

Remote support services will facilitate immediate troubleshooting as required and minimise service visits on board.

“Our vision is to be one of the world’s leading LNG and LPG operators with the highest standards of excellence in terms of performance, reliability, and safety,” said George Kourelis, general manager of TMS Cardiff Gas.

“The maintenance and upgrade service needs of the tri-fuel main generator engines on our LNG carriers are technically advanced and require detailed planning with a professional partner to ensure the engines’ reliable performance and the vessels’ operability.”

“Through our five-year partnership with Wärtsilä and Eniram, we are confident that our fleet will continue to be our customers’ premium choice.”

**TMS Cardiff Gas operates four TFDE LNG carriers**

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setting a course
4–7 sept 2018
hamburg

3 sept
Maritime Future Summit

4 sept
TradeWinds Shipowners Forum

5 sept
gmec, global maritime environmental congress

6 sept
Offshore Dialogue

6–7 sept
MS&D, international conference on maritime security and defence

7 sept
Maritime Career Market

hamburg

smm-hamburg.com /trailer
the leading international maritime trade fair

facebook.com/SMMfair
linkedin.com/company/smmfair
setlto.com/SMMfair
youtube.com/SMMfair
DNV GL’s package of fleet management

A 1.8 million Vessel Technology Assessment System (VTAS) project has been established in the UK, which aims to quantify the financial benefits of investing in fuel efficient technologies for existing and future vessels to assist in accelerating their deployment across the maritime industry.

The project will be led by BMT and delivered in partnership with Black & Veatch, having been commissioned and funded by the Energy Technologies Institute (ETI).

“Maritime transport emits around 1,000 million tonnes of CO2 annually and is responsible for about 3 per cent of global greenhouse gas emissions,” said David Butler, project manager for HDV marine efficiency at the ETI.

“Furthermore, the International Maritime Organisation states that emissions could rise by 50 – 250 per cent by 2050 compared to 2011 levels. Therefore, the efficient use of fuel through the implementation of energy saving devices (ESDs) will be critical to the future affordability, security and sustainability of maritime transport.”

The project will look to create independent, transparent information to support decision makers who can positively influence commercial shipping to reduce fuel consumption.

Initially, work will focus on addressing perceived barriers to the adoption of ESDs, providing data driven technical models of individual ships, and performing financial modelling to help demonstrate the CAPEX and operational impacts of these technologies.

“There is a choice of ESDs within the commercial shipping market such as Flettner rotors, high efficiency propellers and wingsail technologies and yet the uptake to date has been somewhat slow, due to the perceived technical and financial risks of implementing these technologies,” said John Buckingham at BMT.

“Through improved ship-based modelling, assessments and data validation, this project will allow us to explore the options and provide independent evidence that stakeholders can trust to make an informed decision.”

The prescriptive calculation software now also includes enhanced data linking capabilities, to add body plan data from 2D CAD software or to import transverse sections from 3D CAD software, and to import transverse sections from 3D CAD software. The design software is now a stand-alone system, allowing users to create calculation reports while editing cross-section data or operating the calculation window.
Shipping is waking up to a new age where digitalisation is re-shaping the world and creating increased opportunity for development and innovation. Revolutionary concepts plus the evolution and advancement of existing platforms are providing unparalleled growth opportunities for shipping and related transport and supply chain infrastructure. However, achieving digital success requires knowledge and understanding, and an ability to drive your company’s digital thinking and transformation rather than be driven by it. We return to Germany to host the next in our series of Maritime CIO Forums in the port city of Hamburg on 24 April 2018, where we will investigate how we can harness these opportunities and will debate which are going to stick and really make a difference. We will ask how can we identify the real digital legacy in front of us and truly re-define digitalisation in maritime and transport.

Visit [www.hamburg.thedigitalship.com](http://www.hamburg.thedigitalship.com) for more information and to book to attend.

Enquiries: Cathy Hodge, Event Director  |  email: cathy@thedigitalship.com  |  www.thedigitalship.com

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**Digital Ship extra distribution and editorial line up**

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* This calendar ia a guide and is subject to change without notice. Information correct at time of printing.
Advances in technology are helping to slowly lift the veil on the truth behind the apparent state of things in shipping operations, uncovering trends in previously inaccessible data that can provide evidentiary proof of how well — or not so well — a vessel and its crew are performing.

While technologies that monitor systems onboard and from remote locations have amplified the quantity of data that is available, focus is increasingly also turning towards the storage and application of this data in integrated decision-making, to help companies derive significant gains in energy efficiency and vessel performance.

It has always been true that the majority of businesses, including shipping businesses, like to measure things. It enables comparisons to be made and indicates progression, or where operations could be improved.

You will have heard a thousand times that ‘you can’t manage what you don’t measure’, and while this is certainly the case, you can also only manage these measurements if you really understand how the information derived can be used to improve performance.

Many believe that measuring everything and generating huge quantities of data, ‘Big Data’ if you will, is the first step to developing intelligent ships. Essentially, better monitoring and more data allows operators to see exactly what is going on and where, as if the ship itself is able to pinpoint exactly where its fuel losses are coming from and why.

While the definition of Big Data could be discussed to exhaustion, the more pressing issue is how this data is used to ignite change. The data itself is essential in monitoring the performance of a vessel, but it is also vital that there is a system or filter facility available to make sense of these millions of data points generated each second.

Data of this quantity will only be useful if it can be coupled with the storage and post-processing facilities that allow issues to be pinpointed and resolved. Big Data has the potential to be of tremendous value, but it requires conversion to a digestible format that can identify and improve vessel performance and operational efficiency.

Further innovation in maritime technologies has increased the breadth of monitoring solutions available to assess a ship’s performance at any point of its operation, often making systems accessible from any location.

Remotely monitoring or controlling a ship allows offshore experts located thousands of miles away from the vessel to immediately see where there is a problem with a piece of equipment or where fuel is being lost, for example, and automated alerting processes can let the crew on board know so that they can rectify these issues immediately.

Some believe this is the first step towards autonomous operations, but in any case, remote monitoring both increases situational awareness and gives those onboard tools they can use to make changes that can increase vessel efficiency.

In the long-term this can support predictive maintenance, enabling vessel operators to detect early equipment failures before they happen, as well as allowing ship operators to anticipate required maintenance in order to reduce fuel losses. New equipment can be constantly monitored by experts, to ensure it is performing as it should be and to analyse equipment upgrades to judge their contribution to operational efficiency.

Furthermore, continuous and remote monitoring can be used to optimise navigation, increasing overall fuel efficiency. Mobile satellite communications can deliver information from thousands of miles away, providing the option for ship operators to change course or avoid an incident that would result in wasted fuel.

Supporting skills on board

Despite the advances in technology that have been made however, monitoring a vessel, whether remotely or not, is only going to be as successful as the quality of the data provided by the onboard sensors and the skills of the people analysing and advising on ship performance.

TORM’s head of technical division, Jesper S Jensen, believes that poor ship performance comes from not having the right set of people or those with the right skills to utilise the technology and analyse the data available. While data can help a company to understand a vessel’s performance, it does not drive change without action from the right people.

“If ship performance is bad then we as operators to anticipate required maintenance in order to reduce fuel losses. New equipment can be constantly monitored by experts, to ensure it is performing as it should be and to analyse equipment upgrades to judge their contribution to operational efficiency.

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“If ship performance is bad then we as people are not good enough and we only have ourselves to blame,” he said. Mr Jensen points to two important aspects of maximising ship performance which he believes are critical to achieving success. First and foremost, success is dependent on having the right people with the right skillsets at sea and on shore to promote integrated decision making processes. Secondly, to drive improvement companies must ensure that they have accurate and reliable equipment, sensors and software implemented onboard.

Generating large sets of data is often the top priority for shipowners and operators, but “what is really needed is the right people to analyse this and make decisions that will improve vessel efficiency, otherwise you are running blind,” said Mr Jensen.

While machines may be able to collect and filter the data, they are not yet at the stage where they can fully analyse it and make decisions based on a vessel’s performance. These are still ultimately human decisions, and so it is essential that there is both motivation and expertise available to analyse and act on the data for integrated decision-making.

Mr Jensen places great importance on making sure that onboard staff know what they are doing and why, as they need to feel like they are in control and are contributing to vessel efficiency improvements. This is likely to increase their knowledge, especially when working closely with remote experts, so much so that they may even develop their own skills to be able to recognise something before others are alerted to it.

Speaking with Sverre Patursson Vange, head of performance management at J. Lauritzen, it is clear that TORM is not alone in this approach. Mr Vange says that J. Lauritzen wants to make sure that, with all the additional equipment and software on board, the crew are not overlooked and still have the same involvement.

“We don’t want them to think we are looking over their shoulders so we installed a display board to make it visual so that they (the crew) know (what is going on), and there is nothing that we see in the office that they can’t see,” he told us.

Including the crew in this way can help to promote a culture where technology is seen as a tool to enhance people’s skills, and not replace them, which is of particular importance in an industry that is working towards an autonomous future. Even with remote and autonomous operations enabled by technology, people will continue to be vital to the smooth running of an operation, regardless of the industry.

*People are so important in an organi-
The web-based platform offers a dashboard of data at start-up and equipment status for handling of fuel used, leakage of machinery, and statements about how jobs are distributed, and this takes time.”

Doing the right things from the start, rather than making further corrective investments over time is the most efficient way of optimising shipping business processes, according to Mr Jensen and the team at TORM.

In practice, this means assembling a competent and diversified team, backed by commitment from top management. A team with people from different backgrounds is essential, he says, so that people with hands-on experience from time at sea can share their experience with people knowledgeable in change management.

“The idea overall is that if you have the right set of people and you have the right software to collect the data you really want to look at, then you should theoretically be able to invest, for example, $1 in fuel efficiency and equipment and get back $5 in fuel savings,” said Mr Jensen.

Advanced technologies and algorithms can provide invaluable insight into a ship’s performance, but only if the data is used and applied correctly. According to Mr Jensen, this is what will ultimately lead to the greatest gains in fuel reduction and the highest levels of optimisation, without wasting investment.

Thome rolls out waste management software

Thome Ship Management Singapore has completed the implementation of a waste management software module aboard its fleet of 210 ships, linked to its NAU fleet performance monitoring software system from Orion Marine Concepts.

The waste management application will be used to monitor and control waste (oil and bilge) generation and disposal onboard the company’s ships, alerting managers of any potential issues related to fuel used, leakage of machinery, and equipment status for handling of disposals.

If any discrepancies are discovered the management and environmental compliance team are notified automatically.

“The marine industry has been an essential part of modern society, and waste generation is an inevitable part of shipping. We, at Thome, feel morally responsible to ensure the strict compliance towards the rules and the regulations regarding compliance which benefit the environment,” said Capt. Atul Vatta, vice president, head of compliance, at Thome.

“Therefore, we have been proactive in creating, testing and implementing this cost-effective strategy for waste management within the NAU ver. 2.0. With this software, we are notified of the situation onboard our vessels each day, helping us achieve a standardised and effective waste management practice across our fleet.”

Cloud-based maintenance system introduced

Maritime software provider Hanseaticsoft has launched a new web-based planned maintenance system called Cloud Maintenance, to assist in centrally planning and prioritising maintenance jobs across a fleet.

The software dashboard provides the user with a range of relevant maintenance management data at log-in. As the system is Cloud-based no software installation is required, allowing crews to collaborate with office staff within the same platform.

Cloud Maintenance also features a cash flow planning option which provides statements about how jobs are distributed, the resources required for each, and what costs are involved.

“Planned maintenance systems can be confusing and impractical to use. Cloud Maintenance aims to change this with an easy to use web-based system that enables companies to manage and keep on top of planned maintenance jobs, approval processes, have more accurate cash flow planning and better categorising and distribution of jobs,” said Alexander Buchmann, managing director of Hanseaticsoft.

“Companies can now plan maintenance work centrally, precisely and according to requirements. The system divides jobs into critical and non-critical to help companies identify which jobs are class-relevant and of high priority.”

“To avoid peaks, Cloud Maintenance also offers dynamic planning, so that jobs can be rescheduled at short notice, ensuring jobs are distributed evenly, which leads to greater efficiency.”

Cloud Maintenance is the latest addition to Cloud Fleet Manager, Hanseaticsoft’s broader web-based platform for fleet management.
2017 was a landmark year for cryptocurrencies, and the blockchain, across the tech world. A technology that had for the best part of a decade been seen as a niche development primarily of interest to hobbyists or ‘dark web’ criminals slowly gained more attention in the mainstream media over the course of the year, mostly fuelled by an investor frenzy as prices of various digital currencies rose by thousands of per cent in mere months.

Volatility is part of the bargain in the crypto space however, with the prices of tokens and coins across the board crashing hard in the early part of 2018, resulting in the global market losing about 60 per cent of its value in the space of a month. Clearly, this is a sector still trying to figure out its place in the wider economy, with the spectre of the ‘dot com’ bubble of the late 1990s looming large over another potentially game changing technology.

Nevertheless, eager entrepreneurs are making sure that the maritime industry is not missing out on the crypto craze, with a number of different projects having been launched since the latter part of last year looking to solve some of the challenges that present themselves within various facets of the shipping sector through the use of newly created digital currencies.

The first of these to be reported in Digital Ship was cryptocurrency start-up 300cubits, which began its original initial coin offering (ICO) to raise funds for its project in August of last year. Development has continued in the interim to the point where the company began a Shipper Sign-Up Scheme on February 1, 2018, inviting relevant stakeholders to register to receive free crypto tokens (called TEU) for use on the 300cubits platform.

That invitation is being extended to all freight forwarders, beneficial cargo owners, non-vessel owning operators and third-party logistics providers, who can register on the 300cubits website to receive their crypto coins, which have been designed to be used as digital booking deposits. This registration process will continue until summer 2018.

Once the ecosystem is up and running the TEU tokens will be used as a ‘currency’ for container bookings to solve ‘no show’ issues in the shipping industry, using smart contract blockchain technology to verify the satisfactory completion of transactions.

300cubits notes that the TEU tokens will be distributed at zero cost to shipping industry participants, and that the use of the tokens requires zero system integration, as a Cloud-based TEU ecosystem is being developed to manage the use of the tokens as booking deposits.

Any TEU ecosystem transaction costs will be calculated and payable in the TEU tokens that have been received for free, meaning transaction costs will also be kept at zero.

20 million TEU tokens will be provided on a ‘first come, first served’ basis to successful registrants after registration closes, with all accepted parties guaranteed a minimum quantity of tokens, the company says.

The roll-out of the 300cubits cryptocurrency received a recent boost with the news that members of Coopernic Group, a strategic buying alliance from Europe, have confirmed their participation in the project by joining the Shipper Sign-Up Scheme.

Coopernic Group is a strategic alliance of independent retail companies with a combined presence in 21 countries. As such, improving efficiency and transparency in container shipping is a source of potentially significant benefit to the group’s participants.

“We and some members of the Coopernic Group are of course interested in constantly optimising the supply chain,” said Stefan Blickensdörfer, managing director of SRTS Europe, a logistics management company based in Düsseldorf and a Coopernic Group partner.

“Among other things, this includes minimising the high number of no-shows on the part of the shippers and roll-over on the part of the shipping companies. Against this background, the innovative system of 300cubits is interesting for us as a network.”

**Blockchain container registry**

Another maritime cryptocurrency looking to streamline trade in the container shipping sector is Danish start-up Blockshipping, which is gearing up to launch a blockchain-based global container registry that would allow stakeholders to perform a wide range of related transactions within its digital ecosystem.

The aim of the Global Shared Container Platform (GSCP) is to provide a complete blockchain-enabled registry where the full global inventory of approximately 27 million containers is recorded, along with the real-time location of each box.

The ultimate goal, which the founders hope to achieve within three to four years after launch, is to reach 60 per cent market coverage in the GSCP blockchain registry – which means some 16 million container units having their real time information present in the system.

Blockchain estimates that more efficient deployment of containers could create savings of approximately $5.7 billion per year for the global container industry, and reduce annual CO2 emissions by at least 4.6 million tons, by increasing box utilisation, limiting the movement of empty containers, and reducing the total number of containers required.

“The problem here is that there is no central registry of all these containers constantly shifting location, incurring payments and changing ownership,” said Blockshipping CEO Peter Ludvigsen, a man with significant maritime experience at companies like Maersk Line and UASC.

“This lack of real time tracking results in a huge number of empty containers being moved around unnecessarily. What we do here is to solve the problem by building the missing container registry, the Global Shared Container Platform, GSCP. It will be based on blockchain and modern sensor technology.”

Blockshipping will require sensors to be placed on all registered containers to achieve its lofty targets, and is hoping that the potential benefits offered by its GSCP platform will accelerate adoption of real time tracking devices (in the dry container sector in particular, which has understandably lagged behind reefers in this regard) by providing a business case for turning the costs incurred by adding sensors into operational savings through container optimisation.

The company is also looking to digitise the CSC plate (Convention for Safe Containers) system to assist in digital tracking and further improve its ability to keep tabs on container movements.

**Container Crypto Coin**

Blockshipping’s plan will involve the creation of two cryptocurrency tokens, one for internal use on the platform and one for external trading as a funding mechanism.
The internal Container Platform Token (CPT) is a utility token which will be used for record-keeping and settlement of transactions between actors within the GCSP platform. These transactions will relate to a variety of services and fees like ‘capital purchase’, ‘container exchange fees’, ‘terminal and depot handling costs’, and ‘fees collected by carriers’, the company said. The external dividend token, Container Crypto Coin (CCC), will be issued on the global financial blockchain (as is most typical for token based cryptocurrencies) and used to generate funding for the project through an initial coin offering (ICO) beginning on April 15, 2018. CCC tokens will be sold at US$0.62 each during the ICO. Ten per cent of the maximum 50 million CCC tokens that can even be created will be available during this phase.

Ethereum’s own Ether tokens are currently the second largest cryptocurrency by market capitalisation behind Bitcoin. The Ethereum Virtual Machine (EVM) running on the Ethereum blockchain powers its ‘smart contracts’ capability, which allows transactions to take place on the decentralised platform that are then verified by the network and added to the blockchain.

Funding generated during the Blockchain ICO process will be added to backing already received by the company from other sources, which have to date included private business angels, VCs and the Danish Maritime Foundation.

Returns for investors will depend on the platform’s dividend payout ratio, as well as any other surplus from its activities. For the moment, the exchange is opening to revenue share from participating CPT owners with the intention of building a community to drive the exchange and the development of the GCSP platform.

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The physical assets traded on the platform are held by a third party company, supervised by a board which the project team says will comprise of “persons of high standing in the maritime industry to ensure protection of underlying value/earnings capability of the asset and to ensure that operations are conducted / cash flows maintained in a transparent manner for the benefit of fractional asset holders.”

The company is being backed by AlphaSeas Management Limited, a marine investment and asset management advisory group, with that company’s principals having invested approximately €750,000 into the development of the ecosystem.

“We already have approx. US$200 million of assets and services committed to the platform,” the company said, in a whitepaper. “In 5 years (by 2023), we conservatively expect US$1 billion of assets onboarded and tokenised on our store. This emulates the growth trajectory of current ship finance organisations which have, of course, not benefited from the liquidity that SHIPs bring to participation.”

“Depending on the leverage that users decide to employ in their trading activities, we believe transactions will mirror large OTC exchanges for currencies where velocity can exceed 90x per month or 1,000x per year. This could build transaction volume to nearly US$15 trillion per annum by 2023. An improved speed in assets onboarding due to technology absorption effects and liquidity generation effects could easily help the transaction volume surpass the US$1 trillion mark.”

Wider blockchain applications

The development of cryptocurrencies is just one specific application of blockchain technology however, and numerous projects across the maritime sector have used the underlying infrastructure and its particular benefits in transparent data sharing and record keeping to run pilot projects on everything from international document exchange to maritime insurance.

Among the most recent successes has been a project involving Pacific International Lines (PIL), PSA International and IBM Singapore to collaborate on blockchain-based supply chain business network systems to track and cargo movement.

Having signed an MOU in August 2017, the three parties have spent the intervening period working on a Proof Of Concept (POC) project, built on the IBM Blockchain Platform, applying and then testing a blockchain-based system for cargo transport from Chongqing to Singapore via the Southern Transport Corridor.

With the data gathered from the pilot, PIL, PSA and IBM say that they have been able to demonstrate that the blockchain platform has been successful in streamlining the shipping process, having been used as a basis for transparency and regulatory compliance exception of multimodal logistics capacity bookings while also providing a facility for real-time tracking and tracing of shipments.

The partners believe that there is now sufficient evidence to show that the concept can be taken to the next stage, where the scope of the POC will be widened and rolled-out to other participants in the nodes of the distribution network that form the supply chain logistics ecosystem will be encouraged to take part.

“We are highly committed to this idea because we as a company believe the wider application of blockchain across the global logistics and shipping businesses will lead to much greater operating efficiencies, security and transparency. It is the future for our industry,” said Teo Siong Seng, managing director of PIL.

Looking further into the future, the container industry could be set to benefit by development underway in China on the use of blockchain-based technologies by HNA Technology, whose Technology Research Institute’s AI-driven ‘Intelligent Logistics Platform’ claimed first prize in the Greater China Region as part of the IBM Global Watson Build Challenge.

The competition is based on IBM Watson’s Cognitive Build, which explores AI (artificial intelligence) business scenarios and solves industry issues. HNA Technology’s system combines Watson’s AI abilities in cognition and interaction, using machine learning optimisation algorithms and blockchain technology, to allow for better information sharing in maritime transport involving multiple parties, with the ultimate goal of increasing the handling speed of container transport.

The platform also integrates functions for maritime logistics monitoring and management, logistics processes and logistics robot identification and coordination through the combination of HNA Cloud technology and Watson’s Visual Recognition abilities, to further drive improvements in container shipping efficiency.
3D printing project for maritime parts awaiting delivery

Roos will manage engineering of the printer frame and table itself, and aims to develop specific 3D printable applications for the maritime industry. The machine will employ Continuous Fibre Additive Manufacturing (CFAM) technology, which adds a continuous carbon or glass fibre to the granule used, chosen from a variety of thermoplastics, to considerably increase the strength of the material. An internal heating mechanism prevents the new part from warping or shrinking during printing and allows it to cool in a controlled manner.

Once up and running, Rooy3D says it has three main goals. The first is to research and test which maritime products would be suitable to be manufactured in carbon reinforced plastics, while the second is to offer a 3D printing service for reinforced plastics to external clients.

Finally, the new company aims to add consultancy services to guide companies looking to develop their own projects in the field of 3D printing.

Wijnne Barends agrees nav/com package deal for newbuilds

Radio Holland reports that it has agreed a deal to supply navigation and communication systems packages to six newbuild vessels being built for Dutch shipping company Wijnne Barends, based in Delfzijl. Wijnne Barends was established in 1855 and has a relationship with Radio Holland stretching back approximately 50 years. The company currently has more than 30 vessels in its fleet.

The six new 4,200 dwt, 98m Lady-H Class general cargo vessels will trade in northwest Europe. The ships are being designed to meet Swedish and Finnish Ice Class standards and will be built at Chowgule Shipyards, in Goa, India. The first ship is set for delivery in November 2018, with the final vessel expected to be delivered in July 2020.

The systems to be supplied to the newbuilds include Furuno X-Band and S-Band Radars, as well as Furuno Echosounder, Speedlog and AIS systems, Transas ECDIS, and a Raytheon-Anschütz gyro compass system.

"On the communications side, a Furuno VHF unit will be installed alongside Inmarsat-C, S-SAS, and LRIT equipment, as well as a Cobham VSAT system. "We have a very long relationship with Wijnne Barends as preferred supplier of NavCom equipment for newbuilds. In competition with other companies I believe the positive experiences Wijnne Barends had in terms of reliable equipment and service over the years were key to win this order," said Theunis Eelkema, Radio Holland’s sales manager services north.

Rolls-Royce review could see commercial marine business sold

Rolls-Royce has announced that it intends to conduct a “strategic review” of its commercial marine business, which could see these operations sold off as it looks to narrow its focus and concentrate on the aerospace, defence and power systems markets.

This review will be undertaken during 2018 and Rolls-Royce says that it will update the market of the outcome of this process “at the appropriate time.”

Building on our actions over the past two years, this further simplification of our business means Rolls-Royce will be tightly focused into three operating businesses, enabling us to act with much greater pace and capability in reaching our full power needs of our customers,” said Rolls-Royce CEO, Warren East.

The company says that its commercial marine business has had to deal with weak demand for products and services in the offshore oil and gas market since 2015, which significantly impacted its profitability.

These changing market dynamics have led Rolls-Royce to invest in new technologies in maritime, with the company having been particularly prominent in the fields of ship intelligence and autonomous vessels, culminating in a June 2017 demonstration in Copenhagen harbour of the world’s first remotely operated commercial vessel.

This is the right time to be evaluating the strategic options for our commercial marine operation,” said Mr East.

“The team has responded admirably to a significant downturn in the offshore oil and gas market to reduce its cost base. At the same time, we have carved out an industry-leading position in ship intelligence and autonomous shipping and it is only right that we consider whether its future may be better served under new ownership.”

In 2016, Rolls-Royce’s marine division contributed more than £1 billion in revenue, however this represented a loss to the company of £27 million. The commercial marine business accounted for 75 per cent of these revenues and all of the losses, with naval operations generating 25 per cent of revenue and achieving a small profit.

Rolls-Royce intends to restructure the marine division to place the naval section of the business within its defence operations, separating out the commercial marine activities.

The company’s research and development into automated ship systems is set to continue as normal during the review period however, with the official opening of a new research facility in Turku, Finland, to focus on such technologies having recently been celebrated.

The new Research & Development Centre for Autonomous Ships includes a ‘remote and autonomous experience space’ aimed at showcasing the autonomous ship technologies Rolls-Royce has already introduced, as well as those currently in the development stage.

The new centre opened exactly six years to the day after Rolls-Royce launched its first-ever autonomous ship development project, UXUS (User Experience for Complex Systems).

“There is great global interest in autonomous vehicles and vessels as a future means of transport. The opening of the Rolls-Royce Research & Development Centre for Autonomous Ships (in) Turku, a maritime city with a history of technological innovation, will help achieve our goal of digitalising the country’s transport sector,” said Finnish Minister of Transport and Communications, Anne Berner.

The new R&D centre will host projects focussed on autonomous navigation, the development of land-based control centres, and the use of artificial intelligence in future remote and autonomous shipping operations, Rolls-Royce says.

“l’m proud to say that the R&D centre is now up and running and that all stakeholders, partners and customers will be able to see what a remote controlled and autonomous maritime future could look like, and work with us to shape the future,” said Mikael Makenen, president marine, Rolls-Royce.

“The experience space that is part of the centre here in Turku, and a similar one we have in our Technology Centre in Norway, is aimed at demonstrating to our customers the very tangible benefits of what is often considered an intangible technology.”

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Kongsberg Digital has received DNV GL statements of compliance for two of its newest engine room simulator models. The DNV GL-ST-033 March 2017 Maritime Simulator Systems certification, which is based on the requirements of STCW Convention, Regulation 1/12, was awarded to the DEDF Cruise Ferry and L11 MAN 6S70 ME SCC K-Sim engine models.

Kongsberg Digital also reports that it has acquired Vigliok, Takele as its new VP and commercial manager. Before taking this new role Mr Takele served as chief operating officer at software company Cxense.

NAVTOR reports that it has appointed Anders Holme to the role of chief technology officer. Mr Holme has previous experience at a range of different companies including IBM, NOV, Aker Solutions and Lyse.

Wärtsilä has launched its new global Customer Support Centre (CSC), adding an additional channel to its existing support structures for questions about spare parts, field services, and Wärtsilä Online Services. The move follows a pilot of a CSC for the Americas, started in January 2016, and three additional CSCs over a two year period before the global centre was introduced.

Alphatron Marine reports that it has opened a second office in France, with a new facility in the Code d’Azur to join its existing Le Havre offices. Marcell Ebell will head up the new office, which will have responsibility for the service and distribution of Alphatron Marine and JRC products in the South East of France.

Unique Group reports that it has re-established a dealer agreement with Kongsberg Maritime for the Middle East region, whereby Unique’s offices in the region will offer sales and service for Kongsberg products in the territories of Bahrain, KSA, Kuwait, Qatar and the UAE. The two companies presently have an agreement in place for Nigeria and Kenya.

Nautisk has appointed a new commercial director, with Espen Martinsen joining the company after seven years at the Danish toy group, LEGO, most recently as Nordic field sales director. Mr Martinsen was also previously partner manager at Norwegian CRM software vendor SuperOffice.

RIMS (Robotics In Maintenance Strategies) has expanded its list of class approvals, with the Korean Register (KR) certifying the use of its Remote Inspection Techniques (drones) during surveys of enclosed spaces.

International Marine Services (Pvt) Ltd, an Elcome International subsidiary, has been named an official non-exclusive distributor for UKHO Admiralty paper and digital products in Sri Lanka. The distribution agreement certifies that the Colombo-based office meets the same quality and audit requirements as Elcome’s headquarters in Dubai.

Simwave and Kongsberg Digital report that they have completed the Site Acceptance Test (SAT) of what they claim is one of the largest maritime simulation packages ever delivered, meaning that the new Simwave Maritime Centre of Excellence in Barendrecht, Rotterdam, is now fully operational.

The training facility covers more than 5,000 square metres across two floors containing Kongsberg simulators, meeting rooms, offices and welfare facilities. The next step in the project will see the development of a hotel on the top floor of the building for customers and trainees, enabling training to take place round the clock.

Customers can train with their own instructors, Simwave instructors, or external instructors, with the first training courses having now been completed, the company said.

“The first reactions from clients and participants have been overwhelming,” said Marcel Kind, managing director of Simwave.

**Nautisk expands print on demand to South America**

Nautisk reports that it has added on-demand chart printing services for South America to its portfolio, with the launch of a new Print on Demand Location (PODL).

The new service will be provided in conjunction with Chart Patagonia in Buenos Aires.

**Digital Under Keel Clearance service undergoes testing**

The Efficiensea 2 project has begun tests of a new digital ‘Under Keel Clearance Service’ to support mariners in assessing the impact of tidal levels and weather on passage plans that include shallow water.

The service will initially cover the Sound between Sweden and Denmark during testing, but could potentially be adjusted to include other parts of the Baltic Sea and further areas across the world, the project says.

Mariners generally have to manually determine the best time to sail through shallow areas, taking tidal levels, weather and the vessel’s under keel clearance into consideration. The digital tool combines bathymetry data, constantly updated tidal tables and weather reports to show ‘comfort zones’ and ‘no-go areas’ for vessels with different draughts, to remove some of these manual processes.

The service can be accessed on both computers and tablets by those with a login to the web platform BalticWeb, where the relevant data is added as another layer on the platform’s nautical charts showing where it is unsafe to sail.

“It is all about making life more efficient for the navigator, so that he or she can focus on manoeuvring the vessel,” said Christopher Saarnak, project leader for Efficiensea2 and chief adviser at the Danish Maritime Authority.

“Rather than asking them to combine data from sea charts, tidal tables, weather forecasts and the vessel’s draught, all while navigating the ship, our service would offer a way to do it automatically. In the end, it could free up valuable time for the crew.”

The future perspectives for this kind of service are great. The better the data becomes, the less stress will be put on the navigators when sailing. This kind of service will also need to be thoroughly implemented if autonomous ships are ever to truly take off, and we are happy to help them do so.”

The data for the service is provided by the Danish Meteorological Institute, the Danish Geodata Agency and the Swedish Maritime Administration.
Commitment class ConRo (combination Crowley Maritime Corp LNG-powered range of navigation systems to two new Furuno has completed the delivery of a Rico. natural gas (LNG) and will operate Mississippi, US, are powered by liquefied constructed by VT Halter Marine in December 2017. LR’s descriptive note provides an Accessibility Level (AL) for autonomous/remote access for a system, ranging from the information-only AL0 (no access) and AL1 (manual access) through AL2 (cyber access for remote or autonomous monitoring) up to the highest AL5 (autonomous monitoring and control, with no onboard permission required or override possible). The AL3 notation given to COSCO Shipping Aries is defined by LR as ‘Cyber access for autonomous/remote monitoring and control (onboard permission is required and onboard override is possible).” “MV COSCO Shipping Aries is the first 20,000 TEU level ultra large container ship built in a Chinese shipyard owned by COSCO Shipping Container Lines. She is not only one of the largest container ships in the world, but also a ship with high cyber functions,” said Shi Yongxin, safety and technology department general manager, COSCO Shipping Container Line. “We have always attached great importance to a cyber enabled fleet, in order to enhance fleet management, reduce energy consumption and control emissions. In the field of the cyber enabled ship, LR has great research findings and well established requirements.” “During the construction of the MV COSCO Shipping Aries, we are very fortunate to have great support from LR and finally, successfully obtain the first AL3 level descriptive note for an ultra large container ship in the world. This ensures our goal is successfully achieved. We hereby express our heart-felt gratitude and look forward to more cooperation between both sides in the field of the cyber enabled ship.” ‘Cyber-enabled systems’ are considered by LR to be ship systems that would conventionally be controlled by the crew but which, through recent advances in IT and Operational Technology (OT), now include the capability to be monitored, or monitored and controlled, either remotely or autonomously with or without a crew onboard. This could range from simple remote monitoring with a crew onboard through to a fully autonomous vessel without a crew. Consequently, as the risks can vary considerably, the assessment of cyber-enabled systems requires a risk-based approach to identify the hazards introduced by cyber-enablement and to mitigate the associated risks, LR says.

www.lr.org

COSCO Shipping newbuild receives Cyber-enabled notation

The newbuild COSCO Shipping Aries

www.efficiensea2.org

Baltic route data sharing system initiated

Poseidon, an International Admiralty Chart Agent and Digital Distributor, notes that Challenger has received approvals from the Maritime & Coastguard Agency (MCA), the UK Hydrographic Office, as well as flag states including Panama, Marshall Islands, Singapore, and the Isle of Man. “(Challenger) offers complete compliance with all industry regulations, while offering end users a platform for receiving ENC permits instantly,” said Thomas Gunn, managing director of Poseidon Navigation Services. “Our Route Planner offers the navigational decision making the chart for the intended route, select which Admiralty products are needed for the voyage, and order any missing items by communicating directly with our server via e-mail or direct internet connection.” Poseidon has also launched a web-based ordering functionality for Admiralty Digital Products in conjunction with Marine Software Solutions, used to view current vessel inventories and monitor all digital navigational product spending per vessel.

www.poseidonnavigation.com

Challenger navigational data platform launched

Navigation package for Crowley LNG container ships

The new package delivered by the ships includes ECDIS, autoplott, BNWAS, VDR and GMDSS, as well as multiple DGPS, satellite speed logs, depth sensors, NAVTEX, and other sensors and data displays. The FMD3200 ECDIS will form the centre of the navigation system, connected to a track control unit that coordinates the ship’s exact position along a programmed route via the FAPBO20 autoplott. Redundancy for the system has been built-in through the use of multiple ECDIS installations, integrated with radar, differential GPS and other systems. The entire network is connected to the ship’s Bridge Navigational Watch Alarm System (BNWAS), providing ongoing monitoring at the helm, as well as a Voyage Data Recorder (VDR) to collect and record data from these and other onboard sensors.

www.furuno.com

Furuno has completed the delivery of a range of navigation systems to two new Crowley Maritime Corp LNG-powered Commitment class ConRo (combination container and Roll-On/Roll-Off) vessels, the El Coqui and Taíno. The two 219.5m purpose-built vessels, constructed by VT Halter Marine in Mississippi, US, are powered by liquefied natural gas (LNG) and will operate between the United States and Puerto Rico. Each has a capacity of 26,500 dwt and is designed to transport containers ranging from 20-foot standard size to 53-foot high-capacity units. The Furuno package delivered to the ships includes ECDIS, autoplott, BNWAS, VDR and GMDSS, as well as multiple DGPS, satellite speed logs, depth sensors, NAVTEX, and other sensors and data displays. The FMD3200 ECDIS will form the centre of the navigation system, connected to a track control unit that coordinates the ship’s exact position along a programmed route via the FAPBO20 autoplott. Redundancy for the system has been built-in through the use of multiple ECDIS installations, integrated with radar, differential GPS and other systems. The entire network is connected to the ship’s Bridge Navigational Watch Alarm System (BNWAS), providing ongoing monitoring at the helm, as well as a Voyage Data Recorder (VDR) to collect and record data from these and other onboard sensors.

www.poseidonnavigation.com

Poseidon Navigation Services has launched its new Challenger software system, for management of the delivery of digital charts and weekly navigational updates. The system provides updates for Admiralty Paper Charts & Publications, AVCS, ADP and e-NP digital products, allowing the end user to manage onboard holdings and receive updates either by a direct sync service or by receiving weekly e-mails. Poseidon, an International Admiralty Chart Agent and Digital Distributor, notes that Challenger has received approvals from the Maritime & Coastguard Agency (MCA), the UK Hydrographic Office, as well as flag states including Panama, Marshall Islands, Singapore, and the Isle of Man. “(Challenger) offers complete compliance with all industry regulations, while offering end users a platform for receiving ENC permits instantly,” said Thomas Gunn, managing director of Poseidon Navigation Services. “Our Route Planner offers the navigational decision making the chart for the intended route, select which Admiralty products are needed for the voyage, and order any missing items by communicating directly with our server via e-mail or direct internet connection.” Poseidon has also launched a web-based ordering functionality for Admiralty Digital Products in conjunction with Marine Software Solutions, used to view current vessel inventories and monitor all digital navigational product spending per vessel.

www.poseidonnavigation.com

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www.efficiensea2.org

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Singapore eyes digital future

www.mpa.gov.sg

The Maritime and Port Authority of Singapore (MPA) has announced details of a new Sea Transport Industry Transformation Map (ITM), which aims to apply emerging technologies arising from ‘Industry 4.0’ as part of a long term strategic plan to develop its next-generation port and international maritime centre (IMC).

Tuas Port will be developed as an ‘intelligent port’ under the plan, harnessing data analytics to optimise operations and incorporating elements such as just-in-time vessel arrivals and a Maritime Single Window approach for quicker port clearance.

These developments will be supported by the joint Port Technology Research and Development Programme (PTRDP), run by MPA and the Port of Singapore Authority, which will increase its focus on R&D and capability development in the areas of digitalisation, connected community systems, and automation and robotics.

The deployment of automated systems at Tuas Port will build on current trials of automated yard cranes and quay cranes in the Pasir Panjang Terminal, where a fleet of 30 automated guided vehicles (AGVs) has already been deployed for testing. MPA will also look to support external companies active in this sector by increasing its range of support services available, including an MPA Living Lab which will offer technology developers and industry partners a maritime data platform and a real operating environment at the port to co-develop and pilot new solutions.

New research centres of excellence at local universities NTU and NUS will also be expected to bolster Singapore’s maritime R&D capabilities and accelerate technology transfers and spin-offs for the maritime industry.

MPA will look to streamline the logistics chain in international trade by providing increased access to digital services for maritime companies transiting the port, working with Singapore Customs and the Singapore Shipping Association to promote the digitalisation of documentation and the co-development of cross-sector solutions, such as electronic bills of lading.

“The strategies and targets set out by the ITM are undoubtedly ambitious,” said Dr Lam Pin Min, senior minister of state at Singapore’s Ministry of Transport and Ministry of Health, speaking at the launch.

“But with the strong partnership from the industry, the unions and government agencies such as SkillsFuture Singapore and Workforce Singapore, I am confident that we can achieve our vision for Singapore to be a global maritime hub for connectivity, innovation and talent.”

Danish pilot management to be supported by new technologies

www.saab.com/maritime

Saab reports that has been awarded a contract to implement a new marine pilot dispatch system for DanPilot, the Danish State maritime pilotage provider, based on Saab’s PILOTCONTROL system.

The system will be used to improve the efficiency of pilot boat services, ground transportation and pilot services, by offering tools to manage rostering, planning and dispatch.

“We are very satisfied that we as DanPilot have chosen Saab as the supplier of their new pilotage management system, which is the key for efficient operations,” said Steen Larsen, DanPilot’s head of planning and digitalisation.

“By choosing PILOTCONTROL, DanPilot will be well equipped and have flexibility to meet the new local market challenges in 2020 and the years ahead.”

DanPilot dispatches approximately 160 pilots for around 20,000 operations per year, servicing local port entries to Danish ports as well as transits between the Baltic Sea and North Sea.

ACAT 4.0 update for ECDIS training

www.ecdis.org

The eMaritime Group has launched a new ACAT module as a ‘bolt-on’ for its annual competency assurance ECDIS training course, to meet the requirements of Edition 4.0 of the IHO ECDIS Presentation Library.

ACAT (Annual Competency Assurance Training) is used to assess the competency of officers in the performance of navigational duties and has been designed to ensure compliance with 2018 inspection rules.

The video-based course can be completed online, or downloaded to be completed offline where internet access may not be available.

“We have seen a huge rise in the number of companies signing up to ACAT,” said Neil Savage, onboard ECDIS instructor, ECDS Ltd.

“Not enough of us know what changed in the recent updates to ECDIS. The new 4.0 module has proved that all officers who have undergone the course have a significantly increased awareness of what changes came to presentation library 4.0. The feedback shows they have a better understanding of the new ECDIS display and new consider themselves better prepared for future audits and inspections.”

3D training for cargo operations

www.kongsberg.com

Kongsberg Digital has launched a new 3D virtual application for its K-Sim Cargo simulator, adding outside deck area training to sit alongside the existing 3D engine room capabilities of the company’s K-Sim Engine simulator.

The first 3D virtual model for K-Sim Cargo is based on a customised simulation model of a Very Large Crude Carrier (VLCC) M/T Kiho, which will be delivered to Magaysay training centre in Manila. Kongsberg says that it plans to make similar virtual systems available for its existing standard K-Sim Cargo ship models in the future.

The K-Sim Cargo virtual model simulates the deck area in 3D, enabling the student to zoom in and interact with valves, flanges, cargo tank hatches, pressure vacuum valves and crude oil washing (COW) machines. Visual effects such as leaks and hose connections are also included to add to the realism of the experience.

“We will continue to develop our K-Sim Cargo models by adding visualised deck area systems in 3D in the years to come,” said Kongsberg product manager, Leif P. Halvorsen.

“We have received excellent feedback on the corresponding systems for our K-Sim Engine models and this leads to a demand for similar systems in our K-Sim Cargo models. We believe the training value will increase significantly by adding this 3D feature.”

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Seafarer S-Mode sentiments sought

www.nautinst.org

The Nautical Institute (NI) has begun a consultation process to help assess the latest proposals for standardised navigation equipment, under which it intends to seek the views of seafarers on the introduction of an ‘S-Mode’ on critical navigation systems.

The latest concept for S-Mode is in its final stages of development before being finalised next year, built around an ‘always on’ standardisation of key features that could then be adopted by manufacturers of navigation systems and incorporated into their products.

The latest suggestions from the project were presented at the IMO’s 5th NCSR (Navigation, Communication and Search and Rescue) Sub-committee meeting by NI and other stakeholders, including CIRM (Comité International Radio-Maritime), the Western Norway University of Applied Sciences, and delegation members from Australia and the Republic of Korea.

“The collaboration with industry stakeholders has taken years, however this new approach of standardisation should lead to more effective familiarisation for mariners and ultimately improve the safety of navigation,” said David Patraiko, NI director of projects.

“For many years, and particularly with the increased complexity of ship systems, mariners have been challenged when sailing on different ships with different manufacturers’ equipment to become familiar with systems that are so safety critical.”

The new proposal, by CIRM, focuses on three elements that would be common to all manufacturers’ systems – a standard approach to hotkeys, the establishment of ‘essential information blocks’, and a defined list of functions that must be accessible by simple or single operator action.

However, NI notes that these proposals require feedback from mariners before they become enshrined in the IMO Guidance due to be finalised next year. As such, three short surveys have been created by the Western Norway University of Applied Sciences’ department of maritime studies and posted on the NI website (at www.nautinst.org/knowledge) to allow individuals and groups to offer their views.

Further background information on the project is available on the site, including a recorded webinar and full documentation, with the survey period to end on June 1.

Telemar agrees maintenance contract with Carisbrooke Shipping

www.marlink.com

UK-headquartered shipmanagement company Carisbrooke Shipping has agreed a deal with Marlink Group company Telemar to become its preferred provider of bridge system repair and maintenance services, expanding its relationship with the Group as Marlink is already its existing supplier of maritime satcom services.

The new service and maintenance contract will be fulfilled by branch, and will include 24/7 remote assistance, a dedicated service co-ordinator and on board engineer servicing.

A range of additional Telemar value added services also form part of the deal, including an online database of spare parts, reports to identify obsolete equipment and breakdown failure rates, and statistics to measure individual engineers’ productivity and success rates.

Telemar will provide maintenance services to the Carisbrooke Shipping fleet

Cyber penetration tests conducted on ECDIS in transit

www.navaldome.com

Cyber security company Naval Dome reports that it has completed pilot testing of a cyber defence system for Lloyd’s Register (LR)’s auxiliary (AX) ships. The vessel was operational during the tests, which were supervised by the classification society and ECDIS provider Totem Plus.

The pilot was carried out as part of LR’s ongoing work to develop maritime cyber security guidelines, with the tests the first of their kind to be carried out on a vessel in transit, according to Naval Dome.

The process involved an attempt to gain unauthorised access to an onboard ECDIS, though this was confined to an attempt on a back-up system to mitigate the risk of any consequent operational failure.

Naval Dome’s cyber security systems were implemented into the network in preparation for the tests, to detect and alert on the introduction of any unapproved media, such as USB sticks, as well as suspicious system updates, system anomalies and access by unauthorised personnel. During simulated system breaches at sea and in port the cyber defences were able to detect anomalies that occurred, alerting the user and shoreside staff with reports like ‘Cyber Attack! Zim Genova. Call your Captain – one of your GPS sensors is compromised!’ and ‘Cyber Attack! Zim Genova. Call your Captain – anomaly detected in ECDIS map location.’

A second phase of the project featuring an even more extensive set of penetration tests is set to be carried out in the near future, Naval Dome says.

“First phase pilot tests have demonstrated satisfactorily that the Naval Dome cyber security system is effective in protecting ECDIS from a cyber-attack,” said Jerry Li, Lloyd’s Register’s senior surveyor/MMS auditor, who oversaw the tests.

“We found the system provides a level of security without disruption to ship systems and operations. We hope to use the information and experience gained from the Naval Dome tests in the development of guidelines for maritime cyber defence.”

Unmanned firefighting vessel under development

www.kongsberg.com

Vancouver-based naval architects and marine engineers Robert Allan Ltd are working with Kongsberg Maritime to develop a new remotely-operated fireboat to be used to respond to dangerous port fires.

The unmanned RA.Lamander fireboat is expected to be used to combat fires involving containments, petrochemicals, shore-side structures or vessels where toxic smoke or explosion risk may delay or prevent a manned response.

Kongsberg Maritime will provide control and communications systems for the vessel, including a high-bandwidth, low latency wireless link from the fireboat to a semi-portable RA.Lamander operator console that can be located on another manned fireboat, or any other available vessel such as a tug or pilot boat.

The first vessel in the series, the 20m RA.Lamander 2000, will feature a range of automated functions, including dynamic positioning, water spray target holding, and ‘line protection’ where the boat automatically moves back and forth along a line while directing protective spray cover on shore structures or vessels threatened by a fire.

If a burning vessel poses a threat to its surroundings, RA.Lamander can also be used to tow it to a safe distance by means of its Grapnel Emergency Towing (GET) system.

The unmanned fireboat RA.Lamander is currently under development

The S-Mode project is looking for seafarer feedback

www.nautinst.org

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