navarino

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Navarino adds Ku Band to its broad portfolio of connectivity services

Navarino is excited to announce that it is entering the Ku band VSAT market. Currently in the testing phase, the company is already in talks with several Ku band providers, with beta testing expected to begin in the coming weeks.

Navarino CEO, Dimitris Tsikopoulos, said 'We are looking forwards to adding the Ku band option to our broad portfolio of connectivity services. 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.'

Commercial Director Konstantinos Katsoulis added 'As a technology company first and foremost, Navarino always tries to ensure it can offer a full range of advanced solutions to our customers. With the addition of Ku Band to our selection of services we are able to offer our own, customized packages consisting of broad mix of bandwidth options and commercial options that will really appeal to certain types of ship operator. The advantage of Navarino Ku band is that we are highly experienced not only at the connectivity level, but also at the bandwidth management and optimization level, thanks to our longstanding experience with Infinity.

Our commercial department is excited at the prospect of combining these two attributes into the best Ku band solution on the market. It will be a solution that not only is flexible, but also highly secure thanks to Angel, which can be built into the package.'

Mr Dimitris Tsikopoulos, Navarino CEO

Editor's note

by Christian Vakarelis

Welcome to another Navarino newsletter! The really big news this time is the addition of Ku band VSAT services to the Navarino suite of connectivity solutions. Our commercial team is really looking forward to offering our own, tailored Ku band solutions to those sectors of our industry where it is sought.

Navarino is also delighted to have become a member of the CSO Alliance and to be assisting in its work to raise awareness and training on cyber safety across the maritime industry. We are intending to hold cyber workshops in major maritime centres over the coming year and of course this project dovetails nicely with our cyber security portfolio, including Angel.

Also in this edition we take a look at some real examples of the type of cyber attacks Angel has been catching since its launch last year and these case studies really illustrate the surprising amount of cyber threats that shipping faces.

We are really pleased to announce that Infinity continues to see strong uptake among some of the most well-reputed shipping companies in the world. You will read about how both MOL in Japan and Norddeutsche Rederei from Germany have chosen Infinity and the ways in which they are using it to enhance their connectivity and applications onboard their vessels.

Enjoy this edition of the newsletter and we look forward to a successful 2018 for all!

Events and News

Navarino joins the Company Security Officers Alliance, building cyber awareness throughout the maritime IT world

Navarino is delighted to announce their partnership with the CSO Alliance, in a move designed to help the maritime community enhance their level of cyber awareness and readiness by working together to more effectively counter cyber crime.

The company joins the growing list of CSO Alliance partners who are actively working together to increase security awareness in the maritime industry. One step in this direction is the development of the CSO maritime cyber crime reporting portal.

In its pilot phase, this new tool allows for cyber crime to be anonymously reported with the effective pooling and analysis of reports within a secure online and vetted community. The portal will be integrated into CSO Alliance and ensure that cyber incident reports can be anonymously discussed, while sharing ideas and strategies for combating them.

There are also plans to make reporting and retrieving information on cyber security by ships crews more accessible. Navarino have supported a series of several CSO & CISO workshops in the major maritime centres such as Antwerp, London, Rotterdam, Paris and Hamburg to raise awareness of all the planned reporting platform options as they are being refined, before release to ship operators and owners which is intended later in the year.

Mr Mark Sutcliffe, Director of the CSO Alliance

Navarino CEO Dimitris Tsikopoulos said 'Cyber crime is unfortunately a fact of life today for many in the maritime sector. By partnering with the CSO Alliance, Navarino is proactively helping to build awareness of the threat but also offering our customers tools to combat it, alongside our existing cyber security portfolio. We are proud to be working with the maritime industry's community in this way and we want to do all we can to strengthen and protect our industry's cyber resilience.'

The Director of the CSO Alliance, Mark Sutcliffe added 'To have Navarino, one of the maritime industry's leading technology companies, join our efforts is very welcome. As a provider of advanced communications solutions, Navarino is extremely well placed to both spread awareness of cyber security and also to help shipping companies maintain and implement vigilant security policies. We, as a community must, where possible, be proactive in our approach to the cyber threat and work together to share knowledge amongst our peers. The resulting cyber awareness will benefit everybody and lead to a safer maritime community.'

Both Navarino and our partners at the CSO Alliance are keen to spread the word of this important awareness work and we intend to hold further workshops over 2018 in the major shipping centres. To learn about the next event near you, please just contact your Navarino account manager and we shall let you know the calendar for upcoming events this year.

The 'Be Cyber Aware at Sea' campaign wins the SMART4SEA Training award at the Athens Yacht Club

Mr Jordan Wylie, founder of the 'Be Cyber Aware at Sea' campaign being presented with the award by Mr Christian Vakarelis, VP Media Communications

Navarino was proud to again sponsor and present at the SMART4SEA Awards. The winners of this year's SMART4SEA Awards were announced at a prestigious ceremony which took place on Tuesday 6th of March, 2018 at the Yacht Club of Greece. Winners demonstrated outstanding performance within the scope of fostering Smart Excellence and Sustainable Shipping following a combination of open nomination and audience-vote.

Mr Jordan Wylie, founder of the 'Be Cyber Aware at Sea' campaign, was presented with the award for training by Navarino's VP Media Communications, Christian Vakarelis, who said 'Navarino is delighted to be working alongside JWC International and the Be Cyber Aware At Sea team. We have seen a great deal of interest among our customers in this cyber training for crews and we are very pleased that the hard work of the JWC team and their excellent initiative has been recognized with this award. It will help to bring further awareness of the critical importance of cyber security to the maritime industry and as shipping becomes ever more reliant on IT, that can only be a good thing.'

Mr Wylie said 'Awareness, Education and Training are without a doubt the first steps which all organizations in the global shipping industry must embrace in 2018, both on land and at sea, if they are to be prepared for the future challenges that the digital era of shipping will continue to bring.

I would like to thank everyone who has supported the campaign, including shipowners, managers, operators, marine insurers, ship to shore communications providers and most importantly the seafarers who work tirelessly everyday – these are the people that literally make the world go round and it is our duty to ensure they are safe and secure from all risks, some of which continue to emerge and are perhaps less obvious than the usual physical threats we are used to facing.'

Market News

Norddeutsche Rederei places bulk order for Infinity Cube to install across entire fleet

Norddeutsche Reederei has announced that it will begin installing Navarino's Infinity Cube solution across its fleet of 50 vessels. The company, which has been operating for 150 years, has a fleet consisting mostly of modern container vessels which trade worldwide.

Christian Mix, Norddeutsche Reederei's IT Marine System Administrator said, 'We are in the process of further upgrading our connectivity capabilities having completed last year's VSAT installation project across all vessels, in order to increase the bandwidth available for both business and crew purposes. We needed a way to control and manage this new bandwidth better and so we looked around the market for solutions which could meet our requirements.

Having done quite some research and some tests, we chose the Infinity Cube from Navarino. We had heard very good things about its functionality and after a successful trial we intend to use it to the full extent. On the business side, we like that the Infinity Cube provides virtualization for our further system upgrades, full redundancy and that we can run all our business applications over it, including our purchasing system, PMS, DNV Navigator and chart updates. We also are going to use the Infinity Cube to enhance our crew welfare facilities, as it gives us full control over how, when and what our crews can do online at sea as well as very flexible monitoring and management tools.'

Ivo Terhell, Business Development Manager at Navarino Hamburg added 'Navarino is very proud to be working with Norddeutsche Reederei on enhancing their connectivity options with Infinity. It is very rewarding for us to see such a well reputed company as Norddeutsche choosing Infinity, and we are looking forwards to working closely with them in order to meet the requirements of this advanced, modern fleet.'

MOL uses Infinity combined with Fleet Xpress in their 'visualization at sea' project

Mitsui O.S.K. Lines, Ltd. have announced a joint success with Japan Radio Co., Ltd. and JSAT MOBILE Communications Inc. in building a network that shares data recorded in Voyage Data Recorder (VDR) by using Fleet Xpress provided by Inmarsat.

Like the flight data and cockpit voice recorders on airplanes, VDR records data on vessel movement (position, navigation speed, main engine rpm, and so on), voice communication on the bridge, image data on nautical instruments such as radar, and the Electronic Chart Display and Information System (ECDIS).

An international treaty mandates that large-scale vessels and passenger ships that ply international waters be equipped with VDR, in order to analyze and identify the background and causes of marine incidents, based on data collected by the VDR prior to such incidents.

Previous issues

Conventionally, VDR data was accumulated in its main unit onboard, so the data had to be stored in secondary storage such as hard disk drive and mailed to offices on shore. This meant shore-side personnel could not access this data during the voyage. And varying postal systems at ports around the world made it difficult to get data on a timely basis.

Benefits of the new network capability

MOL conducted the test onboard one of its operated vessels, and following the test the company was able to confirm the following-

1. Real-time monitoring on shore - The network can receive and monitor VDR-collected information related to various nautical instruments and the main engine of the vessel, and determine the movement of the vessel on the nautical chart by transferring the data to ECDIS.
2. Shorter, swifter transmission of VDR data to shore - Past data recorded on VDR can be acquired ashore whenever needed.

What are the plans for future use of the new network capability?

1. Determining the current navigation status of the vessel allows deeper support from ashore, enhancing operating safety.
2. In case of an emergency or a marine incident, the data on the vessel's movement from the time the incident occurred can be reproduced in the land-based ECDIS, and voice transmissions and radar images can be confirmed.
3. The information can be provided to concerned parties swiftly and accurately, in an environment that allows for immediate grasp of the sequence of events related to the incident. This also allows the cause of the incident to be determined more quickly.

MOL positions this success as a major step toward future remote vessel operation technology, having set its sights on expanding its use to every MOL-operated vessel, and continues research aimed at refining the concept of "visualization at sea."

Navarino would like to thank MOL for preparing this press release.

Out of the office

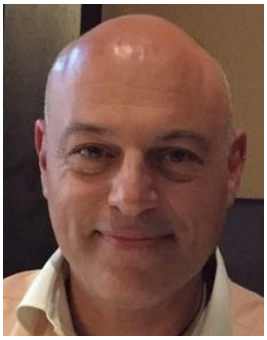
Navarino presents at the SMART4SEA conference in the Athens Opera House

Navarino returned to the Stavros Niarchos Cultural Centre to participate in the SMART4SEA conference, which focused on the latest technology developments in the maritime sector.

Our VP Media Communications, Mr Christian Vakarelis and colleague Mr Stratos Margaritis, Navarino Solutions Engineer, joined the panel on cyber security where they were questioned by the audience on the ways Navarino is tackling the cyber security challenge and how Angel is helping to keep ship networks safer.

Navarino would like to thank the organizers for another superbly run, very well attended event as always!

What cyber threats has Angel been blocking so far? A look at the real-world cases of attempted cyber attacks on vessels



Mr Stratos Margaritis, Solutions Architect at Navarino, who works closely with the Angel SOC

Navarino launched Angel, the first cyber security solution for maritime back in October and since then we have seen a huge amount of interest in our new service. We have been installing Angel on multiple fleets around the world and in this article we are going to look at some of the actual cyber security attacks which Angel has faced, and how it detected and prevented them from causing damage.

Our Solutions Architect, Mr Stratos Margaritis works closely with our Angel team, and he has been involved on the front line of Navarino's cyber security solution. For this article, we asked him to explain what has been going on behind the scenes with Angel and how its dedicated Security Operations Centre (SOC) have been monitoring Angel vessels at sea.

'Since we began installing Angel, we have seen several different threat levels levelled against vessels. Angel is designed to detect, recognize and prevent cyber attacks and we are delighted to see how successfully it has been working. There have been an unbelievable number of what I would call low to medium level attacks, as well as several that were classified as critical which could have caused severe downtime on vessel networks. Now, let's look at a couple of examples.

The first case occurred on the business network of an Angel equipped vessel. One of the business PCs on board was infected by malware and it was contacting command and control servers. This malware was informing the command and control servers that the PC is infected and then the command and control server makes sure it uses that pc to attack other servers. For example it could send emails that would appear to originate from the on-board PC. That PC actually becomes part of a botnet. Angel identified this attack, and because Angel recognised that type of attack, it allowed the traffic to pass but alerted the SOC so that they could identify the attacker. Then, the SOC identified that it was malware on the PC on board, not a human being, carrying out the attack and so the SOC enabled the blocking function of Angel to stop the attack.

Another case was a sequence of attacks towards the Infinity web interface on board. The system realised that someone or something was trying to use sophisticated cracking algorithms to discover administrative passwords of Infinity. Thanks to its Intrusion Detection and Intrusion Prevention systems Angel was able to recognise that it was malware creating these attacks and blocked this attack by disallowing connections between the infected pc and the Infinity onboard.

One more attack that occurred on the crew network was when malicious software was trying to use a 'backdoor' version of a popular FTP server. Backdoor versions of applications are those which resemble the original version but which have been hacked to insert malicious code into it. The user thinks he is using the original 'clean' version of the software but in fact he is using an infected version. In this case, the malicious software was trying to contact the outside world in order to open a door for the hacker to enter the onboard crew network. Again, Angels' Intruder Detection System identified the backdoor version of the software as a threat and blocked it.'

ANGEL

To learn more about Angel, or to arrange a webex to see it working in action, please contact your Navarino account manager who would be happy to help to arrange one.