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## Navarino's Spectrum service is available now - the most powerful suite of ICT tools designed for merchant marine



Navarino is proud to announce that its new Spectrum service launched on the 1st of July 2020 and is available now. Spectrum is the new software suite fully designed and developed by Navarino engineers, reinforcing the company's position as the leading technology partner in maritime ICT.

Spectrum is a software suite of tools and processes designed to cater specifically to the needs of maritime IT managers. It offers a centralized platform for remote monitoring, maintenance and management of the entire IT and connectivity infrastructure onboard including network devices, satellite terminals, operating systems, applications and security measures. It offers a complete IT portfolio that helps to maximize efficiency and increase security while producing cost efficiencies and optimizing your business processes both onboard and onshore.

Apart from its **remote IT Management features**, Spectrum offers to IT managers various options **to comply with the cyber-risk management regulations** that come into effect as from 1 January 2021. It provides you with a **powerful, designed-for-maritime toolset** including –

- Asset management
- Network visualization
- Remote Monitoring and Management
- Software update and patching mechanism

**Easily deployed via Infinity**, with no extra hardware needed and fully automated start up, Spectrum's unique advantages can be in your hands extremely simply and quickly. In the same way as Infinity, Spectrum will be continuously updated based on ideas and feedback from its users meaning that there is no limit to the capacity and potential of our innovative new service. Compatible with any satcom solution, it controls bandwidth consumption depending on provider and combined with Infinity, Spectrum gives you an all-in-one solution in a simple, unified console.

If Spectrum sounds like it can help you work better and smarter, or if you would like to see an online demo of what Spectrum can do, please contact us on [sales@navarino.gr](mailto:sales@navarino.gr)

Editor's note

by Christian Vakarelis

Welcome to another Navarino Newsletter! In this edition we are very pleased to announce the launch of our Spectrum service, which brings exciting, unique new capabilities to the world of remote ICT management. As a technology company, Navarino works constantly to develop innovative new services for the maritime sector and Spectrum is the perfect example of that work.

We are also proud to present to you two case studies in this quarter, detailing our cooperation with Minerva Marine and Roxana Shipping.

You will also read about how Intelsat, the satellite operator whose Ku Band powers our Prodigy service, has achieved a world first by sending a satellite-servicing spacecraft to one of its in-orbit satellites. In an age of sustainability, this kind of innovation is most welcome as it means the satellites' lifespan has been increased by five years.

There is an Infinity update releasing soon, and we have included an article that describes some of the significant upgrades and enhancements that it will bring to the Quality of Service functionality Infinity offers.

And finally we take a look at the how our engineers are coping with vessel attendances under tricky lockdown conditions that can very often limit both travel and logistics.

Enjoy this edition of the Navarino Newsletter and I wish all our readers a wonderful summer!

## Market News

# Minerva Marine Inc.’s connectivity and technology upgrade sees its fleet adopt FX and Infinity Cube with Navarino

One of Greece’s largest ship operators, Minerva Marine Inc. (“Minerva”), has installed Inmarsat’s Fleet Xpress alongside Navarino technology onboard the majority of its managed vessels. 63 vessels have now adopted Fleet Xpress in conjunction with Navarino’s Infinity Cube to provide high bandwidth and advanced, fully redundant communications to their daily operations across the globe. Most vessels are equipped with Cobham antennas providing FX bandwidth packages of high or ultra-high speed.

Ms Eftihia Benaki, Minerva’s IT Manager and CySO, said ‘Fleet Xpress and Infinity Cube have really opened up the technological possibilities of our fleet, both for crew use and for our business use. The welfare of the crews of our managed vessels is one of our top priorities and thanks to the fixed fee and high speed nature of Fleet Xpress we are able to offer them free internet. Thanks to the Infinity Cube we have onboard, we do not need to issue PINs, as crewmember’s data allowance is linked to their registered user account on the Infinity. The way we have set up the Infinity with our crewing system also means that when a seafarer joins or leaves a vessel, his account automatically follows them, which saves us a lot of administration.



The great bandwidths available over Fleet Xpress and with Infinity acting as the ‘brain’ of the vessel, we can now carry out hourly application data syncs between all vessels and our offices as well as shared folders syncs. For some time now, we are also making significant use of video calling with our ships, or sending and receiving videos from onboard when needed. Generally we are able to use data-hungry applications with ease thanks to FX.



Looking ahead, we want to continue to ensure that our managed vessels are equipped with the most cutting edge, reliable technology and so we are currently in the process of beta testing Navarino’s Spectrum service, which we believe can help us with the remote IT services and we are also testing Angel, Navarino’s cyber security solution.’

Navarino’s Director of Strategic Partnerships, Andreas Dimitriadis, said ‘We are extremely proud to be working in partnership with Minerva to help them ensure their managed vessels remain constantly online and to equip them with the technology they need to satisfy all of their business and crew welfare requirements. It is a pleasure to work with a company like Minerva, which is very advanced in its thinking as this challenges us to find innovative solutions and services that can cater to their needs. This makes for a partnership with real synergy, as both Minerva and Navarino benefit from each other’s expertise and ideas. I look forward to continuing our excellent work together for many years to come and I would like to thank the Minerva team for putting their trust in Navarino.’

## Prodigy’s Ku band network uses sustainable technology as Intelsat launches the first satellite-servicing spacecraft



Earlier this year Intelsat successfully docked its Intelsat 901 satellite (IS-901) satellite to Northrop Grumman’s new Mission Extension Vehicle-1 (MEV-1). This historic accomplishment marks the first time two commercial satellites have docked in orbit and the first time that mission extension services will be offered to a satellite in geosynchronous orbit.

IS-901 is a fully operational communication satellite that was running low on fuel, but MEV-1 will power IS-901 for another five years. The MEV is designed for multiple docking and undockings and can deliver over 15 years of life extension services. The launch of the second Mission Extension Vehicle, MEV-2, later this summer, is contracted to provide service to a different Intelsat satellite.

This is the first step in Intelsat’s expansive technology development plan to focus on space sustainability and develop in-space logistics, while continuing to provide the backbone of Navarino’s Prodigy Ku band service for maritime. Prodigy is Navarino’s hybrid Ku and L-Band service that combines Intelsat Ku band with Iridium Certus. Unlike other Ku band offerings, Prodigy from Navarino offers fully flexible contracts with no minimum contract durations and no Early Termination Fees, making a revolution in maritime connectivity. To learn more about the unique ways Prodigy can meet your communication requirements, contact your Navarino Account Manager.



## Events and News

# Roxana Shipping teams up with Navarino to install ‘game-changer’ Fleet Xpress

Roxana Shipping has recently completed a major technology upgrade project that saw the company install Inmarsat Fleet Xpress (FX) on all 10 of its tanker fleet. The project has provided each vessel with the 2 Mb FX package in combination with Infinity Plus and Cobham 60 GX antennas, resulting in a significant bandwidth and technology boost for both their business and crew welfare requirements.



Stelios Kontozoglou, IT Manager and company Cyber Security Officer for Roxana said ‘Having recently completed the roll-out of Fleet Xpress on our tanker fleet with Navarino, we are more than happy with the benefits that the system offers. The increased bandwidth and lower latency has been a game-changer, facilitating a number of possibilities that were just not feasible before, including easier remote support, faster, low-cost crew internet and the ability to exchange large amounts of data with the vessel without restrictions or monthly quotas.

Furthermore, the lower latency makes a big difference to using on-line applications such as remote inspections and audits, remote control, teleconferencing and so on. Cost control is also made much simpler thanks to FX’s fixed fee, All You Can Eat model each month, with no unexpected cost surprises.

The FX installations went smoothly, without any issues and the Navarino support team was always on hand and ready to assist. Fleet Xpress coupled with Navarino’s Infinity has given us a strong foundation and the infrastructure to introduce other advanced applications going forward.’

Ioannis Brougiannakis, Navarino’s Account Manager for Roxana said ‘Communication is an essential part of the ship’s infrastructure as it links people and systems on board to the shore office. In addition, the reliable, high-speed crew internet that FX provides is a must-have and is especially important now during these difficult times. Our Infinity platform provides an ever-growing list of tested, functional tools for ship operators and combines well with our 24/7 5-star customer experience that we strive to offer all our customers. Navarino is very proud of our partnership with Roxana Shipping and we look forwards to working closely with them for many years to help them meet all of their technology needs.’



Roxana Shipping S.A. was established as a ship management company in 1997. The company currently operates 10 modern chemical tankers and 3 bulk carriers through another affiliated company.

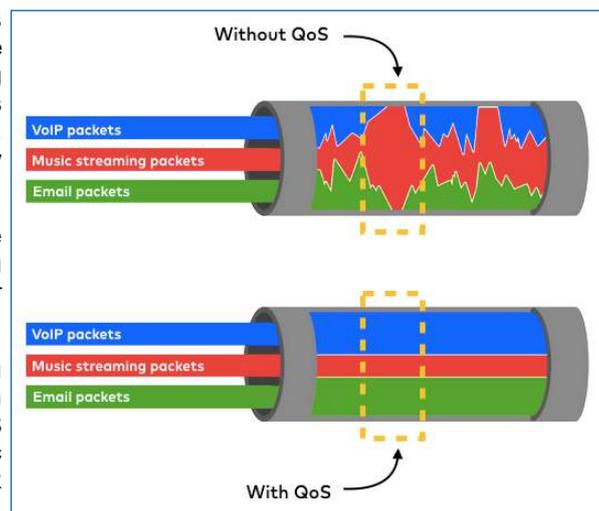
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## Infinity’s upgraded Quality of Service brings enhanced flexibility and capabilities to your bandwidth management

As part of its continuous development Infinity will soon see an update to its Quality of Service (QoS) functionality. Quality of Service (QoS) is the process of treating various parts of network traffic differently allowing administrators to set priorities or allocate specific bandwidth to packets depending on their content, their source, and their destination. As a result, critical applications receive priority, which ensures that necessary resources are always available for their operation.

With the next Infinity update, the new QoS options offer extensive capabilities that users can choose to implement, for example grouping vessels as per your preference and defining different MIR/CIR values per connectivity solution.

This new functionality does not limit users to predefined priorities, but you can specify your own priorities along with your preferred percentages on the CIR/MIR values. This increases flexibility by applying the QoS configuration to different network segments and/or towards specific services. Furthermore, idle bandwidth can now be allocated to the network segments that need it easily and efficiently via the user-friendly interface.



## Out of the office

# Keeping vessel attendances going during the pandemic- an interview with our Field Service Manager, Apostolos Antoniou

The global pandemic has seen enormous changes to all areas of our lives. In this interview, Apostolos Antoniou, our Field Service Manager, outlines how the Navarino Field Service Management (FSM) team has coped with strong demand for installations on the one hand while working within the restrictive environment of a global lockdown on the other.



'The FSM Department that I manage has seen significant challenges since the global pandemic struck. Even before coronavirus, arranging installations on ships has never been a straightforward exercise— often due to the fact that vessel schedules can change at the last minute, or for a hundred other reasons. But coronavirus has multiplied the number of obstacles that can arise to interrupt or delay installation projects. The most common such issues we have faced are as follows -



**1. Transportation restrictions:**

Our engineers sometimes cannot travel to the destination port due to safety measures including transportation restrictions, mandatory quarantine before and/or after the attendance, plus a 14 day travel history requirement. For every attendance request we receive, we have to investigate whether or not our engineer can travel to the requested port, while following such transportation restrictions that are continuously changing.

**2. Ports/shipyards permit entrance:**

Because of coronavirus, many ports and shipyards have applied additional security and safety measures to avoid the virus spreading. These include additional paperwork, COVID tests and checking our engineers' travel history prior to the attendance. Even though our engineers always have all the required paperwork we have seen cases where our engineer was not permitted to enter the shipyard.

**3. Short vessel stays:**

In some ports, especially in China, a vessel's crew has to take a COVID test on arrival. In such cases no access is permitted on board unless there are safety, health or critical situations. In turn, the time taken for the results of the tests mean that there is often not enough time for our engineers to attend before the vessel sets sail again.

**4. Customer restrictions**

Several of our customers have put in place COVID measures in order to prevent the virus spreading to their seafarers. Such measures can include additional paperwork and COVID tests before arrival, minimal interaction with crew members, no overnight stays on board and some even forbid embarkation entirely.

In addition, often the shipping company's own IT manager is unable to attend its vessels to prepare the necessary IT or VSAT pre-works. This means that sometimes our engineers are asked to carry out these tasks, which can add days to the attendance that are sometimes not feasible due to these restrictions.

Due to these factors, all attendance arrangements have dramatically changed since the COVID restrictions came into effect, essentially starting from February 2020. Every single attendance arrangement needs a lot more correspondence between our service engineer, our customer and agents compared to pre-COVID times. In the past, FSM would confirm engineer availability to the customer or agent and make the travel arrangements accordingly. Nowadays, FSM needs to spend a lot of resources on ensuring the engineers visit can happen and often it is unknown if an attendance might get cancelled at the last minute.

Despite all these conditions that certainly make our job more difficult, installations are possible and Navarino has seen a high number of successful installations in spite of the conditions. We are responding to these challenges not only by exploring every possibility of getting our engineers onto vessels, but also by expanding our service network through several new service partnerships around the world. We use online tools to help train these new partners where needed and we support them remotely to the fullest extent possible.

As you might understand, Field Service Management is one of the Navarino departments most affected by the coronavirus restrictions due to the 'hands-on' nature of our work and the amount of travel that is inherently involved in our job.

While we predict that these difficult conditions will persist for some time to come, we shall continue to work at full capacity and as safely as possible in order to keep our customers' vessels connected, online and to meet the heavy demand for our services, even during these extraordinary times.'

