

SHIP

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MANAGEMENT

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Broadband for Cost Effective Ship Operations and Enhanced Crew Welfare

The following is an abbreviated and lightly edited of a webinar hosted by KVH Industries and SMI on July 9, which explored how continuous and reliable broadband connectivity can revolutionise the maritime industry. Participants learned about the benefits of constant internet access for ship operations, including improved efficiency, reduced costs, and streamlined communication.

Additionally, the webinar highlighted how seamless connectivity enhances crew welfare by providing access to vital communication with family, entertainment, and online resources, ultimately contributing to better mental health and job satisfaction.

Taking part were **Sean Moloney**, CEO at Elaborate Communications (Moderator), and panellists **Simon Grainge**, Chief Executive at ISWAN; **Alexandra Mouligné**, Program Manager at KVH Industries; **Rick Driscoll**, Chief Technology Officer at KVH Industries; and **Sumanth Dhananjaya**, Senior Principal Product Manager at Intelsat.

Sean Moloney

Welcome everybody to the latest in our series of Ship Management International webinars.

I'm really delighted to introduce a stellar line-up panel today. We're going to be talking about the issue of broadband for effective ship operations and enhanced crew welfare and looking in particular at the whole aspect of 'always on' broadband. The way that it can benefit life on board ship and the way that the ships are operated and monitored.

So without any further ado I'm going to get the panellists to introduce themselves and just to give a sort of two-minute precis on their thoughts and feelings as far as broadband for effective ship operations is concerned. I'm going to start with Alexandra.

If you could introduce yourself, please, and then give a sort of policy statement on the debated issue.

Alexandra Mouligné

Thank you. My name is Alexandra Mouligné and I am a Program Manager at KVH Industries in Middletown, RI, where our world headquarters is, and I run the Starlink program for KVH. We are an official reseller of hardware and data services for Starlink, the Low Earth Orbit (LEO) satellite data service, which has just absolutely exploded like nothing we've ever seen in the industry before. Providing fast, affordable data on board ships has been an absolute game changer in our industry and I anticipate that will just keep moving in terms of momentum



Simon Grainge,
Chief Executive
ISWAN



Alexandra Mouligné,
Program Manager,
KVH Industries



Rick Driscoll,
Chief Technology
Officer, KVH Industries



Sumanth Dhananjaya,
Senior Principal Product
Manager, Intelsat

and popularity, giving crew lots of different options for connectivity on board.

Sean Moloney

Brilliant. Thank you very much indeed, Alexandra. Sumanth, can I ask you to please introduce yourself and say a few words?

Sumanth Dhananjaya

Absolutely. Thank you, Sean. Good morning, good afternoon, wherever you are. So I'm Sumanth based out of London, where I'm a Senior Principal Product Manager with Intelsat's Product Management Team for Maritime. And coming from a satellite operator perspective and supporting our solution partners, we have three main imperatives basically.

The first one is highly reliable connectivity, the second globally available and consistent availability of connectivity, and then the third one is higher performance. As Alexandra mentioned, there is an explosion of data growth and in order to support that data growth, these are the three main kind of imperatives that we strive to deliver to our solution partners.

Sean Moloney

Brilliant. Thank you very much. Coming on to Simon, obviously one very important aspect of the debate today is how 'always on' broadband will enhance crew welfare and wellbeing. So could you please introduce yourself and say a few words just about the important aspects that you see?

Simon Grainge

Certainly, Sean. Thank you. I'm Simon Grainge, Chief Executive of ISWAN (International Seafarers Welfare and Assistance Network). We're a not-for-profit maritime welfare organisation. We're based primarily in the UK, but we also have teams in India and the Philippines.

So, inevitably, I'm going to come at this from a welfare perspective. Connectivity has been a hot topic amongst seafarers for several years and whilst a lot of progress has been made recently, we're still hearing from seafarers that connectivity is either too little or too expensive and that's why we see seafarers scrambling for SIM cards as soon as they get into port. But it is getting better. There are those companies who are fully committed to providing connectivity and recognise its value to their ships and to their crews, and there are those who are still reluctant to provide it.

I guess from ISWAN's perspective, we would argue that in a world where everyone lives their lives practically online, connectivity is essential to seafarers' wellbeing.

Sean Moloney

Yeah, very valid points and they raise a number of questions that I think we'll tackle in a couple of minutes. Simon, thank you very much indeed. Great. Can I come finally to you Rick, thanking you for being patient, and ask you to introduce yourself and also give us a bit of a flavour of what you think are the important aspects of the debate.

Rick Driscoll

Thanks, Sean. I'm Rick Driscoll, Chief Technology Officer at KBH. I've been here about 23 years, which I think is about the time that the first kind of stabilised VSAT (Very Small Aperture Terminal) of the one metre VSATs became available and that really kind of started the the 'always on' concept as opposed to a dial-up that used to happen. So VSAT helped with the speed and the expense and the accessibility of data networking and access to the internet, but it was still a kind of expensive relative to what's come out now, which is the LEO services. And it's taking it to a whole new level with increased performance, increased speeds and then also decreased cost per GB (gigabyte), which really enables more crew access to service as well as the Internet work ship, which I think is kind of the goal of a lot of this - to make the ship look more like a remote office than this remote island to be serviced in a bespoke way. So I think the combination of the LEO and the GEO (Geostationary Earth Orbit) services are really turning things around for the connected ship.

Sean Moloney

I'm going to stay with you, Rick, as you're going into our first point there, and then bring Alexandra in. We talked about this sort of 'explosion' in data demand but what do you think is driving that demand for ships to be online and monitorable all the time? Is it just efficiency, and what are the challenges?

Rick Driscoll

Well, I think some of the things that are driving it are compliance with regulations. There there's decarbonisation and things like that that are requiring different reporting and communication of data back to shore on more real time. I think also, as I mentioned before, the end goal is to have the ship become a remote office. Enterprises have moved so much to the cloud and they want the ships to be able to use those resources. And with the advent



of LEO, as I mentioned, and its high-level performance and [reasonable] cost of the service, it's making it more of a reality that these ships can actually become a real remote office. And I think that is a lot of what's driving the demand for bandwidth.

Sean Moloney

On to you, Alexandra, and your mention of Starlink. What role are they playing in all of this? Are they this disruptor coming in and saying, right, OK, this is how we're going to do it from now on? And how does the market view them?

Alexandra Mouligné

Well, Starlink is great when it works and I will say that we are always touting the benefits of a hybrid network because the reliability of VSAT has been proven worldwide, a very robust redundant network versus Starlink which is a new network. Then some places have congestion issues, so we always tell our customers that it's imperative you have a backup system. So a lot of our customers will have a configuration that automatically switches from Starlink or VSAT or Wi-Fi or 5G LTE, depending on where they cruise.

Also, from a least cost routing perspective, not all the ships need satellite Internet all the time. A lot of them are in port or close enough to get long range cellular, so that offers tremendous savings to the ship owners.

Sean Moloney

Right. There are so many demands now for connectivity, for

example performance optimisation but also crew aspects such as training. Reliable connection is very, very important.

Alexandra Mouligné

Yes, ask the question 'Is Internet on board a nice to have or need to have?' I've never had anyone say it's a nice to have, so when they say it's a need to have then it's a requirement. It must work all the time. We talk about options for hybrid connectivity and this new generation of seafarers are digital natives so they are used to always being connected, the fleet owners recognise this. They understand the importance of offering 'always on' connectivity so that way they can entice crew members to join their fleet and they can retain their crew. It really eliminates a lot of obstacles that some fleets are facing with high crew turnover.

Sean Moloney

Sumanth, let me bring you in a little bit on this. You talked about the need for reliable connectivity and it being globally available and consistent, but also high performance. Is that really starting to be delivered now into the market and is this something that the industry is demanding?

Sumanth Dhananjaya

I'd like to answer that question by expanding on some of the trends that Rick touched upon, the geopolitical events that are shaping our world today and some of the technological trends such as AI. And last but not the least, it's the social trends that we are seeing today, such as the digital natives Alexandra mentioned. All



these trends are increasing the demand for data on a day-to-day basis, and as that data is being delivered, the requirement for consistency and reliability is ever more important.

If you take any of the trends, and if you take any examples or use cases attached to those trends, all require a reliable global connectivity available to customers or end users. And from a network operator-end point of view, we are driving consistent connectivity by having multi-layered networks for example. Or for the performance, if you look at our partnership with the LEO offering, we are bringing in the low latency to our customers.

So those are some of the initiatives as a network operator that we are taking in order to bring the three imperatives down to our solution partners and supporting our solution partners to deliver the solutions required as per the market needs.

Sean Moloney

As for geopolitics, what sort of challenges is that throwing up those two elements throwing up to the industry?

Sumanth Dhananjaya

Well, it's the coverage. If you talk about geopolitical events, it's a very, very dynamic landscape. With the Red Sea, for example, the coverage there has gone down, but it has increased in other parts where the shipping routes have changed. And that's a dynamic landscape on a on a month-to-month, or even week-to-week, basis in certain cases. So that is having an impact.

If you take an example from an AI standpoint of view, that relies on 'always on' connectivity, primarily because it is in some instances talking to the shore devices or somebody controlling a certain part of the AI which is deployed. So there is always chit-chat with the onboard equipment. And as Rick was saying earlier, the ship is seen as a connected office and the AI solutions deployed on a ship is always relying on that backbone to talk to the shore, to make sure that the communications happen all the time, and as a service operator we want to ensure that our solution partners are always relying on us to make sure that the connectivity is available to them.

Sean Moloney

Simon, let me bring you in on this, because there are 1.5

million seafarers at sea at any one time and they're relying on this connectivity and as Alexandra was saying earlier they're geared up to the to the digital age already, they're digital natives. Before we come on to the very to the important issue of mental health and crew welfare, what are the seafarers telling you?

Simon Grainge

Well, they're certainly saying that they expect good connectivity. And when you think that everyone expects that in their daily lives, can we really expect seafarers to make do with less, particularly younger generations who've never known anything but good connectivity? And if you're used to spending all of your spare time online, then this could be incredibly difficult to be in a world where that's not possible.

That said, of course seafarers have got a job to do and the employer is fully within their rights to expect full attention at all times. But let's face it, that's a problem faced by many employers. But we're talking about a recruitment crisis for the industry in the future, so seafarers are going to be able to name their price for their services and I've no doubt that connectivity is one of their major considerations when selecting to choose who they work for. So it's going to become more and more difficult for managers to deny it.

And connectivity is vital for crew welfare which is a problem for seafarers. If they are able to get off, will they actually get access to any welfare facilities and organisations similar to us? We don't provide ship visiting services, but those that do are reporting increasing difficulty in getting access to ports. So the face-to-face support is not always possible.

And that's where ISWAN comes in because we operate a helpline which is, but we need connectivity for that. We've noticed a real change in the way that people contact us for help these days. Only around 10% of contacts are by phone because WhatsApp, Facebook and live chat are much more popular. And obviously they need connectivity for all of that. So the better the connectivity is, the better access they have to our services, for example. And we have an app that seafarers can use offline that gives access to all of our written resources.

But if they want to come through to our helpline, they need to be connected and if someone is feeling really low and then having to wait until they're in port, that is not going to be good enough.

We think around 40% of our contacts are from seafarers whilst they're actually at sea. And remember that the real value of what we do is to provide a friendly point of contact where you can say the things that you wouldn't say to your crew mates, your employers or maybe your family. So privacy and connectivity are essential.

Seafaring is a tough job. If we want people to do it, we need to think about making it as manageable as possible - good food, rest, good pay, entertainment packages, value in their work and enabling access to the people they love is surely a minimum. And people will always work well if you look after them properly, even if the job is really tough.

Sean Moloney

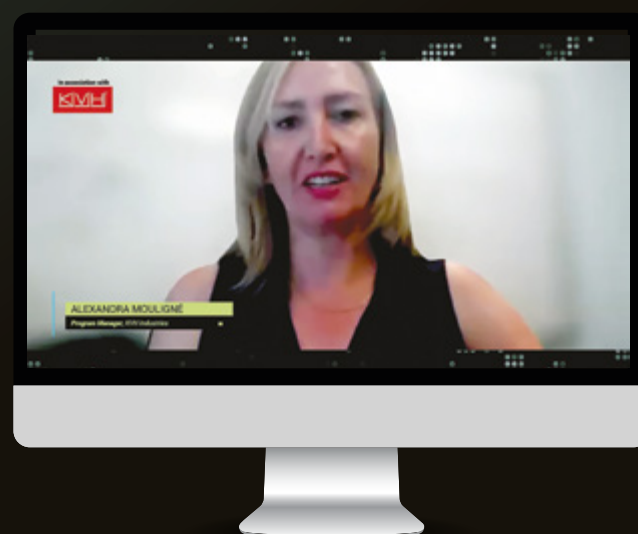
I just want to develop this issue of crew welfare and what connectivity with entertainment and loved ones at home means to seafarers, and what people spending a lot of time in their own cabins does to interaction on board, whether there's a downside to all this.

Simon Grainge

There's quite a lot of interest at the moment in monitoring seafarers and their well-being. We're running a project on social interaction where we're getting people to wear watches and we're we're actually noting what's happening with them, how they're feeling, asking them questions to try and keep a constant monitoring of morale on board.

Sean Moloney

Rick, maybe you can come in with your thoughts?





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Rick Driscoll

Well, one of our most popular service offerings is KVH Link. That is a content delivery method which gives the fleet owners the choice of over the air delivery or secure USB delivery. So they could choose whether it uses a little bit of monthly data or no monthly data at all, so that's a very cost effective way to bring content on board for the seafarers. So there's everything from education to sports music.

They have a variety of different languages, so all the most common seafarer languages are covered. They can have their local news that they can keep up on...

Alexandra Mouligné

First run movies the their local sports team. I mean getting everyone in the mess hall crewing for their favourite local sports team is a great way to go. Everyone together and out of their cabins, as is the karaoke feature, has been really popular to get crews engaged and together on board, so that offers a number of different ways to keep the crew happy, build morale and offers a number of different delivery methods to fit all different budgets. So that's an important element to this as well and that needs good connectivity, but also being able to talk to family.

Sumanth Dhananjaya

As Simon was alluding to earlier, we, we want the crew to be entertained and also to be cohesive so they build a team. You don't want the crew to be locked in a cabin for X amount of time that is not good for their mental. So you can build solutions wherein AI is helpful to control that kind of usage at the network level, looking at the usage patterns and deciding how to control it. So that is one example where AI can be used to enhance crew welfare and to build more camaraderie within the vessel.

(The discussion then continues, including Q&A with the online audience.)

Sean Moloney

An edited audio version of the full webinar will be made available on the Ship Management International website and will be sent to all readers. Thank you very much to all our panellists and audience, and I look forward to seeing you at the next SMI webinar. ●



KVH Link

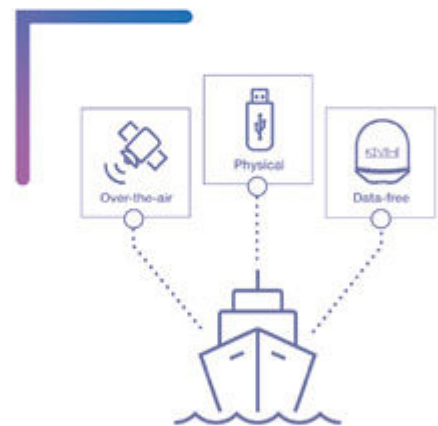
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