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Issue No 104 July/August 2023

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Ship-to-Shore Connectivity: Keeping ahead of the curve

The following are edited excerpts from latest SMI webinar on 'Ship-to-Shore Connectivity: Keeping Ahead of the Curve', held end-July in association with KVH Industries.

The discussion featured Robert Balog, COO at KVH Industries; Sven Brooks, CEO at ScanReach; Steven Jones FRSA, Founder of the Seafarers' Happiness Index; and Chris Watson, VP Marketing and Communications at KVH Industries. Moderator was Sean Moloney, CEO at Elaborate Communications.

A full audio recording of the webinar can be found on the SMI website.



Sean Moloney

Good afternoon, everybody and welcome to this latest in our ShipManagement International series of industry webinars, which we are very delighted to be doing in collaboration with KVH. The webinar today will look at how ship to shore connectivity is a vital part of the communication strategy for ship owners and managers. Not only is it, as we know, a conduit of sharing important data insights to help optimise ship operations but it is also a valuable link for seafarers, with the outside world. Without any further ado, I'm going to ask our expert panellists to introduce themselves and give an opening perspective.

Chris Watson

Good to see you, Sean and thank you all, very much, for joining us. It's great to be here with my fellow panellists. I'm Chris Watson. I'm the Vice President of Marketing and Communications at KVH. I've got more than 20 years' experience in the field of maritime communications and have seen it move from the low bandwidth of early Inmarsat and Fleet services, up to the just tremendous advances that we've seen in VSAT (Very Small Aperture Terminals) and now, with LEO (Low Earth Orbit satellite networks). What's really been interesting for me is also seeing the emergence of digital natives who are used to being connected and are now taking advantage of connectivity and data and being onboard ships.

With this new demographic, with these new technologies, we're also seeing lots of questions about the applications of these new services. The implications for existing technology and services, the growing demand for data and the applications of that data for the purposes of business and efficiency, safety, etcetera. But we're also seeing a lot of questions about how to take advantage of the new services, how to blend them with existing services, how to take advantage of them for crew welfare, while also minimising risk with regard to cybersecurity. We've gathered some great experts here so I'm very excited about today's conversation.

Steven Jones

Thanks, everyone. Real honour to be on the panel and thank you for inviting me. I'm Steven Jones, Founder of the Seafarers Happiness Index and a former seafarer myself but perhaps, even more important than that, a child of a seafarer. So, the family links to those that are sometimes left behind, are important as well, and resonate. The Seafarers Happiness Index is a tool that exists to allow us

to ask seafarers how they feel about their life at sea. We have 10 core questions that we ask, every quarter, and seafarers tell us how they feel from everything ranging from their general happiness, through connectivity, which is a really important part of the focus, constantly. Through to the more nuts and bolts of food onboard, health, fitness, interactions, how they feel about workload and all the realistic expectations that they have of their life at sea and the impacts when good things happen and how that improves their mood.

But equally, when we're seeing negative influences onboard, such as problems with shore leave, etc, how they leave seafarers feeling. The constant demand for connectivity is something that we're hearing all the time, from seafarers and how important that is to them. I think that's an important part of the debate today. The other angles of this, really is to make sure that technology has a reciprocal benefit for seafarers. I think sometimes, there's a danger that we might be running a little bit too far, too fast ahead of the realities onboard and how seafarers play their part in that. That's where I'm hoping we can engage on that but it's a real pleasure to take part and thank you.

Bob Balog

Good morning, everyone. I'm Bob Balog. I'm the Chief Operating Officer for KVH Industries. I've got over 18 years' experience in the industry. My responsibilities include managing the full KVH product lifecycle, design, through manufacturing and shipment of our equipment. Our KVH goal is to deliver the highest quality products to ensure secure, enterprise grade reliability and performance for our customers. Connectivity has always been of vital importance in the maritime industry and in this quickly evolving digital world, more than ever, staying connected is just taking on a greater importance. As connectivity becomes more affordable, we've seen the demand for data and communications just grow dramatically. Vessel reporting, navigation, weather, trip optimisation, fleet management, cargo tracking, communications, email, crew welfare.

All of these things are using more data. With the increase in the reliance on connectivity, inevitably comes a requirement for data, connection security, bandwidth management, connection switching, cost control and of course, reliability. It's a lot of things come into account here, that we're taking into account on our products and our services. At KVH, we understand how important it is for our customers to stay ahead of this technology curve. At

times, it can be overwhelming. So, we're making sure we're delivering products and services that are essential for safe, efficient ship operation and ship management. I'm looking forward to our discussion today. Hopefully, we get a chance to learn and explore some ideas and views on a lot of these important topics.

Sven Brooks

Thanks for having me on this panel, everyone. It's really exciting times and ship-shore connectivity is changing everything a little bit for the better. I've been in the industry for 20-plus years, working in navigation, in communication, in IoT, in connectivity and I'm the CEO of ScanReach, a Norwegian-based scaleup. We're focused on onboard wireless connectivity. We build mesh networks that connect the unconnected, whether these are sensors or crew members. We make sure that the crew onboard has access to vital data and vital information that's important to their jobs. We also make sure that other parties, other third parties, whether these are software providers, fleet managers, owners, operators, get access to their data wherever, whenever they need it.

My concern, when it comes to the digital transformation is, a little bit, that it has become synonymous with decarbonisation, over the past years. I just feel that a little bit of digital fatigue has set in. There are so many players, it's highly convoluted, it's difficult, it's challenging to get the right solution onboard and it's really for an owner or a manager, difficult to understand which path to take. There are so many different vessel types, there are so many different equipment types, there are so many opportunities to collect data and understanding what's really important and vital for operation is incredibly challenging. The bulk of the industry has focused on decarbonisation, of course. It's great, it's green, it saves cost, at the same time.

But there are so many more other low-hanging fruit and there's a lot that touches the safety of the crew members, themselves. Whether these are training opportunities or whether that's safety of life at sea, being able to call for help, or call for assistance, or ring an alert when you're working in a highly automated environment in the middle of the ocean. Those are the elements I find are largely overlooked. What happens to crew, what happens to cargo during digital transformation? That's what we're addressing at ScanReach, quite a bit.

Sean Moloney

Thank you everyone. Chris, let me come onto you. Taking this

whole issue of digital fatigue and shipping's constant search for standardisation, what are the opportunities here and what are, maybe, the challenges you see facing all of this?

Chris Watson

It's a great question, Sean. I think that, in many ways, the industry is grasping the opportunity in the right way but, as with any disruptive time with many new advances in technology, there is a question of how to go ahead and use this. There need to be standards. What is the approach? I think that shipping companies are recognising that maritime operations are increasingly digital and connected. You've got vessel operations, you've got communication, shipping, ports, logistics. You've got crew connectivity, things like that. Ships are no longer on their own but are mobile offices on a global network. As Steven reminded me, in a conversation we had a couple of weeks ago, they are also homes for the crew, their connected homes. I think people are recognising and beginning to take advantage of the opportunities, with this digital transformation, to touch on an array of benefits.

This technology is leading to increased efficiency and cost savings, improved safety and the reduced risk of accidents. I think we're seeing enhanced transparency and accountability. Sven mentioned the decarbonisation and, on a broader level, the idea of improved environmental sustainability but it's also opportunities for improved customer service and experience, so that people who are shipping their materials are able to see where they are at all times. So, it's connected throughout the entire life in transit of products. It's also for the crew, with telemedicine and training. I think we're seeing a steady increase in data use and demand in bandwidth. We certainly are, at KVH, as we're providing global connectivity services. No one in the industry is saying "I don't need so much data" or "I'm good with a really slow connection." The realities of modern business are requiring these connections and people are starting to figure out how they mesh together.

Sean Moloney

Shipping is fragmented, we know that, and you've got the early leaders and you've got the laggards. You've got companies that are driving in value to the bottom line and that is so important. Is that an issue, in the sense of looking at the way the industry is moving forward, en masse?

Chris Watson

I don't think anyone's ever looked at the commercial maritime industry and said, "This is an industry that is



Chris Watson



Bob Balog



Sean Moloney



Sven Brooks



Steven Jones FRSA

noted for being early adopters of new technology.” There tends to be a bit of conservatism there, but I think that, over the years, just the realities of what this tech can deliver, ship to shore connectivity, access to data. Even the laggards are recognising the need, and some are going to come along more slowly. They’re going to be more conservative. They’re going to be careful. They want to make sure they understand how it’s going to work. You are going to get some that are going to lead the way but they’re serving as guides and good examples for the other companies that are considering getting into this and taking more advantage of it.

Sean Moloney

Steven, let me bring you in on this. The point was made earlier that ships are the home of seafarers and they want to feel involved. What are they saying about all this?

Steven Jones

Well, we’re hearing from seafarers who work for companies who are working with KVH and the likes, at the cutting

edge of all these things. For them, life really is about riding this wave of technology and digitalisation. Although even they sometimes feel that, as they’re surfing, they might be falling off the board, or they’re struggling to keep up, at least they know the direction of travel, where things are going and how they are, in essence, a part of it.

But then, you strip away from those higher echelons, the blue-ribbons of our industry, and you really don’t have to scratch the surface very deeply before you come across such a different perspective, such a different way of life and how things are managed and considered. I think that’s the slight danger, at the moment.

As I said at the start, this concern is that those at the forefront of technology are moving so far, so fast, ahead of the others. Unfortunately, the reality is it’s those others that will probably collide with you in the middle of the night when you’re at anchor. The problems that you have don’t go away just by ignoring the fact that shipping has, for so long, been a lowest common denominator business and

that is still the case today. That would be my slight concern, that we need to move forward, making sure that this is a rising tide that lifts, metaphorically, all ships as well.

Sean Moloney

Can it achieve that? Because if you look at the way that digitalisation has evolved over the last three to five years, it's accelerated and what will the next three years hold? Shipping has got to invest in people - digitalisation needs people.

Steven Jones

Yes, totally. I've just been working on quite a big ESG project. Part of that was looking at the sustainability reports of a whole vast array of different companies. From the blue-ribbon, blue-chip shipping companies, through to those big retail charterers, oil majors, etc. Seeing what they're talking about in terms of the social element of ESG. It's as if seafarers don't exist, in so many of these reports.

Sven Brooks

This is where I believe it's currently quite one dimensional. Simply because it gets a lot of media attention at the same time. If you want to do something in digital, deep decarbonisation gets you onto the front page. It does save money, it's good for the environment, it's cleaner, it's more

factory. In each of those areas, shipping can learn a lot from other players in those elements. We can learn what's going on in the airline transportation, road transportation and see what we can do there to optimise shipping and transit times and cargo handover.

Sean Moloney

What does shipping need to do, do you think, Bob, to keep ahead of the curve? Because, as we've been hearing already, it tends to be a little bit slow in the uptake, really and it has been, over the years. What are your views?

Bob Balog

It's a dilemma because you've got a fairly cautious, and rightfully so, industry, where safety has to come first. You have to stay on top of the connection assurance, the reliability. So, even though you might want to slow roll some of the newer LEO type connections, you can't slow roll the cybersecurity. You can't slow roll the connectivity reliability.

The way we look at this is we want to make it simpler. We want to provide those controls. We want to provide that environment that allows our customers to go ahead and say, "Hey, let's layer in a LEO technology. Let's layer in something that maybe, doesn't meet all the reliability needs but we can turn it into a hybrid solution. Behind the scenes without anybody worrying it, we can make sure that no one overloads that connection by streaming applications, watching high-definition movies. We can maintain that ship connectivity, the importance, the operation bandwidth. We can make sure that we can application filtering, so we can take out undesirable applications, while giving the crew the flexibility to do what they need." I think the best way to describe it is what we're trying to do is not have the shipping industry become super experts in every single aspect of this remote office.

Chris Watson

Well, I wanted to chime in on staying ahead of the curve because I think the other thing that we need to make sure that we're taking into account is not just determining how the technology's going to be used but ensuring that seafarers have the training. We can't assume that there is always going to be the same level of training. We are working with a partner who is developing a digital literacy programme for seafarers because we can't make the assumption that things like familiarity with cloud applications, even how to use an email system or even more specifically, best practices for cybersecurity ... the weakest element in any potential



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Sven Brooks, CEO at ScanReach



sustainability. It rings all the bells and buzzwords but at the same time, what makes shipping so special, and Steven and Chris both mentioned it, it's that a ship, a vessel is also an accommodation area. It is a transportation medium, it's accommodation, it's a warehouse, and it's also at time a

area for cyber is the human element. So, we need to make sure that fleets, ship management companies, crewing organisations, that they are providing the training for seafarers, so that they know how to use these technologies. Use them safely, use them well, use them efficiently and minimise the risk for the organisation.

Sean Moloney

I want to come onto this point. We've been talking about LEO satellites, and I know we've been hearing the name Starlink mentioned, but what does LEO really mean for shipping and how does it stand along the enterprise grade systems that we have?

Chris Watson

Yes. I think there's a lot going on and I think there's a lot of confusion and a lot of questions. For those who aren't necessarily familiar with the meaning of LEO, it's Low Earth Orbit satellites. So, these are things like Starlink, OneWeb versus the more traditional connectivity, which is provided by geosynchronous or geostationary orbit satellites, that are much further out. LEO does offer a lot of significant benefits. It can be fast, it can be affordable but it's an open pipe and not necessarily what we would consider to be enterprise-

grade solutions, right now. Here at KVH, we look at the benefits that it can offer as being optimised when it's part of a robust hybrid connectivity solution. It's not an issue of which service should I use but how do I take advantage of multiple services?

We've got Starlink and LEO, that offer those speeds and offer the affordability. Maybe they're ideally suited for crew connectivity, perhaps. Whereas other things like charts, GMDSS, ECDIS, other types of things can travel over these more proven, longer term enterprise grade solutions. Plus, you've got 5G, you've got Wi-Fi. All of these can complement one another, so that they can provide that enterprise grade tech services and reliability that go beyond just that data pipe.

Sean Moloney

Bob, do you want to come in on that?

Bob Balog

Sure, I'd love to. I think the best way to describe some of the LEO options that are available is when they work, they work really well. They work fantastic. They have some of the concerns that we've touched on. There are still some regional availability problems. There's still some issues

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in high pitch and roll sea environments. There are things where obviously, you have to integrate it into a hybrid system to manage the cybersecurity, to manage all of the other controls. The best way, I guess, as I was saying, to describe it, is when it's good, it's great. Use it. Absolutely, use it and then, our system, the way we've integrated it is we monitor all of the different connections, at all times.

We're constantly doing a health check on the LEOs, the geostationary, the 5G, the LTE connectivity. We're watching all of those behind the scenes for the consumer, for the customer. What the system will do is automatically, decide which connection is best for you. It'll seamlessly, behind the scenes, without anyone's knowledge onboard ... obviously, you can see the display. It's not a secret. But it takes that worry out of the customer's purview and it automatically makes the selection, to make sure you're on the most robust, the most efficient connection at all times.

That's part of what we believe is taking that worry away from the customer, letting them understand we're going to monitor these, we're going to make sure you keep the best connection, while not sacrificing any of the bandwidth management tools, any of the firewalls, the application filtering. We can make sure all of that stuff works,

seamlessly. It's a great technology when it works. You have to find a way to make that play well in your system and that's what we're trying to do, is provide people again, with a simple solution so that they don't have to worry about all of these details behind the scenes. As much of that as we can do, I think the bigger the benefit for the customer.

Sean Moloney

Thank you all very much indeed, Chris. I'd like to echo your comments, to thank the panellists today, for a really good debate, an edited version of which very soon will be available on the Ship Management International website and the sent out to all of the readers. It's a fascinating subject and I think a very exciting future lies ahead as the industry evolves over the next five to 10 years. ●



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