

# Connectivity 'vital' for business continuity



The Covid-19 pandemic has made the need for ship-to-shore connectivity even more obvious, says **Erwan Emilian**, CEO of IEC Telecom Global and board chairman of the Mobile Satellite Users Association. He talks to SMI about the latest developments in the sector.

**L**ocked down, separated from loved ones, working from home – who didn't want to be more connected during the Covid-19 pandemic? For those at sea, the issues have been magnified, of course. Add to that the acceleration of digitalisation across the industry, and the demands are clear.

"Mobile satellite communications are revolutionising the operations of maritime, aeronautical, enterprise businesses and governments worldwide," says Erwan Emilian. The Mobile Satellite Users Association, which he chairs, is dedicated to promoting satellite innovations worldwide, he says. "Our members have a single common issue: retain the users in their technological environment and make sure these users foresee the future of the satcom paradigm: higher throughput, lower latency, equipment standardisation, cloud-based solutions and services, AI online support, SD WAN cloud solutions, Satellite-as-a-Service, and full managed services. End users expect to experience in their remote office the equivalent throughput that they have at home: a fibre-like speed and power delivered by satellite. It is almost there!"

As he says, the need for connectivity across shipping and offshore operations has become more apparent during the pandemic. "The impact of travel restrictions, port closures and other Covid-19 operating requirements meant that the precise coordination of their work became more important than ever, particularly considering the need to decrease crew capacity to ensure social distancing."

Connectivity has served as a reliable

bridge between crews and ashore office, he says – enabling remote teams to keep updated and receive important instructions, and to receive timely training. It has also, of course provided a vital link between crew and their loved ones miles away.

Was there a rush for mobile satellite communication services as the pandemic took hold?

One quick response was that vessels already equipped with VSAT wanted to increase the monthly allowance, says Emilian.

"Satellite connectivity formed a vital link between the onboard crew members and their loved ones. Being at sea for months on end, these communications served to keep crew welfare and morale high. From a business perspective, vessels that were already equipped with VSAT remained operational and maintained business continuity, gaining a competitive edge, while vessels which hadn't embraced digitalisation before the pandemic occurred found themselves behind their competition," he says. "Understanding the importance of connectivity in such unprecedented times, there were satcom industry joint efforts to support vessel owners at the start of the pandemic. For instance, in April 2020 IEC Telecom, together with one of the major satcom operators, doubled the end-users' data allowance at no extra cost."

Emilian says that in recent years, and especially because of the pandemic, there has been a significant increase in demand for corporate apps, serving as the "backbone behind business continuity".

"The more vessel operations depend on the apps, the more important it is to make sure that digital operations



continue, regardless of the coverage type – 2G, 3G, LTE, VSAT or L-band.”

This is an area of expertise for IEC Telecom, which offers two ways to overcome the hurdles, he explains.

In network management, the OneGate solution was developed to provide seamless VSAT/L-band switch at least-cost routing. “In other words, we provide vessel owners with an automated system that takes care of connectivity and protects from disruptions, with the least possible damage to the owner’s wallet.”

Second, he considers optimised application. “Traditional desktop applications for videoconferencing and VoIP can operate over GSM and VSAT (FSS). Small and mid-sized vessels have neither the room, nor budget for FSS set-up. Large VSAT-equipped vessels also experience downtime, particularly in stormy weather, when all operations failover to the narrow L-band back-up channel. To overcome these challenges, in 2021 IEC Telecom presented a range of optimised applications supporting a portfolio of advanced digital services, including videoconferencing, remote maintenance, telemedicine and more, even in low-bandwidth environments,” he says.

It is often said that ships are becoming like an office at sea – what are the challenges of ensuring connectivity in all areas and at all times? Emilian says: “The availability of an onboard voice service has become as essential as having lifejackets or a first aid kit. And, as digitalisation spreads across the shipping industry, having access to email services is gaining equal importance in order to receive navigation updates, port notifications and operational instructions.”

The requirements for managing large volumes of critical data via reliable connectivity are increasing exponentially, he points out. “With all this reliance on data transfer and vessel monitoring, 24/7 connectivity is now expected. Systems with automated failure and robust backup are therefore essential.

“Digital systems need to be capable of operating seamlessly over GSM and satcom. Today we see far fewer ships operating just with a single line of communication. It’s now common practice to equip an onboard network with one or

two backup lines. VSAT packages now routinely include L-Band along with any Ka or Ku offer. Business continuity is essential, otherwise, efforts invested into digitalisation could be wasted.”

Cybersecurity is, unsurprisingly, a major focus, particularly following the entry into force last year of the IMO’s Resolution on Maritime Cyber Risk Management.

Emilian says: “With the introduction of the IMO resolution in January 2021, IEC Telecom has been working closely with fleet managers to develop an individual cybersecurity policy for each vessel. With more data onboard than ever, efficient cyber risk management includes measures such as the separation of corporate and crew networks, verifying the authenticity of data, and proper safety protocols for personal devices brought onboard a vessel. BYOD (Bring Your Own Device) cyber strategy is a continuous bargain between IT and users. The end goal is a fair, secured connectivity for both.”

There has been a significant increase in interest in cybersecurity packages, he says, and IEC Telecom has developed an “extensive portfolio” of security solutions optimised for the maritime environment, including a multilayer cybersecurity package which safeguards onboard systems from all known viruses and detect new potential threats.

“IEC Telecom supports the business continuity of customer operations by enabling IT personnel to retrieve data following an interruption and keeps mission-critical and crew welfare networks segregated with multiple access levels. IEC Telecom also provides remote deployment of software update patches as well as replicates data between ship and shore.”

And finally – any predictions for the next ten years?

“The market will undergo a massive expansion due to the development of the orbital infrastructure. As of 2021, there were 11,000-plus satellites in orbit. Some experts forecast that, by 2030, there will be nearly ten times as many.”

This expansion will generate more capacity than possible demand for it, he says. “Oversupply will drive prices down and average revenue per user (ARPU) is expected to drop from \$466/Mbps/month in 2021 to \$166/Mbps/month in 2029.” ●

