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SATELLITE EVOLUTION GLOBAL

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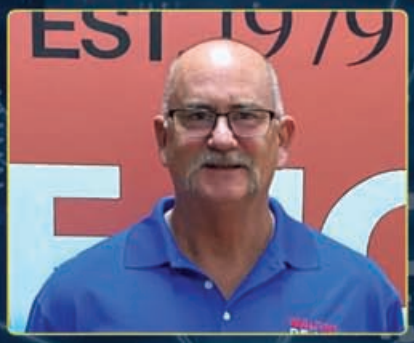

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Daria Boiko, Vice President of IEC Telecom Group's Commercial Division

Satellite Evolution Global

Q&A

How remote technologies and their networks unlock the potential of automation

The autonomous revolution that utopian thinkers have long theorised stands atop dozens of complementary technologies, not least of them IoT-connected remote systems that expand the reach of AI sophistication across the breadth of the globe. Daria Boiko, Vice President of IEC Telecom Group's Commercial Division explains the industry she sees, and the myriad of efficiencies automated technologies can empower.

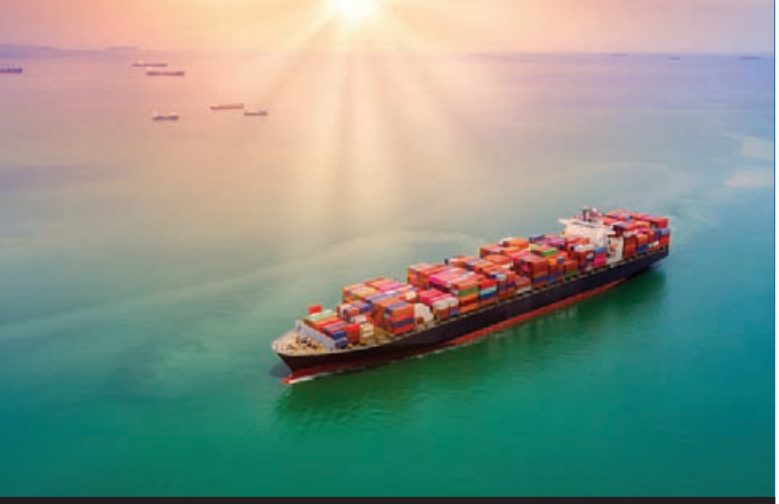
Laurence Russell, Associate Editor, Satellite Evolution Group

Question: As the world gets back on its feet, digitalization and remote connectivity have become a big opportunity for fuelling growth. What do you believe will be the sectors driving the most demand for these technologies in 2023?

Daria Boiko: As we're getting more and more connected, there remain opportunities being missed. From a satellite perspective, we're still seeing the same industries voicing demand, such as maritime, where there are still many unconnected vessels making do traditionally. This is to say nothing of the opportunity for entirely automated vessels which are becoming quite a big thing as this sector grows.

Mining and agriculture sectors are still developing their taste for

IEC connects remote industry. Photo courtesy IEC Telecom



Decarbonisation efficiencies make maritime green. Photo courtesy IEC Telecom ●●●

internet of things (IoT) and machine-to-machine (M2M), which we can expect to mature into an even greater market share before too long, and relief and NGO demand remains reliable.

Question: With industries becoming increasingly automated, what's possible in a world of connected AI and automated systems?

Daria Boiko: The world of artificial intelligence (AI) is all about operational efficiency. With a range of processes handled without human involvement, companies can optimize their costs and speed up their business cycles. As more organisations take advantage of AI capabilities and cloud technologies, they report 27 percent of earnings being attributable to benefits from AI, according to a 2021 McKinsey report.

From increased access to data and automated processes to reduced safety risks for remote workers and real-time security measures, AI adoption is up from 45 percent in 2020 to 57 percent in 2021 in emerging economies. Big data analytics are being driven by artificial intelligence for faster data crunching and processing. AI-driven systems can make short work of analysing billions of datasets. Furthermore, their machine-learning capabilities pave the way for efficient, safety-driven automated responses.

Question: When it comes to bringing IoT connectivity to systems, automated or otherwise, what are the biggest obstacles to overcome? What's stopping us from connecting everything everywhere?

Daria Boiko: Often, IoT systems are used specifically in remote areas to optimize processes and reduce unnecessary expenses. While in cities, the availability of seamless connectivity is not an issue, achieving an uninterrupted data flow in remote areas remains a challenge.

This is where satcom solutions come to the rescue. In the past, access to satcom was limited due to the considerable cost of both airtime and equipment. This has dramatically changed over the past ten years. Servicing IoT devices can be achieved via compact and affordable terminals, offered with tariff plans at a cost on par with the Global System for Mobile Communications (GSM).

With IoT sensors, enterprises can ensure complete visibility of their assets. In the maritime sector, tracking devices empower vessel owners with comprehensive onshore management and monitoring of offshore assets from damage and unauthorised movement. As a case in point, IoT over seamless connectivity can support digital cargo optimization by reducing empty space from 40 percent to below 15 percent.

IoT technology takes this process from a physical space to the digital realm after collecting data on container types, weight, engine performance, destination, and more. This critical space and transportation capacity decision-making is easily enabled by offering remote control to the vessel operator.

Wide reaching connectivity serves first responders when they need it most. Photo courtesy IEC Telecom ●●●

Question: You recently announced a partnership with Intelsat as a solution partner for their FlexMove High-Throughput Satellite system. What does their technology bring IEC?

Daria Boiko: Intelsat FlexMove is 20x faster than current mobile satellite solutions. We are thrilled to enhance our customers' productivity and help them decrease their operational expenses with this state-of-the-art solution for communications-on-the-move (COTM) and communications-on-the-pause (COTP). FlexMove empowers users with unprecedented flexibility for large remote operations no matter where they take place over a Ku-band satellite fleet. So, our customers can benefit from reliable connectivity in areas with limited to no GSM coverage and also access a powerful backup solution in urban locations.

Several state-of-the-art satellite terminals can be paired with FlexMove. Compact and portable, the StarWin terminals for stationary use and Kymeta terminals for vehicular use do not require a complicated set-up. This makes them ideal for special missions and humanitarian actions, whose operations depend on a swift response. With optimized applications by IEC Telecom, our customers can benefit from remote maintenance, surveillance, telemedicine, and more value-added services over FlexMove connectivity.

Question: Are remote connections less secure? Do a great number of end-points create more opportunities for cyber-attacks? How can we assure security as we expand the scope of our connectivity?

Daria Boiko: There is no particular sector of the industry that is more exposed than any other. It's the systems and access points that create the issues.

In a corporate environment, most of the cyber threats come from unintended contamination from a personal device. IEC Telecom solves this problem with the OneGate network management system.

The terminal allows the separation of operational networks. Hence even if one of those gets infected, the rest remain secure and operational. It is especially important for the maritime market, where onsite maintenance is not an option available anytime. Our typical solution for this use case is the separation of corporate and crew welfare environments.

As such, even if the social network is down with a virus intentionally released via a personal device, critical infrastructure remains intact.

OneGate allows for network monitoring and set-up to be performed from onshore via a cloud-based control panel. ICT managers based in HQ can keep an eye on remote operations via an easy-to-use local dashboard. In addition, OneGate assures continuity of service by enabling advanced cyber security. The terminal segregates crew and corporate networks, eliminating the risk of cross-contamination.

Question: On the subject of digitization, what is digital decarbonisation? Can the sustainability gains of connected systems add up to make a real impact for the world's net-zero targets?

Daria Boiko: Connectivity has a direct impact on decarbonisation. Digital technologies are forecasted to

AI and machine learning leverages data advantage into real results. Photo courtesy IEC Telecom ●●●

Photo courtesy Fit Ztudio/Shutterstock

achieve 76 percent of the decarbonisation efforts mandated by the International Maritime Organization (IMO) targets, i.e., reducing carbon emissions by 40 percent by 2030, for possibly one-tenth of the cost. With IoT, smart mobility, and artificial intelligence, the maritime sector is empowered to optimize routes, decrease fuel consumption, track asset performance, and reduce idle time and inefficient processes – resulting in the prevention of millions of tons of CO_2.

Shipping companies across the globe are supporting digital decarbonisation efforts with The Getting to Zero Coalition – an alliance of 150 companies. The goal is to develop and deploy zero-emission vessels by 2030. There are already reports of CO_2 emissions savings of 18 percent or more across early digital decarbonisation adopters. With digital decarbonisation being a growing US$11 billion market, optimizing conventional ships with digital decision support can result in up to 38 percent reduction in greenhouse gas emissions by 2050, according to an Inmarsat report.

Question: What can we expect from IEC Telecom in 2023?
Daria Boiko: We are committed to bringing the benefits of digitalization to the communities in which we operate. From humanitarian field missions to e-government and remote maintenance to real-time maritime updates, we believe that satellite connectivity empowers businesses and communities with services that may otherwise be unreachable.

In 2023, IEC Telecom will continue to expand its portfolio and develop new partnerships to support global business operations as well as regional set-ups.

We aim to expand our geographic presence, especially in the Middle East. Our integrated and scalable satellite communication solutions optimize e-business services, offer a reliable backup for the GSM network, and ensure business continuity in the rapidly developing business landscape in the Middle East and North Africa (MENA) region.