Global satellite connectivity comes of age

As the sun sets on 2022, **Nabil Ben Soussia**, of IEC Telecom Group, looks ahead to how digital connectivity will develop in the coming years

It's an exciting time for communications and connectivity across the globe. According to a report by BCG, the global satellite communications service market is expected to reach US$40 billion by 2030 at an annual growth rate of 7 per cent. It is a promising opportunity to bridge the digital divide by connecting remote areas on land and across vast stretches of the sea.

Low-Earth Orbit (LEO) satellite technology is taking centre stage in this process and is forecasted to account for 40 per cent of this market. In the past 10 years, the cost of launching a LEO satellite constellation has dropped significantly. Some 1,200 LEO satellites were launched in 2020 and a further 1,400 in 2021. It is expected that the oversupply of satcom capacities will lead to a substantial fall in airtime prices, with the average revenue per user declining by 21 per cent between 2022 and 2028.

Not only will LEO constellations make satcom more affordable, but they will also make it more efficient. As the satellites are located closer to Earth, data can pass from one point on the network to another in a shorter amount of time. This is called latency, which is reduced to as little as 40 milliseconds over a LEO network. In the era of digitalisation, this alone sets LEO operators ahead of the competitive curve, as modern cloud-based applications require low latency by default.

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While the adoption of new LEO-based communication systems with flat antennas is gaining momentum for land use, the technology is still not available for maritime use. The trials are ongoing and success is just a matter of time. Yet, before this becomes mainstream, satcom users will seek other solutions to enable digitalisation for their operational needs. Traditionally, access to digital apps was only possible over VSAT. Today, this is no longer the case. For instance, we have invested in the development of specialised applications for the low-bandwidth environment of remote areas on land and at sea.

Of course, increased connectivity places a greater emphasis on cyber security and this goes beyond the availability of anti-virus solutions. The success of cyber security implementation depends on policies which must be custom made for each specific case. The needs for cyber security onboard a bulk carrier will differ from the needs of a fishing vessel. Similarly, the set-up for humanitarian missions will be very different to the demands for highly encrypted infrastructure in the defence sector. The role of satcom service operators has shifted from enablers to consultants, helping customers to maximise digitalisation without exposure to cyber attacks.

Slowly, but steadily, businesses are coming to acknowledge the vast benefits of big data analytics. Data-driven decision-making allows us to make better operational choices, saving on consumable resources and ultimately contributing to lowering emissions, paving the way for a greener future. Statistics support this view: it is reported that adoption of digital technologies can reduce carbon emissions by 38 per cent, while enhanced connectivity increases profitability by up to 17 per cent.

With this rapidly evolving digital landscape, connectivity is not only about doing more – it is about using digital products for smarter workflow, seamless communications and sustainable environment-friendly processes. ***MRI***

Nabil Ben Soussia

Nabil Ben Soussia, COO of IEC Telecom Group