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Using CBH over Satellite to Bridge the Digital Divide in Mexico

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Digital innovation is often hailed as the solution to accelerate socioeconomic development around the world. However, the reality is that the global digital divide is still as vast as ever.

As a reference, consider this: In the United States, more than 95% of people have access to the internet. Rates are similar in Germany, Sweden and other wealthy countries. Yet billions of people worldwide, the vast majority of them poor, still lack internet access. While more than half of the world's population can get online, the other half, totaling over 3.7 billion people, still cannot do so.

In Mexico, approximately 30% of the population still does not have access to the internet. The implications of the pandemic, including lockdowns and the shuttering of schools and businesses has left millions of people at a great disadvantage in terms of being able to continue working or studying as well as purchasing food or services online. For the 3 out of 10 people in Mexico who live without internet, the pandemic has only exacerbated a problem to an extreme; the 30% without internet access are primarily people living in rural areas who were in a precarious and vulnerable situation even before the pandemic began.

According to a recent analysis by UNCTAD, the coronavirus crisis has accelerated the uptake of digital solutions, tools and services, speeding up the global transition towards a digital economy. On the other hand, it also exposed the wide chasm between the connected and unconnected, revealing just how far some countries are in terms of digital uptake. As stated in the report, "This situation has significant development implications that cannot be ignored. We need to ensure that we do not leave those who are less digitally equipped even further behind in a post-coronavirus world."

Development of Internet Access in Mexico

Telecommunications reforms introduced in Mexico during 2013 were designed to substantially reshape an antiquated industry and increase internet access. The reform package, conceived under former president Enrique Peña Nieto, sought to develop a wholesale wireless network (Red Compartida) and a fiber-optic backbone network (Red Troncal) using more than 25,000 kilometers of fiber-optic strands that belonged to the Federal Electricity Commission (CFE), the state-owned electricity utility.

The development of Red Compartida has continued under the current president of Mexico, Andres Manuel Lopez Obrador. In March 2018, the consortium in charge of the project, Altán Redes, launched operations with the ultimate goal of reaching more than 92 percent of the population by January 2024. In February 2021, López Obrador announced an agreement between the government and the three biggest telecommunications providers to use Red Compartida infrastructure to offer fourth generation plus (4.5G) services to localities with under 5,000 inhabitants. Altán Redes reached over 50 percent of its coverage goals, providing coverage for over 72,000 localities with under 5,000 inhabitants, having invested more than $1B in telecommunications infrastructure for Red Compartida as of May 2021.

In January 2020, the Mexican Ministry of Communications and Transport announced a future tender for satellite internet access providers to connect 1,200 public access points across the country, projecting an eventual total of 19,000.

Using SATCOM to Reach Everyone

In order to provide communication services to everyone, everywhere, Mobile Network Operators (MNOs) are relying more and more on satellite communications. More specifically, by utilizing cellular backhaul over satellite, MNOs are now able to remain profitable while meeting worldwide demand for greater connectivity and 5G. Satellite has become a top choice for those wanting to provide cellular backhaul in rural or remote areas.

As a result, MNOs are looking for solutions which offer improved efficiency, performance, flexibility, and scalability. In remote regions, operators cannot easily roll out individual backhaul networks; for countries with sparsely spread populations, like Mexico, the cost is several times the amount compared to urban areas. But cellular backhaul over satellite can offer a compelling business case, allowing people to remain connected and keep pace with the fast-developing technology landscape. As the majority of people access the internet via a mobile phone or tablet, rather than desktop computers or laptops, this technology is also easily accessible, allowing people to get online quickly and easily.

Gilat is Hard at Work in Mexico

Gilat has been an active player in the Mexican Telecommunications sector for a number of years.

Earlier this year, Gilat announced our partnership with AXESS, one of the main companies that offers satellite telecommunications solutions to companies with critical operations in remote locations. AXESS selected Gilat to power the network expansion of two of the key Mobile Network Operators (MNOs) in Mexico. Gilat's cellular backhaul solution over satellite will enable connectivity for hundreds of sites to support bridging the digital divide throughout Mexico.

Gilat's multi-application, scalable SkyEdge II-c platform is being leveraged by AXESS to broaden and expand its service. In addition to CBH projects, AXESS has been providing service to an assortment of industries including: Oil & Gas, Retail, Mining as well as for Corporate and Internet Connectivity.

In late 2020, Hispasat awarded Gilat a multi-million-dollar order to expand the existing SkyEdge II-c platform that Hispasat operates in Mexico and procure Capricorn VSATs for cellular backhaul (CBH) over satellite. Hispasat, Red Eléctrica Group's communications satellite operator, is a world leader in content distribution in Spanish and Portuguese speaking countries. Hispasat is using Gilat's technology to extend the service of Altan La Red Compartida, the shared telecommunications network in Mexico, to over three million people in Mexico. Mexico's underserved rural population will benefit from 4.5G LTE coverage enjoying high-quality mobile broadband voice and data services.

Altan is committed to promoting the vision of more and better-connected residents in Mexico. Due to difficult terrain, laying out land-based infrastructure is unfeasible or would require exorbitant costs. Therefore, satellite backhauling is the preferred method to provide fast coverage to the unserved and underserved population in Mexico, in regions where telecommunications can be crucial to open new opportunities for economic and social development. Gilat's SkyEdge II-c platform with its flagship VSAT, Capricorn, over Hispasat's Ka-band Amazonas 5 satellite, provides a most reliable quick solution to meet Altan's demanding requirements. Gilat's CBH platform provides a user experience similar to terrestrial technologies enabling MNOs to expand high-quality coverage to underserved areas of Mexico.

For the last 3 years, Gilat is also directly serving the needs of an additional leading MNO in Mexico, offering Cellular Backhaul in 3G and 4G. This is also bringing connectivity to remote regions where terrestrial systems such as fiber and microwave are not available. Gilat's satellite platform also allows the mobile operator to use transportable VSATs for disaster recovery, thus ensuring connectivity anywhere in Mexico at all times.

Summary

Many believe that the Covid-19 pandemic has highlighted the world's digital divide more than any single event in history. While clearly billions of people have managed to overcome the challenges of lockdowns and closures with the use and benefits of technology, the same number of people were further isolated and cut off from daily, necessary services. Ubiquitous access to communication technology is more important than ever before, as frameworks for education, healthcare, financial services and more have now moved online.

Satellite backhauling to extend mobile networks represent an exciting solution for telecommunications companies that need to extend their connectivity in areas where land-based infrastructure deployment faces geographic challenges or is not viable economically. Satellite technology makes it possible to connect remote areas to mobile networks quickly and efficiently. In turn, this makes satellite communication an ideal solution for reaching the billions of people throughout the world who still do not have access to internet and with it all the life sustaining services that they require.

Gilat is proud of our efforts around the world, and particularly in Mexico, to help bring connectivity to billions of people.

To learn more, please contact us at: info@gilat.com