SkyEdge IV Case Study: GESAC Program in Brazil for Bridging the Digital Divide

SkyEdge IV is the platform of choice for satellite operators, enabling large-scale digital inclusion projects. Gilat provides an end-to-end solution in the remote areas of Brazil. Collaboration with Telebras enabled timely professional delivery of more than 1,500 Internet access points, mostly to North and Northern Brazil.

Executive Summary

The Challenge

- Bridge the digital divide in Brazil by providing internet connectivity to the population of remote and rural areas
- Overcome the geographic and socio-economic barriers to enable digital inclusion mostly in the Northern region of Brazil

The Solution

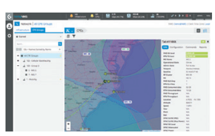
- Provide internet connectivity over satellite in partnership with Telebras for the Brazilian government's GESAC project
- Deliver more than 1,500 internet access points to the most remote and rural areas in North and Northern Brazil
- All sites include an indoor Wi-Fi solution, and outdoor Wi-Fi Solution as required

Benefits of Gilat

- The **SkyEdge IV** VSAT platform provides superior scalable next generation technology with advanced hubs and terminals designed to provide the required connectivity
- Vast experience working with local partners on a professional timely end-to-end solution for bridging the digital divide
- Professional project management capabilities with local office providing field services across Brazil in support of schedule and KPIs

The Electronic Government Program — Citizen Assistance Service (GESAC) is managed by the Ministry of Communications and offers access to internet connection services, with the goal of promoting digital and social inclusion, as well as encouraging electronic government actions for the population.

SkyEdge IV



TotalNMS

Gemini

The Challenge:

Brazil, a country with significant social and economic inequalities, poses unique challenges in achieving comprehensive digital inclusion. Even though significant strides in increasing internet access took place over the last decade and notable progress has been reached, still significant gaps exist in digital connectivity. Rural areas, particularly in the North and Northern regions, lag significantly behind urban centers in terms of internet penetration and quality.

A study by the Regional Center for Studies on the Development of the Information Society (CETIC) found that only 41% of households in rural areas have internet access, compared to 89% in urban areas.

This digital divide is fed by the lack of robust digital infrastructure in rural and remote areas. High costs of deployment and maintenance deter private investments, leaving many communities disconnected or reliant on inadequate and unreliable internet services. Digital literacy remains a critical challenge and is essential for enabling individuals to fully participate in the digital economy and society. Many Brazilians, particularly in underserved communities, lack the necessary skills to effectively use digital technologies.

The government of Brazil formed the Governo Eletrônico – Serviço de Atendimento ao Cidadão (GESAC) - a federal government initiative for high-speed broadband over satellite across Brazil's Northern Region. The Ministry of Communications (MCom) offers access to internet connection services, with the goal of promoting digital and social inclusion for services such as health and education. Furthermore, the program is encouraging electronic government actions for the population, including in locations with no adequate offer of internet connection.

The Solution:

The Brazilian government program GESAC is chartered with providing access to internet connection services to promote digital and social inclusion, as well as encouraging education and e-government initiatives for the population. Telebras delivers to Mcom satellite connectivity for the GESAC program, utilizing Gilat's ground segment equipment, local services and expertise to provide digital inclusion throughout Brazil.

Local organizations and initiatives serve as powerful drivers of digital inclusion. Community networks, which are locally built and managed, have proven effective in providing internet access to underserved areas. Funding and training further support and enhance these initiatives and their impact.

Gilat's SkyEdge IV VSAT platform enables more than 1,500 internet sites in public institutions, schools, libraries, telecenters, health units, villages and rural settlements mostly across Brazil's Northern Region. Coverage is provided to rural, remote, border, and urban peripheral areas. Gilat's solution consists of field implementation, operation and maintenance of satellite internet access points with Wi-Fi access and operation as needed. SkyEdge IV Gemini VSATs were delivered and installed by the local Gilat team to provide remote sites with high-speed broadband.

The SkyEdge IV solution is equipped with a comprehensive management system, Elastix TotalNMS, allowing for full configuration, control and monitoring of all hub elements and remote terminals, regardless of their physical location. The solution also brings increased performance and optimized utilization to the remote sites.

The Gilat Advantage:

Gilat is a long-time player in Latin America and in Brazil, in particular. Gilat is involved in multiple projects for bridging the digital divide and promoting digital inclusion.

With great support of Gilat's local office we not only provide the ground segment equipment but manage additional aspects of the project in a timely fashion. A dedicated local project manager oversee services from site configuration, creation, installation as well as proactive and corrective maintenance. Services also include first level support and ongoing training and reporting.

Gilat's next generation multi-orbit VSAT platform, SkyEdge IV, has been built to address the needs of today and tomorrow. Critical for the GESAC project is the SkyEdge IV system architecture that took into account the need for project scalability and is best for addressing large networks with multiple user beams.

SkyEdge IV enables the platform to scale efficiently based on aggregated capacity of the network regardless of the number of spot beams. The smallest footprint possible is used, while capacity is added only as network utilization increases. This ensures accommodation of day-one operation over a large coverage area, allowing a pay as you grow model. Scaling up with additional bandwidth, an increase in users and expanded geographic coverage, as well as support during the network maturity phase is easily supported with SkyEdge IV.

SkyEdge IV's high-density hubs reduce rack space and power. The compact chassis architecture for transmit modules, receive modules and servers provides high throughput performance while minimizing rack space and power.

Gilat is experienced in addressing infrastructure inadequacies, socioeconomic shortcomings, and educational gaps, through coordinated efforts and innovative solutions. Bridging the digital divide is a core value of Gilat and as such the commitment and personal engagement in successful implementation is very high.

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