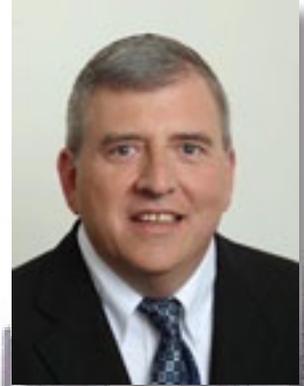# SatMagazine

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A Case In Point: USO Services For Brazil

by David Leichner, V.P., Marketing, Gilat Satellite Networks

São Paulo State is the driver of the Brazilian economy, but even this highly developed State has regions where terrestrial communications is difficult. Telefonica had the obligation to provide USO services across the São Paulo. They selected Gilat to create a turnkey solution running on the *SkyEdge*™ System with remote facilities integrating VSAT, payphones, rectifiers and solar panels, which Gilat supplied in only 90 days.

The Need

Telecomunicações de São Paulo S.A., **Telesp**, a subsidiary of **Telefonica, S.A.**, provides the full range of telecommunications services in São Paulo State, Brazil, which is the most populous, rich, and developed state of Brazil. The state has an area of 248.176,7 km^2 (larger than France—243.965 km^2).
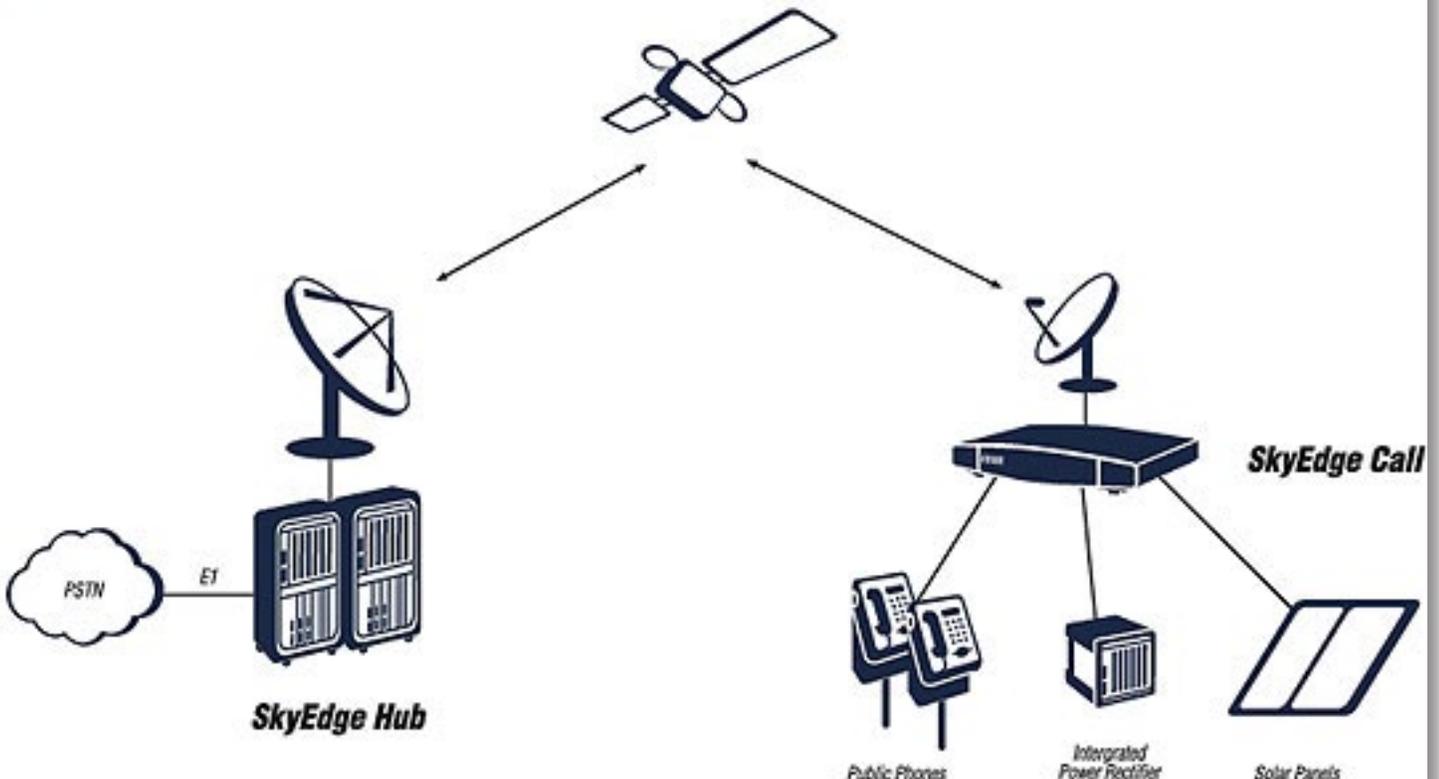
While the state is very well developed, there are still a few locations where satellite is the only economically viable alternative to provide telephony services. Telefonica has the obligation to provide *Universal Service Obligation* (**USO**) telephony across the State—VSAT technology was selected for those locations.

The Challenge

Providing rural telephony coverage is often expensive as the population density of those areas is low and the terrestrial communication infrastructure is not advanced. Knowing that, **Telefonica**, with its wealth of experience in service provision, established a team of experts to study all of the aspects of its challenge on how to provide services to remote communities.

Adding to the difficulties was the need to know how many communities existed. In fact, the first phase of the project was to identify the villages. Taking satellite imagery, Telefonica surveyed the state and listed the target villages that required a solution.

While Telefonica prioritized the villages and selected the first ones to receive their services, Telefonica management also had to decide on a technology for rural telephony. Laying cables would be quite expensive and would take far longer than their contract allowed. *Wireless Local Loop* (**WLL**) radio transmission technology was also investigated, but would also be expensive. There was a satellite option, but Telefonica did not possess significant internal experience with satellites. They quickly needed to better understand the technology and its implications.

Typical Remote Site

SkyEdge Hub

SkyEdge Call

A Case In Point: USO Services For Brazil (Cont.)

The Solution

Satellite systems avoid the problem and expense of installing telephone cables to distant low population areas. After evaluating a number of satellite communications solutions, Telefonica decided upon **Gilat Network Systems** and its *SkyEdge* System.

One reason was Gilat's position one of the leading firms providing global rural telephony solutions. Telefonica was confident that Gilat's deep global experience could help the company quickly roll out a solution.

One of Telefonica's key criteria was speed of solution implementation—the company only had a short time to create the system—Gilat committed to a three month project time frame, which included delivery and deployment of a turnkey system that helped meet USO requirements. The final system included:

• A SkyEdge Redundant Hub

• SkyEdge Call VSATs spread across São Paulo State

• Each VSAT supports two public payphones with 12KHz metering

Telefonica realized that SkyEdge would provide...

• Experience in Rural Telephony & USO

• Rapid development and installation

• High quality telephony communications

• Integration to Brazilian telephony standards

• Low Total Cost of Ownership

• Complete deployment package including poles, rectifiers, solar panels and fences. Integration with Brazil SS7 (ISUP Br) Signaling

The SkyEdge Hub in São Paulo communicates with remote SkyEdge VSATs, directly connecting rural telephones with the rest of the PSTN system and bypassing the need for terrestrial wiring or a series of radio towers. SkyEdge's bandwidth management means that high-quality voice and fax communications is available from every telephone.

A technical requirement was that Telefonica needed the signaling interface to be a Brazilian variant of ISUP. As Gilat has global experience in adapting to local standards, it committed to making the required customizations and the solution was ready in two weeks.

"After witnessing Gilat's fast, efficient deployment of this VSAT network, it was evident how they came to achieve a global leadership position in this market," said Jose Luis Dutra, Telefonica's Engineering & Planning Director. "We were particularly impressed with the speed with which they deployed the entire network solution. It took only 90 days from signing of the contract to its full implementation."

Making Telefonica management even happier is that the SkyEdge system isn't just powerful, stable and rapidly deployable, it also provides excellent Total Cost of Ownership (TCO). VSATs mean no terrestrial cabling, significantly lowering fixed costs. High system availability (over 99.95 percent), efficient use of satellite bandwidth, and speed of installing additional VSATs provide lowered operational expenses.

A Tailored Solution

Gilat was able to work quickly to provide a solution tailored for São Paulo State's USO requirements and telephony infrastructure. Along with the full SkyEdge system providing rural telephony, Gilat designed and created an enclosure that combined a VSAT and integrated rectifier.

While the immediate need was for telephony, future plans are to add broadband and, potentially, transportable communications offerings. The SkyEdge System serves as a platform for telephony, data and multimedia communications, supporting the full range of communications needs.

Using SkyEdge, Telefonica was able to quickly roll out their USO requirements while creating a system that works not only for current services but also for the future.

About the author

Mr. Leichner has over 20 years of marketing and management experience. He is responsible for corporate marketing and business development in Gilat and its subsidiaries. Prior to joining Gilat, Mr. Leichner served as the VP of Sales and Business Development at Dynasec; CEO of SafePeak Technologies; CMO at BluePhoenix Solutions; VP of Marketing at Unipier Mobile; and as VP of Worldwide Marketing at Magic Software Enterprises. Mr. Leichner has been a member of the global board of the Israeli Mobile and Communication Association since 2005. He holds a BA in Computer Information Systems and an MBA in International Business from the City University of New York.

For more information, access the Company's website at:
http://www.gilat.com