Case Study: A Fully Managed Service Provides the Answer for LTE Connectivity

Not even typhoons could impact the robust Gilat cellular backhaul implementation

Executive Summary

The Challenge
- Ensure that a comprehensive Ku-band solution could work in a region with a heavy rainy season
- Delivery within a narrow timeframe

The Solution
- A managed service to upgrade 36 remote sites
- Augmentation of LTE transmission capacity in peak areas
- Rapid disaster communications solution

Benefits of Gilat
- Full LTE speeds for cellular handheld devices
- No packet loss under fade conditions
- Easy expansion to additional remote areas in the future

Gilat packages nationwide managed service connectivity and an emergency backup network

> By using Gilat's innovative VSAT technology, we can deliver mobile broadband data services in remote rural areas that previously had no connectivity, in a cost effective manner.

Emmanuel Estrada,
Globe Senior Vice President for Technical Service Design

The Challenge:
LTE in the most far-flung regions

The Philippines has more than 100 million residents and over 7,000 islands. While most of the population lives on the largest islands, many do not. Regardless of where Filipinos live, their need for connectivity is the same. The leading telecom provider in the nation, Globe, is committed to their vision of ensuring high-quality broadband access in support of its nation-building strategy.

However, due to the country's unique geography and extreme seasonal weather, they faced a challenge: cellular backhauling through fiber or microwave alone could not provide comprehensive coverage.

Globe was looking to upgrade their existing VSAT backhaul in 36 remote rural sites in order to provide not just basic voice and SMS service, but to deliver mobile broadband service, as well. In addition, they had other needs that they hoped to address: faster enterprise connectivity and infrastructure for emergency communications. To top it off, the solution would need to be implemented in a matter of months.

The common misconception that Ku-band broadband over satellite is unreliable in rainy conditions particularly in the Philippines, which experiences a heavy rainy season, including periodic typhoons is more than a passing concern. This challenge was negated due to Globe's early adoption philosophy. Thorough testing and validation proved that Gilat's satellite mobile backhaul solution surpassed expectations from trial to actual implementation.

Gilat's response to the challenge was to provide hard data from the field. A proof-of-concept for cellular backhaul over satellite deployment conclusively demonstrated not only that the satellite connection held up in the rainy season in a dense area, but also that previously unattainable download speeds were now possible.

SkyEdge II-c System with X-Chassis and Capricron-4

The Solution:
A managed service that does it all

Gilat deployed a full managed service solution in three months that included all the elements Globe needed: a cellular satellite backhaul solution enabling high-quality data and voice services; a boost in consumer and enterprise connectivity; and network-in-a-box technology to provide rapid disaster communications during catastrophic incidents.

The managed service solution uses the scalable and flexible X-Architecture, deployed in the two different locations in the northern territories of the Philippines. Thirty-six Capricorn-4 VSATs sites were deployed in the regions of Mindanao and North and South Luzon. These sites are supported by a 24x7x365 Network Operation Center (NOC) service, a SLA guaranteeing 99.5% network availability, bandwidth management and optimization, and program management and reports.

"This is a breakthrough project for Globe," said Emmanuel Estrada, Globe Senior Vice President for Technical Service Design. "By using Gilat's innovative VSAT technology, we can deliver mobile broadband data services in remote rural areas that previously had no connectivity or only voice and SMS service in a cost effective manner. At the same time, this can provide us a means to quickly provide an interim transmission capacity augmentation for some of our 4G sites pending provision of fiber transmission, which can take time to provide. We envision this project improving the delivery of our mobile broadband network for quality and excellent user experience to our customers, especially in remote rural areas."

The results speak for themselves. The network was deployed on time and now operates as a fully managed service, with greatly improved efficiency, and for cellular subscribers in those 36 sites, at higher speeds.

The Gilat Advantage

Gilat's Capricorn 4 VSAT propels the cellular backhaul over satellite approach into the mainstream by providing terrestrial-quality broadband service at a faster time-to-market than terrestrial solutions. Utilizing this solution means increased market share for Globe, keeping them ahead of potential competitors.

Capricorn includes Gilat's patented cellular data acceleration, enabling true LTE speeds for the cellular handheld devices of all leading technology vendors. This acceleration technology is part of Gilat's overall managed service solution and is embedded in the Capricorn 4. Offering the benefit of a four-port Gb Ethernet LAN, Capricorn 4 eliminates the need for an external switch. Each port can be individually managed, including assigning VLANs, monitoring, and configuring Ethernet link parameters.

Gilat's scalable solution enables expansion to new remote areas. As opportunities arise, Globe will benefit from the ability to quickly deploy a wide range of applications.

![Gilat]