

Satellite Telephony

“Above the Property” and “In the Clouds”

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Summary

In times of crisis, “real time” voice communications is essential to business continuity. In this decade alone challenges with traditional land line and cellphone technology limited or prevented our ability to communicate effectively with our hotels and corporate facilities during multiple crises. New solutions were needed.

Background

The events of 9/11 (2001), the Northeast Power Blackout (2003), the Memphis Straight-line Winds episode, aka ‘Hurricane Elvis’ (2003) and Hurricanes Katrina and Wilma (2005) produced a loss or interruption of both telephone and data communications due the failure of traditional telephony and data infrastructure. This breakdown disrupted our operations and limited our ability to assist those facilities when they need such support the most.

Our recent experience in New Orleans in the aftermath of Hurricane Katrina is a prime example. A complete communications breakdown, with the exception of isolated and intermittent “copper wire” telephone lines and sporadic cellular coverage, occurred. Our ability to organize the ‘rescue’ of both team members and guests in New Orleans were hampered as a result.

While portable satellite telephones (Plan A) were deployed to New Orleans from our operations center at the Homewood Suites in Baton Rouge, they proved only marginally effective. Portable satellite phones require a ‘clear view’ of the sky, mandating the user be outdoors. Their antenna must be continuously pointed to the sky and their inbound and outbound dialing protocols are cumbersome. A concentration of high-rise buildings further contributes to the difficulty in establishing and maintaining effective and continuous communications. As satellite phones operate differently from cell phones, users were further challenged, lacking the necessary familiarity with the former. While the Hilton Family of hotels in New Orleans had this limited resource, our competitors, including Marriott, Starwood, Loews and Hyatt, did not.

A better solution (Plan B) was needed and Loss Prevention was determined to find it.

Plan B – Fixed Satellite Technology – ‘Above the Property’ and ‘In the Clouds’

Looking for options, a “fixed” satellite telecom system, connected to reliable primary and secondary power sources was the most reliable answer. Globalstar and their Qualcomm product line was identified as the most economical and “user friendly” service available in this hemisphere.

Satellites are the best and most reliable form of interstate or international communications in the case of natural disasters or other crises where traditional voice and data communications are impacted. This alternate method takes communications “Above the Property” and “In the Clouds”.

With the assistance of the Hilton Telecom and Facilities teams and Data Network Cabling (Hilton’s cabling vendor) a fixed satellite transceiver was incorporated into the Memphis Operations Center (MOC) PBX. The satellite system is intended as the voice communications technology of “Last Resort”. When there is a failure of traditional land-line, cellular and/or VoIP capabilities, satellite telecom will be available.

How It Works

To access the satellite system from a desktop phone, the User simply dials a 3-digit access code and then the 10 digit number of the person being called. In case of the loss of commercial power, the satellite system is connected to a back-up power source. Connection to the satellite system will only occur as a “last resort”, or in other words, when this is the only service available. The switch from normal phone circuits to the satellite service is seamless to the user. His or her phone works as normal.

The Qualcomm Satellite Radio Antenna Unit (SRAU) was mounted to a convenient outdoor location, with a clear view of the sky. The SRAU connects to a standard indoor telephone set using a standard telephone cable. Once plugged into the provided 12v power supply, it provides a clear and effective satellite phone service inside the MOC. Telephones (a maximum of 10) are connected to the PBX and access the SRAU. Such satellite phones then operate like a standard phone. The transition from “standard” phone service to the ‘satellite’ service is transparent to the user.

To make the satellite service work, the SRAU unit was mounted to a solid structure on the roof of Bldg. B on the Audubon Woods Campus of the MOC. This location was selected for its close proximity to the Telephone Switch Room. The weatherproof SRAU is securely mounted on a mast that provides height and stability, as well as a degree of protection from flying debris.



Once the SRAU was secured to the mast, cabling from the SRAU was run through a "roof penetration" to the Telephone Switch Room and connected to the satellite phone interface. Standard CAT5 wire connects the interface to the "punch block" and the dedicated telephone line. The PBX Switch was then programmed to identify the individual telephone extensions that have access to the SRAU.



All components in the Telephone Switch Room are connected to a dedicated uninterruptible power supply (UPS) and then to the building's Emergency Power Circuit. In the event of the loss of public utility electric service, the UPS initially carries the load until the new MOC diesel fueled emergency generator with an automatic transfer switch supplies power to the telephone switch and connected components.

Currently ten (10) telephone extensions (see locations in the schematic below) have access to the SRAU. These extensions are assigned to Executive personnel, three Conference Rooms and Loss Prevention. The Conference Rooms are in separate buildings on the campus and each is capable of operating as an Emergency Command Center.

Conclusion

In the event of a natural or man-made disaster, and as long as the integrity of the facility remains intact, your leadership team, by means of satellite communications technology, can remain in contact with our assets through-out the world.

The total materials and labor investment associated with this initiative cost approximately \$3500.00.

