

“Hope for the Best, Prepare for the Worst”

Recovering from Disaster More Quickly with Satellite Communications

By David Myers

IT IS AN UNFORTUNATE FACT THAT IN RECENT YEARS, THE WORLD HAS SEEN a significant increase in the number of disasters—both natural and man-made. Between terrorist events in New York and London, wildfires in California, Oklahoma and Texas, hurricanes along the Gulf Coast and earthquakes in Asia, many areas around the globe find themselves rushing to regroup and rebuild. A difficult task when you consider that following a disaster, the affected area usually is hurled back into the dark ages. The power is out, telephone lines are cut, and cellular towers are down or jammed.

Perhaps the most important aspect of rebuilding is getting communications up and running. Once a company re-establishes a communications system, not only can it begin a number of basic business operations, but it also can begin to make the contacts necessary to rebuild. And if a company takes the proper precautions, communications can be the first thing that gets back online, even while the local utility companies try to figure out where and how to start the restoration effort.

The key to getting an operation back to business as usual, even amidst the chaos, is to plan ahead with a self-contained back-up communications solution that does not rely on any local infrastructure. In short, a business needs an independently powered satellite communications system.

Everyone knows to “be prepared,” but many companies have a “that won’t happen here” mentality, leaving them woefully unprepared in the event of an emergency. With all the potential in today’s atmosphere for a disaster to strike, it is what you do to prepare ahead of time that truly determines how well and how quickly you will recover. This was certain the case for one Gulf Coast company affected by Katrina.

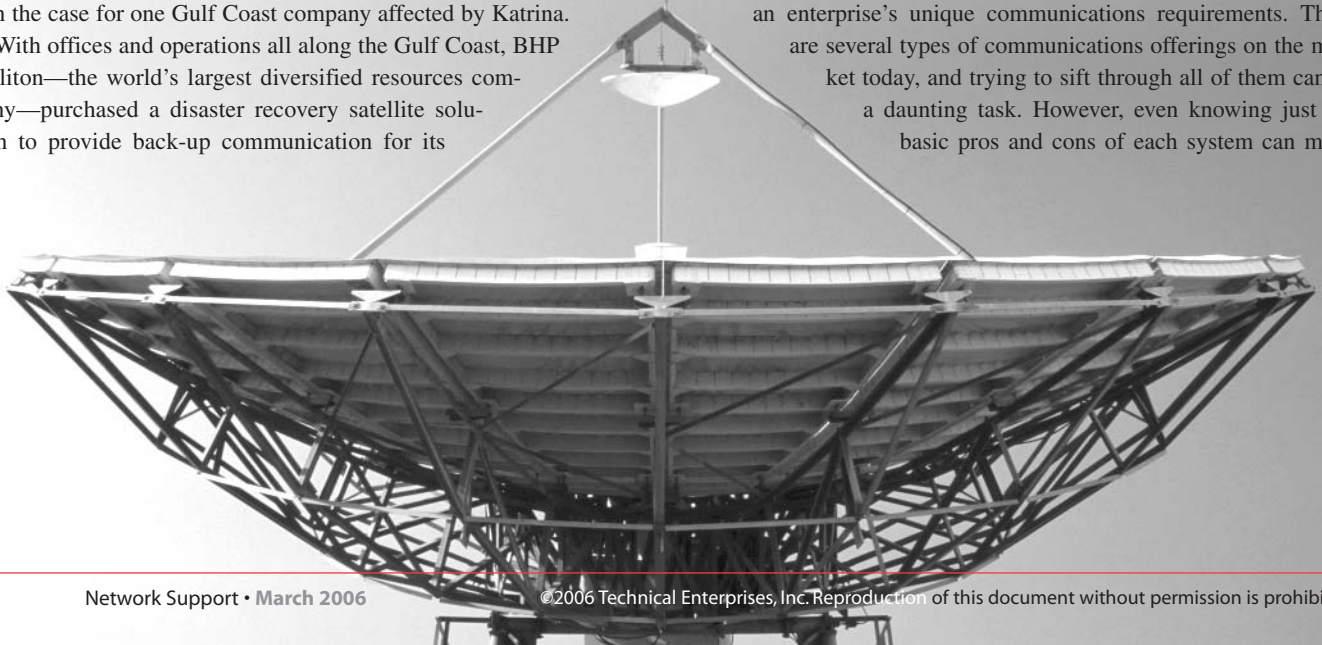
With offices and operations all along the Gulf Coast, BHP Billiton—the world’s largest diversified resources company—purchased a disaster recovery satellite solution to provide back-up communication for its

shorebases supporting offshore oilfield facilities in the Gulf of Mexico. The trailer mounted self-contained communications system came complete with all of the equipment necessary to reconnect with the outside world, including a satellite network gateway, two telephones, a fax machine and a bank of Ethernet ports for plugging in laptop computers. The solution was kept on stand-by at a separate facility for emergency deployment.

Just over one month after BHP Billiton purchased this solution, Hurricane Rita ravaged the Gulf Coast area, cutting power, downing communications and effectively sending the region back to medieval times. The transportable satellite system enabled the company to establish a new, temporary shorebase well outside of the affected area, which was inaccessible due to severe flooding. The company’s preparedness allowed it to restore voice and corporate data communications, as well as public Internet access, within five hours of activating the solution.

Other companies found themselves scrambling to contact satellite service providers just before and immediately after the storm’s landfall and, in most cases, waited in long “first come, first served” lines with no guarantees. Waiting for a communications solution often costs the affected companies several days and even weeks, while BHP Billiton had peace of mind, knowing that its backup communications plan was already in place.

Companies can learn the importance of planning ahead by looking at BHP Billiton or any number of companies that had to wait to get back online, but perhaps the most important aspect of preparing for an emergency is choosing a satellite recovery solution that can support an enterprise’s unique communications requirements. There are several types of communications offerings on the market today, and trying to sift through all of them can be a daunting task. However, even knowing just the basic pros and cons of each system can make



the task much easier. There are three primary types of satellite communications services to consider when selecting a back-up solution: Mobile Satellite Services, Consumer Internet Services and Enterprise Converged Communications Services. Each has its benefits for certain kinds of applications, though some enterprises may need to consider more than one solution.

MOBILE SATELLITE SERVICES (MSS)

MSS providers like INMARSAT, Globalstar and Iridium have offered basic voice, fax and even limited e-mail or Internet-based communications for specialized handheld and laptop devices for several years. These services are generally provided on a best effort basis and offer “burstable” data rates ranging from as low as 2.4 kbps to about 64 kbps. MSS services are ideal for the individual who needs basic emergency communications and is willing to closely monitor the usage-based, per-minute charges. These battery-powered, handheld equipment packages also are perfect for local emergency responders or field personnel. The MSS solutions are chiefly designed to offer mobile phone-like voice services and are not generally suitable for providing larger businesses with sustained Internet access or corporate data communications.

CONSUMER INTERNET SERVICES

Consumer-oriented services—based on VSAT (very small aperture terminal) technology—are *ideal* for small-and medium-sized businesses. Services such as DirecWay, Connexstar and WildBlue offer “entry level” back-up solutions by utilizing equipment similar in size to what is used for direct-to-home satellite television. The bandwidth of 256 kbps upstream and about 1 mbps downstream are similar to the bandwidth offered by residential DSL services. These off-the-shelf, two-way services are largely designed to support “burstable” best-effort broadband Internet access for one or two PC’s. Some services are capable of supporting VoIP over one or two phone lines, but this service does not typically perform well, often running slowly when inundated with tasks such as corporate VPNs and other business applications. Consumer-oriented satellite solutions are typically not designed for use as a disaster recovery service and require a separate back-up power source.

ENTERPRISE CONVERGED COMMUNICATIONS SERVICES

Enterprise Converged Communications Services offer significantly greater performance and flexibility to support future applications. Though these services also employ VSAT technology, these solutions utilize much more sophisticated networking and quality of service (QoS) capabilities. Enterprise converged services make use of more robust antennas to support higher bandwidth of well over 1 mbps both upstream and downstream. Enterprise-grade VSAT services are intended to provide critical communications applications and can offer committed information rates (CIRs), which guarantee a minimum speed in addition to even higher “burstable” rates. These services are capable of simultaneously supporting secure corporate data access, broadband Internet, real-time video and toll-quality digital telephone service over more than 100 inbound lines. Providers of enterprise converged services are capable of offering solutions in a variety of ruggedized configurations specifically for disaster recovery

applications, such as those currently being used in the Gulf Coast by ambulance services, banks, energy companies and law enforcement and government agencies.

THINGS TO CONSIDER

Finding a provider is every bit as important as selecting a service. In the aftermath of Hurricanes Katrina and Rita, too many satellite providers market their standard, off-the-shelf services as “disaster recovery,” but they don’t optimize the services for disaster situations or for a company’s specific communications needs. The challenge for the IT manager is distinguishing between service providers and finding a solution that is optimized to perform for his or her specific company in a post-disaster situation.

The right service provider should have experience delivering IP and VoIP technologies in difficult or harsh locations. More often than not, in the time following a disaster, ground zero is nearly inaccessible. In order to have the peace of mind that a back-up solution offers, a company needs to know that its provider will be able to get the solution to them. Immediately following an emergency is not the time for a company to experiment with harsh conditions. Some providers are capable of deploying equipment to staging areas ahead of a known disaster such as a hurricane. By setting up several of these staging areas before disaster strikes, the equipment is ready to deploy to the consumer, even if a major road or highway is wiped out. The ideal provider will also have relationships with large government contractors in order to ensure that the equipment can get the status needed to travel through affected areas.

IT managers also should consider a provider that offers a ruggedized, self-contained satellite solution. In a disaster area, it is not uncommon for roads and generators to be out of commission. There are providers who offer solutions that not only can make it into a disaster-stricken area, but also operate even if power is not readily available. In addition, any back-up solution should be able to integrate into the corporate network. An experienced provider can make the back-up service work seamlessly with an existing IP network and even support existing telephone numbers at the remote location.

There are so many service provider options available today it is difficult to understand why an enterprise would risk its business continuity by not securing a back-up communications solution. While cost can present a challenge, calculating the lost revenue and incurred costs of keeping an operation idle while awaiting restoration of communications will often make the case. Satellite systems also require little on-site infrastructure, making them quick to install and provision. They promote business continuity in ways that traditional systems cannot. The key is selecting the right service for a company’s specific needs and a high-quality satellite communications provider. If businesses can make these choices successfully, then they can quickly shift their focus from restoring communications following a disaster to restoring their business. 🌀

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