



Shelter From The Storm

A Chronicle of the Performance of Velocita Wireless'
Crisis-Proven Network during Hurricane Katrina

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Overview

Katrina's wrath and the resulting telecommunications breakdown in the Gulf region and New Orleans have been clearly documented in the media. Indicative of the scope of devastation Katrina wrought on critical communications infrastructure is the fact that nearly three weeks after the event, nearly every major telecommunications carrier was still attempting to reinstate wireless and landline service to normal levels. While the attempts of telephone, cable and broadcast companies to restore service and aid disaster victims has been extensively covered, what has not been covered as extensively is the availability and reliability of the Velocita Wireless dedicated data network, which continued to serve New Orleans and the Gulf region with critical communications throughout the storm.

The 2005 Atlantic hurricane season officially began on June 1, and while Katrina was the fourth hurricane of the season, it was the first storm to reach category 5 status, making it this season's most deadly and destructive. With more than a million people displaced, an official death toll that now stands at over 1200 and damage exceeding \$200 billion, Katrina topped Hurricane Andrew as the most expensive natural disaster in U.S. history and a catastrophe of proportions unseen in the U.S. since the Great Depression.

Velocita's network withstood the tempest and continued to provide coverage throughout the storm's duration due to unique, redundant network architecture, designed and built to storm specifications over a decade ago, a dedicated, data-only technology that promotes disaster avoidance rather than disaster recovery, and a team of crisis-tested field engineers utilizing state-of-the-art troubleshooting tools.

Disaster Prevention before the Dawn of Destruction

Hurricane Katrina first hit the Florida coast on August 25, with the path of the storm taking it across Miami and Southern Florida. By August 28, Katrina had reformed in the Gulf of Mexico and gained additional strength, reaching Category 5 status. On August 29, it made landfall in the Gulf region between Louisiana and Mississippi as a Category 4 hurricane.

In addition to a superior, distributed network architecture, Velocita employs a dedicated, fast-response field engineering team, specifically trained and experienced in restoring critical communications, with fully-stocked, strategically-located depots of portable base stations, generators, fuel and spare parts that can quickly be deployed to any disaster area within the United States. Prior to Katrina's onslaught on Southern Florida and the Gulf Coast area, Velocita's network operations and field engineering teams quickly mobilized to address any storm-related network issues.

Dateline: Tuesday, August 23

The National Hurricane Center (NHC) had indicated that a broad low pressure area over the southeastern Bahamas had become organized enough to be classified as a tropical depression. At this point, Velocita Wireless' network operations team started to prepare for the possibility that the southern Florida area would be hit by the storm. As a precaution, the team initiated testing of all secondary base station telecommunications lines in the Miami area for connectivity to emergency restoration switches in Velocita's Network Operations Centers (NOCs). To maintain base station and local switch connectivity in the event of main Telco line loss during disasters, Velocita Wireless maintains three emergency restoration switches in each of its fully redundant NOCs. In addition, Velocita stocks an inventory of redundant, line-powered back-up circuits to all base stations and switches from strategically located Telco central offices positioned outside main hurricane belts.

Dateline: Wednesday, August 24

Satellite imagery, Doppler radar data from the Bahamas and Miami and reconnaissance wind data collected by the NHC indicated that Tropical Depression Twelve had become considerably more organized during the morning hours. As of 11 AM EDT, the NHC reported that the tropical depression had strengthened into Tropical Storm Katrina and was moving through the central Bahamas toward Florida with 45 mile-per-hour winds. A hurricane watch and tropical storm warning were subsequently issued for Florida's east coast from Vero Beach, about 150 miles north of Miami, south into the Florida Keys. As of Wednesday afternoon, the storm was about 200 miles off the coast of Florida. Based on the storm's projected path, Palm Beach officials declared a state of emergency and Broward and Palm Beach counties announced they would open shelters and begin evacuating barrier islands the next day. In preparation for the storm, Velocita Wireless network engineers completed testing of line-powered back-up circuits in Miami and began logistical planning and resource mobilization of emergency personnel, equipment and supplies.

Dateline: Thursday, August 25

At 4 PM EDT, the NHC upgraded Tropical Storm Katrina to a Category 1 hurricane. The storm made landfall in south Florida, between Hallandale Beach and North Miami Beach, at approximately 7 PM local time with 80 mile-per-hour winds. At 11 PM EDT, the storm's maximum sustained winds were still being clocked at 75 miles per hour, despite being over land for more than four hours.

Responding to Katrina's impact on South Florida, additional Velocita field engineers from Georgia were mobilized and sent to South Florida to help local field engineers with the restoration effort after the storm made landfall. Additional field technical support was provided by Alabama-based personnel. Generators and spare equipment, staged from Atlanta, were also deployed to the area. Velocita has 177 base stations within Florida, 17 of which were impacted during the storm's height on August 25 and 26.

At Katrina's first strike area in Miami, field engineers manually pumped rising flood water out of the local Miami switch (MOX). No damage to Velocita equipment was reported.

Dateline: Friday, August 26

At 4:52 AM EDT, the Velocita Wireless network began losing connectivity to base stations within the Florida region as a result of a power loss to circuits at the Miami switch location. However, Velocita field service engineers, already deployed to the area, began restoration efforts in conjunction with the NOC and managed to complete a total restoration to the emergency back-up switch within 60 minutes, thereby mitigating more extensive and sustained service outages. Work to restore service to the 17 base stations rendered inoperable by Katrina's winds and storm surge was also initiated.

At approximately 5 AM EDT, Katrina had weakened over land to a tropical storm. However, the storm quickly regained hurricane status as it moved out over the Gulf of Mexico. At 11:30 AM EDT, the hurricane had been upgraded to Category 2 status with 100 mile-per-hour winds, veering north and west toward Mississippi and Louisiana. The storm's feeder bands continued to pound the lower Florida Keys. At 5 PM EDT, the NHC issued an advisory forecasting that Katrina would soon be a Category 3 hurricane and was expected to reach dangerous Category 4 intensity before making landfall in Mississippi or Louisiana. In anticipation of a possible landfall, Mississippi Gov. Haley Barbour and Louisiana Gov. Kathleen Blanco subsequently declared states of emergency.

To prepare for the storm's potential impact on network infrastructure assets within the Gulf Coast region, Velocita's network operations team repeated the same testing procedures utilized in Miami to ensure back-up telecommunications line connectivity to emergency restoration switches in the NOCs. Additionally, Velocita's field engineering teams, which continued careful monitoring of the storm's progress, began logistical planning and resource mobilization to support and maintain optimal network performance in anticipation of Katrina's landfall within the Gulf region.

Dateline: Saturday, August 27

By 8 AM EDT, Velocita's field engineering team had restored service to 9 of the 17 inoperable base stations in Florida. As of 5 AM EDT, Katrina was upgraded to a Category 3 hurricane, a major storm possessing 115 mile-per-hour winds, with the Gulf Coast in its path. During the day, residents of Louisiana's low-lying areas were told they must evacuate; residents in other low-lying areas were urgently advised to do so as well. President Bush declared a state of emergency in Louisiana. Highways leading out of New Orleans were filled with bumper-to-bumper traffic and several major interstates were converted to one-way routes away from the city. At 11 PM EDT, the NHC issued a hurricane warning from Morgan City, Louisiana to the Alabama-Florida border, an area that included New Orleans. A warning means that hurricane conditions are expected within the next 24 hours.

Dateline: Sunday, August 28

Katrina was declared a Category 4 hurricane at 2 AM EDT and later intensified to a Category 5 storm, the worst and highest category on the Safer-Simpson scale. At 10 AM EDT, Katrina's winds hit 175 miles per hour and New Orleans Mayor Ray Nagin ordered mandatory evacuations as the storm was projected to be on a direct path to the city. During the day, President Bush declared a state of emergency in Mississippi and ordered federal assistance. The NHC stated that low-lying areas along the Gulf Coast could expect storm surges of up to 25 feet.

With Katrina's impending landfall, Velocita expedited mobilization and deployment of human and equipment resources. cell sites on wheels (COWs), portable base stations, generators, Velocita-designed extended-fill fuel tanks, which facilitate longer back-up generator power, and field engineering teams from Texas, Alabama, Florida, Tennessee, Wisconsin and Ohio were mobilized and sent to New Orleans and Mississippi to assist with the restoration effort. For on-going support within the Gulf area, all Velocita field engineering personnel were notified and put on alert of possible deployment to the region.

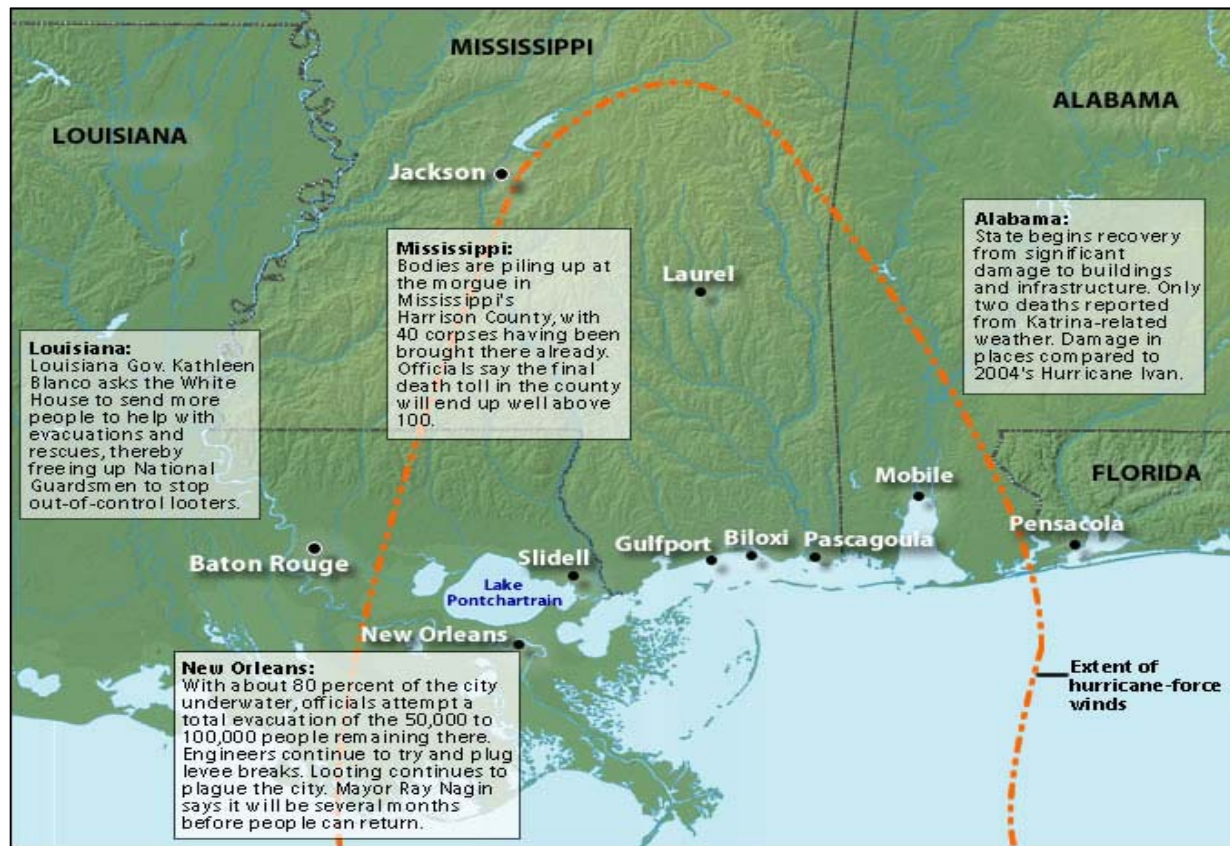
Managing the Crisis - Withstanding Katrina's Wrath

Dateline: Monday, August 29

On Monday, August 29, at approximately 7:10 AM EDT, Katrina made landfall near Buras, Louisiana as a Category 4 hurricane, with maximum sustained winds of 145 miles per hour, wreaking havoc in Louisiana, Mississippi and Alabama. Many areas of New Orleans were flooded and high winds ripped two holes in the roof of the Superdome where some 10,000 people were taking refuge. Later in the morning, there were reports that some of the city's flood defenses had been breached. Katrina's front-right quadrant—which contained its strongest winds and peak storm surge—slammed into Biloxi and Gulfport, Mississippi with devastating force, destroying much of both cities. At least eight Gulf Coast refineries were shut down or reduced operations. **Figure 1** depicts the reach of Katrina's hurricane force winds as well as an overview of significant events related to the storm's destructive power.

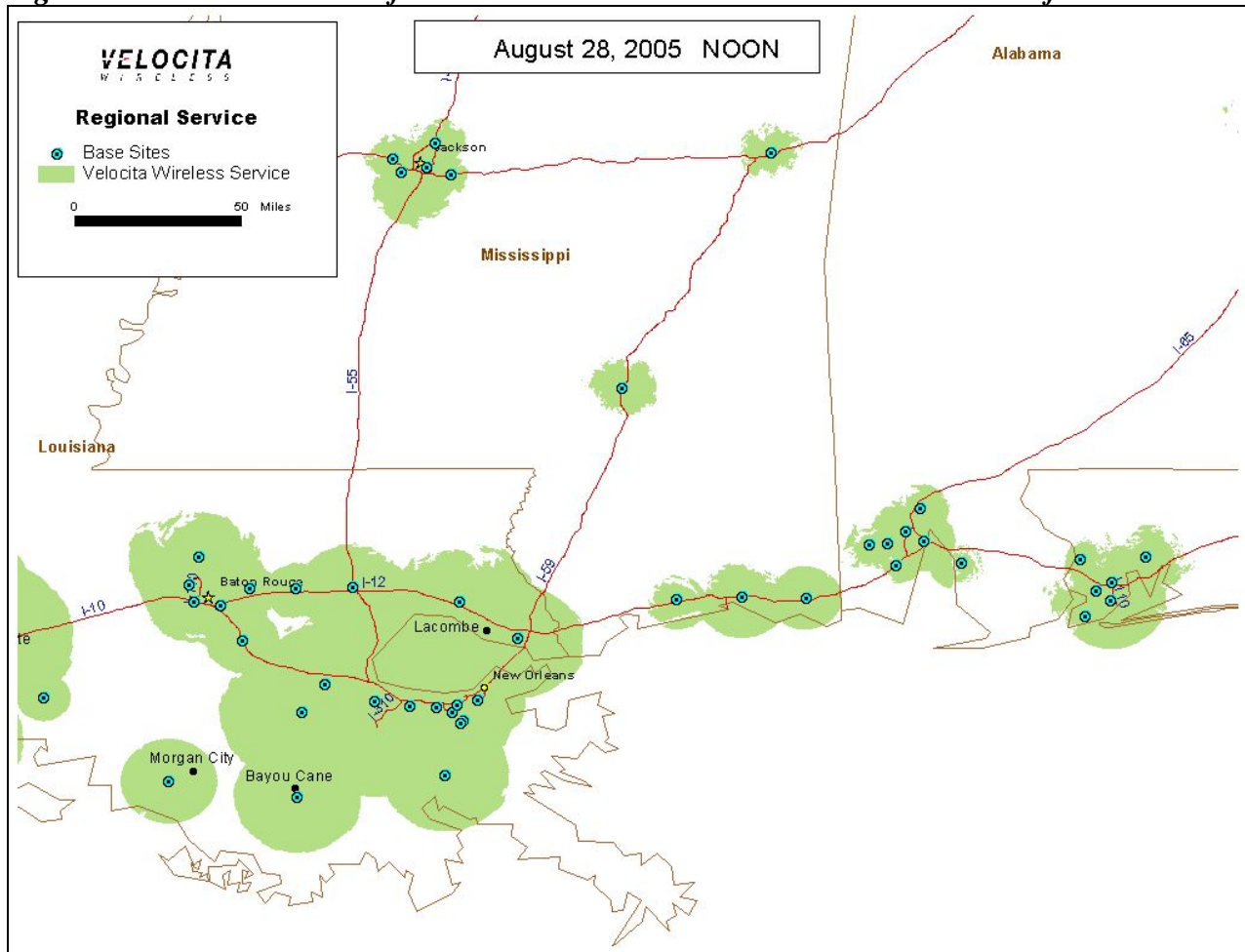
Figure 1. Map Depicting Reach of Katrina's Hurricane-Force Winds within the Gulf Area

Source: NPR web site, 09.02.2005



In the Gulf area states of Mississippi, Louisiana and Alabama, Velocita had a total of 100 base stations with 47 bases within the impacted coastal area, including the western Florida panhandle region. **Figure 2** depicts normal service coverage and full operational status within the region as of noon on August 28.

Figure 2. Pre-Katrina View of Velocita Wireless Service Area in the Coastal Gulf Area

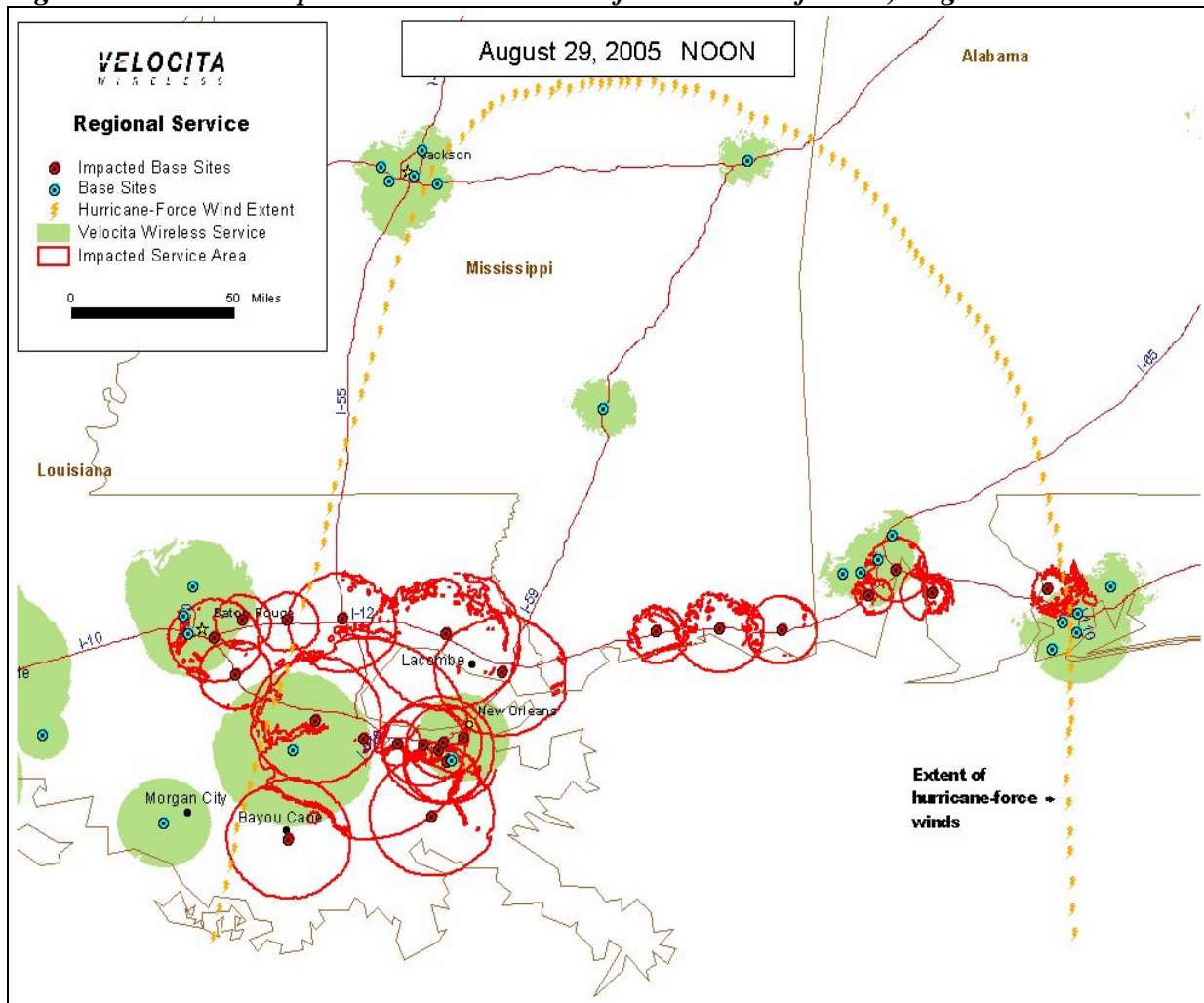


At the height of the storm's impact on August 29, 30 base stations were off the air in the impacted region. A total of 92 sites were affected to some degree over the course of the storm and its immediate aftermath, experiencing problems such as power loss (which resulted in back-up battery power engaging) and loss of primary Telco service (resulting in switching to redundant, line-powered back-up facilities). In those instances where primary power could not readily be reestablished, back-up generators were deployed and engaged to restore and maintain base station operation.

In the Louisiana, Mississippi, Alabama and western Florida panhandle coastal areas, base station connectivity began degrading at approximately 9:30 AM on August 29, with the greatest number of base station outages, 35, being reached on August 30.

Figure 3 provides a mapped overview of Katrina's impact on individual base performance and related coverage within the Gulf area states as of noon, August 29. The maps are exemplary of the detailed coverage maps that Velocita provided daily to its customers to illustrate current network coverage and service status in the Gulf Coast area. The green areas of the maps depict normal, pre-Katrina network coverage while the red circles indicate areas served by base stations that were rendered inoperable during the course of the storm.

Figure 3. Katrina's Impact on Base Station Performance as of Noon, August 29



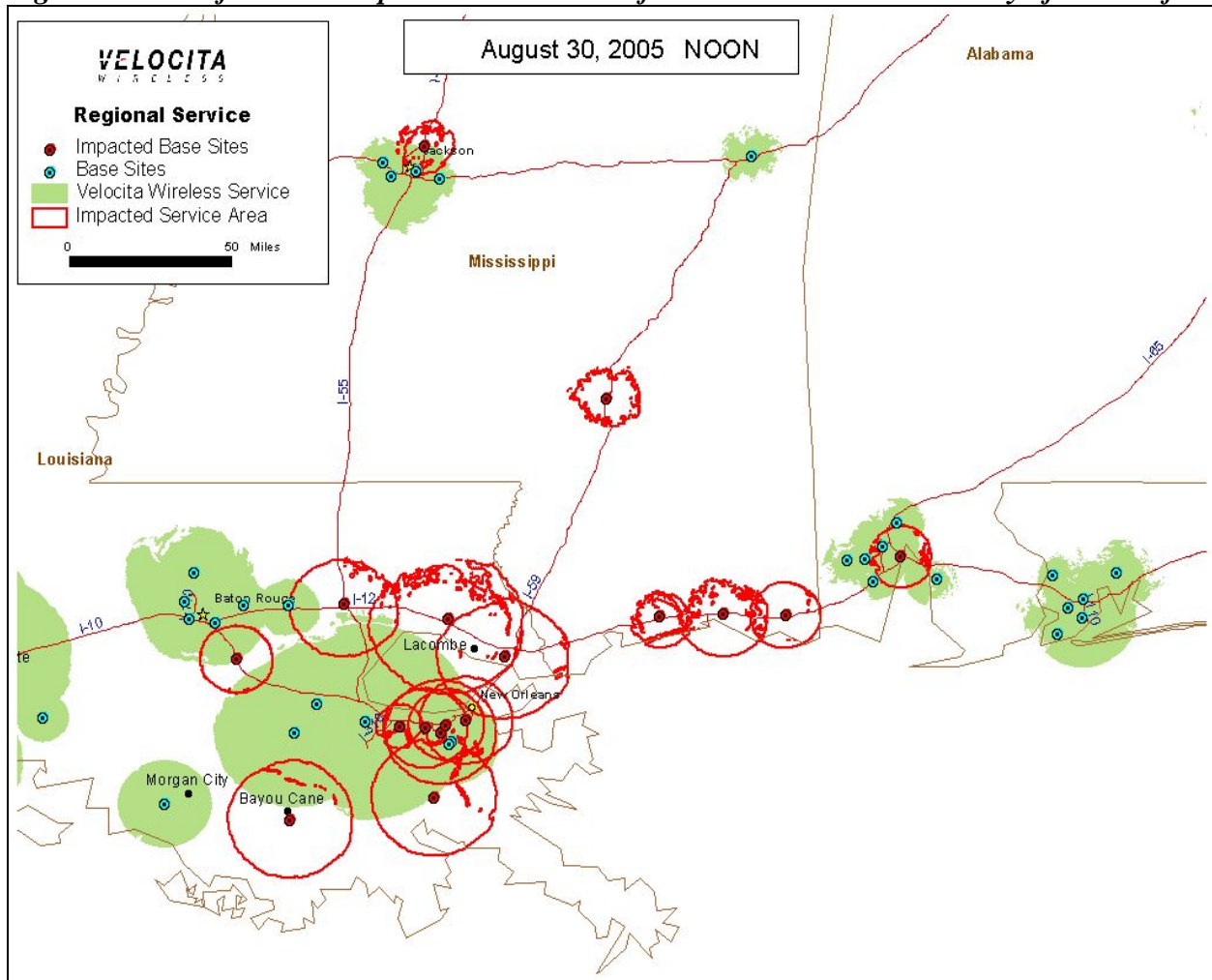
Dateline: Tuesday, August 30

At 11 AM EDT, the NHC issued its last advisory on the storm that once was Hurricane Katrina. The storm now had maximum winds of approximately 35 miles per hour and its center was dumping heavy rainfall on Tennessee. In Mississippi, the hurricane death toll had risen to more than 100. In New Orleans, two levees had been breached with resulting flood waters from Lake Pontchartrain covering 80 percent of the city and rising to 20 feet deep in some areas. Many people climbed atop roofs to escape.

Velocita Wireless

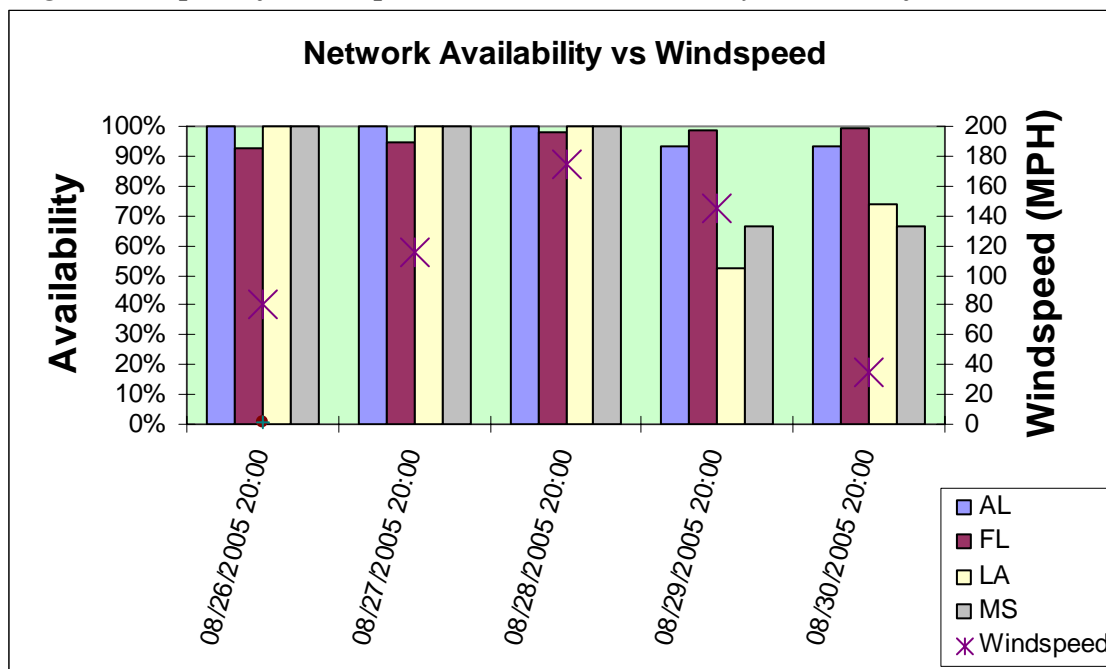
Velocita personnel, already dispatched to the Gulf area on August 29, began site restoration efforts on August 30. Utilizing an existing real-time alarm and restoration reporting system throughout the duration of the storm to provide up-to-the-minute intelligence on base stations reporting alarms and their location for more rapid diagnosis and restoration of outages, Velocita field engineers quickly deployed to restore service to 35 base stations that had been rendered inoperable as of 6 AM EDT. **Figure 4** depicts individual base station status within the impacted area as of noon on August 30.

Figure 4. View of Katrina Impact on Velocita Gulf Coast Service Area One Day after Landfall



It should be noted that despite the outage of 35 base stations on August 30, one base station, NEO-0403, remained connected to the network for all but roughly ten hours, providing continuous coverage for the severely impacted downtown New Orleans area. Overall, Velocita's network was still operating at approximately 80% of normal coverage in the combined Gulf State region, despite Katrina's maximum sustained winds of 80 to 145 miles per hour and storm surges of 10 to 30 feet during the period of August 26 through August 30. **Figure 5** depicts the impact of Katrina's wind speed on overall network availability during the critical period of August 26 through August 30. The ability to provide continuous service results from base station redundancy and associated coverage overlap that is inherent within Velocita's network architecture.

Figure 5. Impact of Wind Speed on Network Availability within Gulf Area States*



Source: Velocita Wireless, NOAA – NHC Advisories & the Weather Channel

* Network availability is depicted as the percentage of operational base stations at a particular point in time. Actual network user service levels were greater than those depicted due to overlapping network coverage.

Dateline: Wednesday, August 31 through Friday, September 2

On August 31, Health and Human Services Secretary Michael O. Leavitt declared a federal public health emergency throughout the Gulf Coast region. Medical supplies and workers were sent to the area to deal with the emergency.

Despite substantial residual flood waters throughout the coastal region, Velocita field personnel made significant progress in reestablishing service to a number of inoperable base stations during the period of August 31 through September 2. Within New Orleans, water levels had finally stopped rising.

As of September 2, service had been restored to all but 13 sites, with nine sites on generator power, in the immediate coastal impact area including the New Orleans airport site. Other sites along the Mississippi Gulf coast, including Biloxi, Gulfport and Hattiesburg, and sites on the northern inland storm track were also back in service, some on generator power and line-powered emergency back-up telecommunications. Additionally, new, higher-speed, mini-satellite equipment that enables base station connectivity and routing to a Velocita Wireless network switch was deployed to the area along with two COWs for subsequent installation to restore coverage to those base stations that were severely damaged. For customer and partner reference, Velocita’s engineering team provided network coverage maps throughout the storm, updated twice daily, depicting the latest network coverage status along with any base station outages.

Dateline: Saturday, September 3 through Thursday, September 9

Restoration efforts continued during the period of September 3 through September 9, with significant restoration work being performed by Velocita field personnel over the Labor Day weekend. To augment coverage and restoration efforts within the severely impacted downtown New Orleans area, two COWs were installed along with new portable satellite equipment.

At the end of the day on September 8, the company reported more than 95% of network coverage in the Gulf area had been restored and was operational, with only four sites down in the coastal impact area from New Orleans to Mobile. The four sites out of service were in the immediate flood zone of New Orleans and were inaccessible. **Figures 6-7** depict Velocita service area coverage at noon on September 5 and 9 respectively. What is particularly significant and clearly evident in the coverage maps is the ability of the Velocita Wireless network to provide continuous service within the severely flooded New Orleans area as a result of base site coverage overlap.

Figure 6. View of Katrina Impact on Velocita Service Area Six Days after Landfall

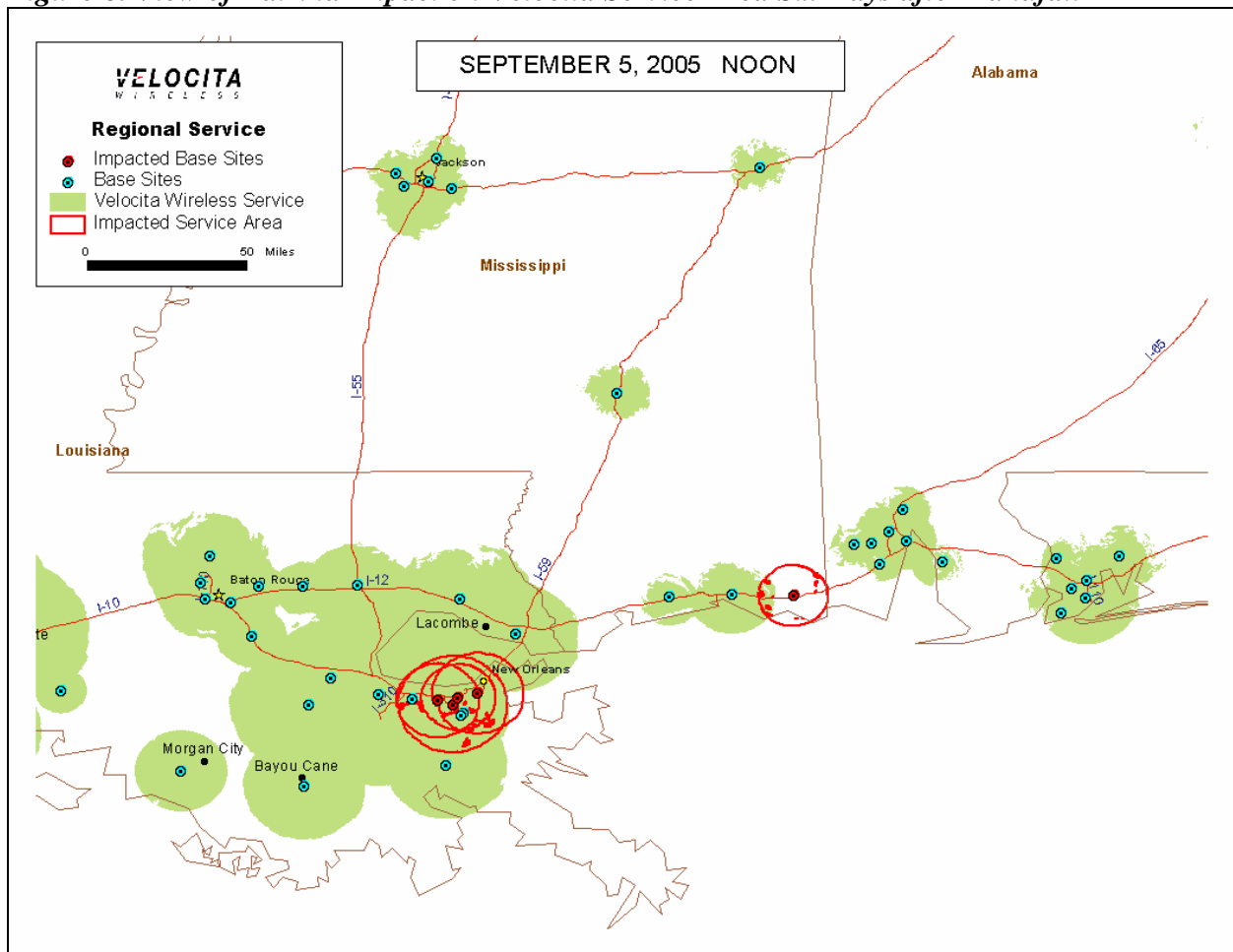
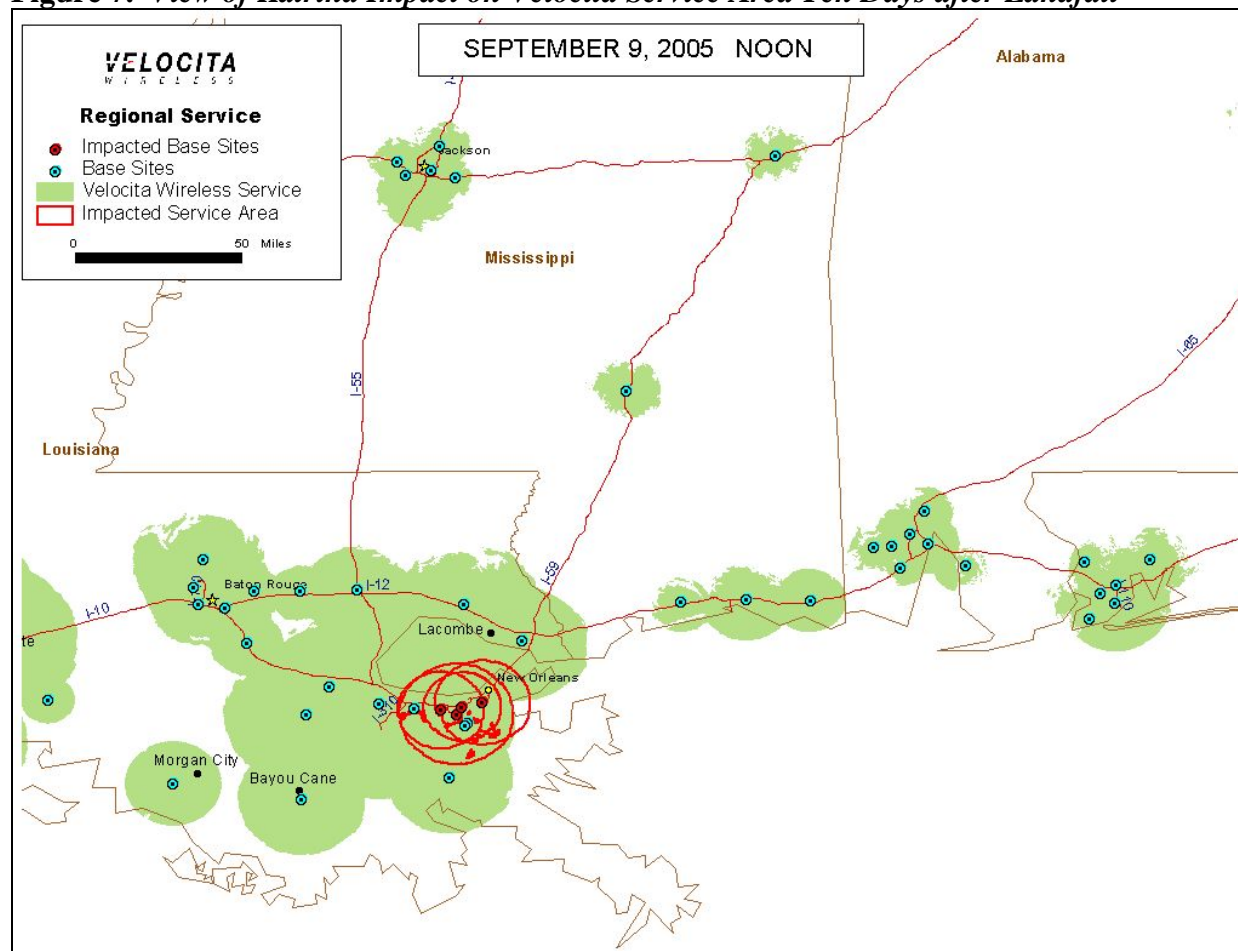


Figure 7. View of Katrina Impact on Velocita Service Area Ten Days after Landfall



Recovering from the Disaster with a Network Built for Crises

Disaster proven for more than a decade, throughout numerous hurricanes, earthquakes, the Northeast Blackout and the terrorist attacks of September 11, Velocita's dedicated data network has proven to be a communications lifeline during times of crisis. Due to its robust network architecture, overlapping coverage capabilities and time-tested disaster prevention and recovery processes, Velocita was able to maintain approximately 80% of normal network coverage during the course of Katrina. Within days, coverage was restored to over 95% of normal coverage and at the end of the day on September 28; the company reported that coverage had been restored completely to normal, pre-Katrina levels within the Gulf region. This sustained level of connectivity and coverage enabled numerous customers, partners and organizations such as the U.S. Senate and House of Representatives, BellSouth, Discrete Wireless, TCS and the Port Authority of New York, which had nine first responders in New Orleans, to exchange critical information, in real time, despite the numerous Telco and power failures that besieged the area.

A Simple, Stable Network Design Ideally Suited for Disaster Prevention and Recovery

Velocita's ability to maintain communications capabilities and provide for rapid restoration of service during Katrina was the direct result of an innovative network design that's ideally suited to perform during times of crisis. Unlike converged voice and data networks, the Velocita Wireless network is a dedicated, data-only network. That means critical data messages do not have to compete with voice traffic transmitting over the same network. This is a critical factor in emergency situations which usually exhibit a dramatic increase in cellular voice traffic as landlines fail or become extremely congested with increased emergency communications. As these converged networks also have data flowing through the same infrastructure, critical data transmissions can become clogged as a result of competing for available channel slots with shared voice traffic. An additional disadvantage of this type of shared network architecture is the fact that when a network facility fails, both voice and data transmissions fail collectively, thereby preventing any type of emergency communication as was evidenced during Hurricane Katrina.

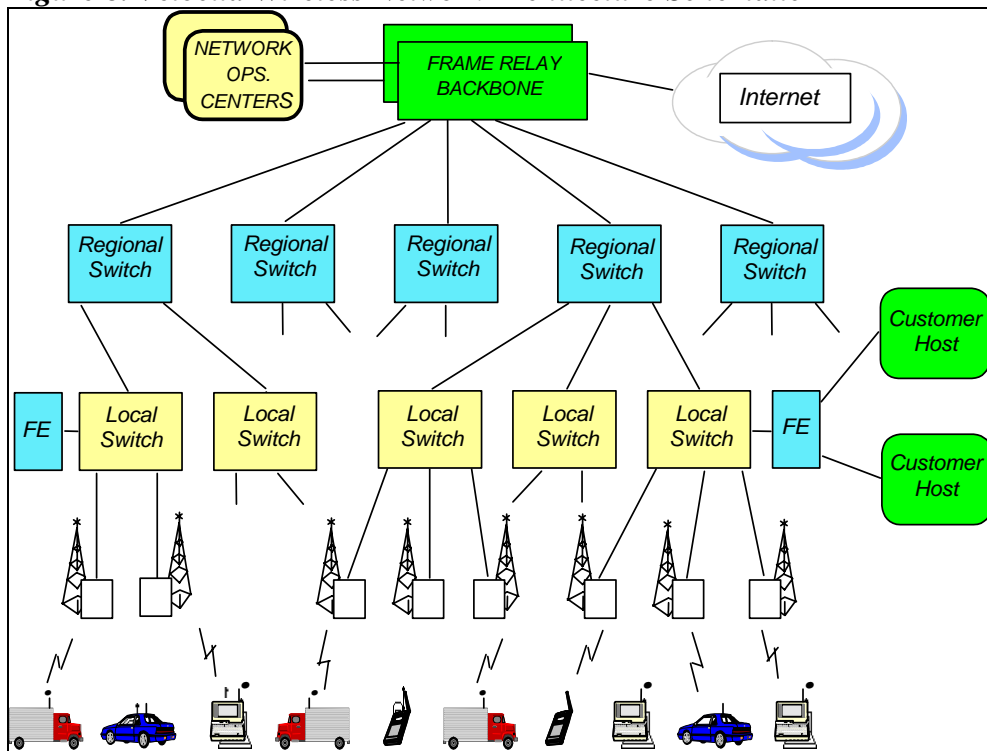
The cellular network designs contrast sharply with Velocita's network architecture. Velocita's network has been specifically engineered to provide a high level of overall network availability and rapid restoration of service during times of crisis. Based on Mobitex, a proven, stable, internationally-recognized open protocol standard, Velocita's network incorporates a distributed modular design with a number of built-in redundancy and reliability features that facilitate continued operation if any part of the network is damaged:

- Distributed architecture ensures no single point of failure that can take down the entire system.
- In the event of a switching node failure, all subordinate nodes and base stations in the network continue to support local or regional traffic in autonomous mode.
- Two geographically separate Network Operations Centers; either of which is capable of handling all network management functions in the event of a disaster.
- All base stations have 12 to 32 hours of DC-powered battery reserve if commercial power should be lost.
- All local and regional switch sites have standby power generators in addition to DC battery generators.
- All data circuits between switching nodes in the network have redundancy by means of automatic line backup.
- Velocita's long distance supplier maintains two separate and continuous feeds to two different central offices and different long distance carriers.
- Spare antennas and feed lines, as well as portable base stations and generators, are fully supplied and maintained in strategically located depots, ready for rapid deployment should they be needed for an unforeseen emergency.
- Dual antennas at most sites provide added reliability, and overlapping cells in major cities reinforce coverage patterns.
- Velocita monitors all network equipment locations 24 hours a day, 365 days a year.
- Base stations can operate with minimal utility support.

In addition to fully redundant hardware, circuits and power systems at all switch locations, which minimizes the impact any failed facility might have on the remainder of the system, the simplicity of the Velocita network facilitates rapid restoration of service during times of disaster.

Due to the heavy power and utility load (T1, Frame Relay and massive amounts of electricity) that converged networks require, once service is out during an emergency it tends to stay out for longer periods of time as heavy generators and larger capacity (high-speed) Telco connections are required to restore service. Conversely, a base station outage resulting from power loss within the Velocita network hierarchy can be restored with a portable 1000 watt generator. An outage due to Telco non-connectivity can be rectified with a simple 9.6 Kbps dial line (dial lines tend to be back online first in an emergency situation) or portable satellite dish connection to the Internet. This simplicity of network design proved extremely advantageous during Katrina as numerous Velocita Wireless base stations were able to continue operating on line back-up connections from remotely located Telco central offices. **Figure 8** depicts the distributed, hierarchical design of Velocita's network architecture.

Figure 8. Velocita Wireless Network Architecture Schematic



Keeping Customers Communicating

Among the many organizations that counted on the Velocita network for mission-critical communications during Katrina was Discrete Wireless, Inc., a leading provider of GPS Fleet Management Systems. According to Jeff Thacher, president and chief executive officer of Discrete Wireless, “Velocita’s network was operable immediately after the storm, and the network was being used extensively by other carriers for data communications while they tried to repair and redeploy their infrastructure in the days following the storm’s landfall. In fact, 95% of our many customers within the Louisiana, Mississippi and Alabama region were fully operational utilizing our MARCUS® GPS Fleet Management System powered by the Velocita Wireless dedicated data network.”

Another organization that relied on the Velocita Wireless network for critical communications was BellSouth. BellSouth currently utilizes the Velocita Wireless network to dispatch field technicians responsible for repairing problems reported in their telephone network. During the Miami portion of Hurricane Katrina, circuits connecting BellSouth technical centers to the Velocita Wireless switch in Miami failed. Working with BellSouth technical support, Velocita Wireless NOC engineers were able to reroute the BellSouth connections to Charlotte North Carolina via the Atlanta Hub. This change allowed their field force to continue receiving work orders from their technical centers to expedite network troubleshooting in the impacted area.

BellSouth’s Natalie Gray commented, “Velocita Wireless’ responsiveness to BellSouth during Hurricane Katrina was outstanding. During the first few weeks after the hurricane, Velocita provided updates three times each day on the status of their towers. BellSouth requested to receive more detail on the reports so the technicians could more effectively perform their jobs and Velocita provided that additional information to assist in BellSouth's restoration efforts. Many of Velocita's towers remained in service during the hurricane and immediate restoration efforts took place to get those towers not in service back in service.

Velocita Wireless has also been very responsive to BellSouth in obtaining pagers and establishing service in a short turnaround time. Velocita Wireless allowed BellSouth to bypass the process and work closely with the single point of contact for BellSouth to quickly resolve issues and provide service. This emergency service was and continues to be provided seven days a week and extended hours each day. BellSouth appreciates the continued support Velocita has and continues to provide throughout the recovery efforts.”

Throughout Hurricane Katrina, restoring and maintaining service in the New Orleans and Gulf areas was Velocita’s top priority. In addition to network restoration efforts, the company provided numerous emergency, aid and media crews with mobile handheld devices that could be used to send email and text messages over its network. The U.S. Senate, Coast Guard and Fox News in New York were among the organizations that utilized the handheld devices running over the Velocita Wireless network.

Conclusion – Preparing for the Next Catastrophe

The impact of Katrina was immense and long-lasting from a telecommunications network perspective. It is estimated that the storm rendered approximately 3 million landlines, more than 1,600 cell sites and over 420,000 cable television connections throughout the area inoperable. Indicative of the scope of Katrina's devastation was the fact that nearly three weeks after the event many major telecommunications carriers were still attempting to reinstate wireless and landline service to normal levels.

With over a ten-year history of providing continuous, business-critical communications throughout all types of disasters, Velocita's data-only network successfully withstood the tempest and continued to provide coverage throughout the storm's duration due to an unique, distributed network architecture designed and built to storm specifications more than a decade ago.

In the wake of Katrina, the question of how to better protect telecommunications systems has been the subject of much discussion. Many telecommunications providers are looking at ways to bolster communications preparedness and protect their networks to help avoid prolonged communications outages in the event another disaster of the same magnitude as Hurricane Katrina strikes.

While the massive outages of cellular and land-based service caused by Katrina has many providers scrambling to deploy new ideas and technologies to improve their communications capabilities and infrastructure during disasters, Velocita Wireless remains steadfast in its commitment to a time-proven network technology that withstood Katrina's wrath and is ideally suited to perform through all types of crises, today, tomorrow and well into the future.

KATRINA AT A GLANCE

Date	Katrina Activity	Impact to Network	Velocita Response
Aug. 23	Storm forms as Tropical Depression Twelve.		Testing of all secondary base station lines in Miami.
Aug. 24	Tropical Depression Twelve strengthens into Tropical Storm Katrina.		Testing of line-powered back-up lines completed. Logistics and resource mobilization planning.
Aug. 25	Katrina upgraded to a category 1 hurricane with 80 mph winds. The storm makes landfall in Florida.	3 base stations in Miami impacted.	Additional field engineers, technical support and equipment from Georgia and Alabama mobilized and sent to Florida.
Aug. 26	Katrina weakens over land to a tropical storm before moving out over the Gulf of Mexico. It grows to a category 2 hurricane with 100 mph winds, veering northwest toward Mississippi and Louisiana.	17 out of 177 base stations in Florida impacted. Power loss to circuits at Miami switch (MOX) location.	Base station restoration initiated. NOC completes total restoration to emergency back-up switch within 60 minutes. NOC tests all secondary base station lines in New Orleans.
Aug. 27	Katrina upgraded to a category 3 hurricane with 115 mph winds. States of emergency declared in Mississippi and Louisiana. 11 hurricane-related deaths in Florida. Hurricane warning issued for Gulf Coast area.	8 base stations in Florida remain inoperable.	Service restored to 9 base sites in Florida.
Aug. 28	Katrina intensifies to a category 5 storm with 175 mph winds. New Orleans Mayor orders mandatory evacuation. Alabama Gov. declares state of emergency. President declares state of emergency in Mississippi.	3 base stations in Miami remain inoperable.	Field engineering (FE) teams and equipment from multiple states mobilized and sent to New Orleans and Mississippi. All FE personnel put on alert. In Florida, service is restored to 14 base stations. Rising flood water is manually pumped out of the local Miami MOX. Velocita equipment is undamaged.
Aug. 29	Katrina makes landfall as a category 4 storm with winds up to 145 mph, wreaking havoc in Alabama, Louisiana and Mississippi. New Orleans flooded. Biloxi and Gulfport, Mississippi severely impacted.	Network starts to lose connectivity to base stations at 9:30 AM. 30 base stations disconnected from the network at 11 PM.	
Aug. 30	Storm now has maximum winds of 35 mph. 100 dead in Mississippi. 2 levees breached in New Orleans with resulting flood waters covering 80% of the city and rising to 20 feet deep in some areas.	35 bases disconnected from network at 6 AM. Base site NEO-0430 remains connected, providing coverage for downtown New Orleans area. 2 sites remain inoperable in Florida.	Velocita personnel, already dispatched to the Gulf area on August 29, begin site restoration efforts.
Aug. 31	Water levels stop rising in New Orleans.	19 bases disconnected from network at 8 PM.	Base site restoration continues. 16 sites restored.
Sep. 1		16 bases in region remain inoperable.	Service restored to 1 additional site in Florida.
Sep. 2		13 bases in region remain inoperable.	3 more sites restored. Detailed network coverage maps of area, updated twice daily, are posted on Velocita's website for customer/partner reference. Florida coverage is restored to normal, pre-Katrina levels.
Sep 3.		10 bases in region remain inoperable.	COW installed in New Orleans, 3 more sites restored.
Sep. 4		6 bases in region remain inoperable.	Mini satellite equipment installed in New Orleans.
Sep. 5		5 bases remain inoperable – 4 in New Orleans flood zone with no access.	Service restored to 1 additional site.
Sep. 6			Second COW installed in New Orleans to provide additional coverage.
Sep 7.			Mini satellite equipment installed in field command center for Internet and IT LAN connectivity.
Sep. 8		4 bases remain inoperable.	Mini-base installed to support Mississippi-based local FE.
Sep. 9		2 bases in New Orleans lost on permanent basis due to flooding.	2 more sites restored.
Sep. 28		Gulf area coverage restored to normal, pre-Katrina levels.	Final restoration complete.