In the aftermath of the Hurricane Katrina disaster along the Gulf Coast, among the most reliable methods of electronic communication throughout the region were the one-way paging and two-way text messaging services provided by USA Mobility, Inc.

USA Mobility is the nation's largest narrowband personal communications service (NPCS) company, providing mission critical wireless services for police, fire, rescue operations, hospitals, and government, along with many utilities and other businesses that responded to the emergency.

In preparation for the hurricane, USA Mobility technical teams staged equipment and personnel just outside the storm's path for rapid deployment. The hurricane recovery work demonstrated several of the distinguishing features of USA Mobility's NPCS messaging – the speed and relative ease of restoration of service, based on a streamlined and cost-effective system design.

"FYI I am with an Urban Search and Rescue for FEMA and with the cell and data service down and systems being flooded. I just want you and your readers know that ReFLEX is working fine and communications are flowing through the units! We are allowing people to send e-mails to loved ones to let them know they are alive and well. Again the critical use of the ReFLEX in the all the disaster situations I have been to (9/11 NYC, Ivan, Isabel and now Katrina!)

Submitted to "Brad Dye's Wireless Messaging Newletter" by

Carter C. Blumeyer
Communication Specialist, Boone County Fire / MO-TF1 (COMS) US-Forrest Service (COML, COMT)

USA Mobility's 16,000-transmitter network is satellite controlled, and is therefore less dependent on the traditional wireline telephone system than wireless cellular two-way voice or mobile phone based data technologies. This architecture enabled rapid restoration of USA Mobility's services.

On Monday, August 29, the hurricane interrupted operations at 291 of the company's tower locations along the Gulf Coast. Partial network coverage remained available during the storm and immediately thereafter. Within 48 hours, basic service was restored throughout New Orleans, southeast Louisiana, and Mississippi, the areas hit hardest by the storm. In contrast, most wireline and cellular telephone services have required far more time for restoration and in some cases were still off line weeks after the storm.

USA Mobility's paging availability far exceeded that of mobile phone providers in the affected areas and when you consider that most pagers operate on a standard AA battery, there is no concern of not being able to recharge when commercial power is out. Bottom line is that one-way and two-way pagers worked when most other wireless services didn't. This meant that emergency service responders, hospitals, utilities, police, businesses and citizens could receive messages on a pager and initiate messages from a two-way pager when their phones would not work.

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USA Mobility also supplied thousands of additional pagers to federal, state, and local emergency response organizations to help respond to the Katrina crisis. To understand why pagers work when mobile phones do not one must consider the very different network architectures. USA Mobility's systems feature high power transmissions of up to 3500 watts effective power with typical antenna heights of 300 feet or more in a simulcast network topology, in contrast to the 100-watts of power and 90-foot antenna heights of the typical cellular system. USA Mobility's simulcast networks provide simultaneous delivery of a radio signal from several transmitters, which provides wider coverage area and better in-building penetration than other wireless technologies. This overlapping radio coverage provides natural redundancy in the event of the loss of one or more transmission towers. Cellular type networks, in comparison, assign a single channel in a single transmitter to a mobile connection, typically with a much smaller range, and then rely on the network to "hand off" the call to another tower, but only if a channel is available.

Many federal government organizations need an emergency communication system that provides rapid messaging for one-to-one and one-to-many communications, where voice is not required or message content is sensitive to eavesdropping. The paging and text-messaging services of USA Mobility offer a premier emergency communication solution in these cases at a significantly reduced cost as compared to any wireless voice services.

The Reliability of Paging:

The unique architecture of paging technology provides significant advantages over other wireless technologies:

- Broad geographic coverage
- Superior in-building signal penetration
- Built-in network redundancy
- "Always on" operation
- Long battery life
- 24x7 Network Monitoring
- One-to-many group messaging

Two-way Messaging also offers:

- Store and Forward technology
- Confirmed Message Delivery

Comparison of Paging vs. Cellular Networks

Paging Architecture:

- **Messages are simulcast from multiple towers**
- **Transmitters high off ground (up to 300 ft)**
- **High power (up to 3500 watts ERP*)**
- **Connectivity to towers via satellite**

Cellular Architecture:

- **Transmission from a single tower**
- **Transmitters low to the ground (90 ft)**
- **Weak power (100 watts ERP*)**
- **Connectivity via wireline telephone system**

Connection to Wireline Infrastructure

***ERP= Effective Radiating Power**

At a time when our nation is challenged with so many natural disasters a tried and true technology represents the most reliable form of wireless connectivity at ironically the lowest cost as compared to any other form of mass mobile wireless communications. The paging systems, customer service and engineering resources of USA Mobility should be the first choice of all federal, state, and local governments when considering their critical communications needs.

For more information call **1.800.342.4351** or visit us at **www.usamobility.com**

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