

# WIRED

[<< Back to Article](#)

## Storm Communications No Big Easy

Beverly Hanly 08.03.06

NEW ORLEANS -- It was a great idea: an emergency communications system that would kick in at the first signs of a disaster like Hurricane Katrina, putting up-to-date information in officials' hands and getting word out to the masses.



Click [here](#) for photos of Louisiana's emergency communication challenges.

But like many great ideas, it hasn't worked out yet. Plans have been floated and [committees formed](#). But have authorities implemented an effective hurricane-response system that works on a grass-roots level? Some say older, disbanded schemes worked better than the current mix of "modern" systems.

As Louisiana approaches the one-year anniversary of Hurricane Katrina, some fear a repeat of the Katrina debacle, when a lack of accurate information about the developing situation on the ground slowed authorities' response.

"Lack of communication hinders a lot," said Mark Smith, spokesman for the Louisiana Governor's Office of Homeland Security and Emergency Preparedness. "It's exceedingly difficult to run search-and-rescue operations of that magnitude without communications. There were parishes -- we didn't know whether or not they had even survived for two to three days because the (satellite) phones weren't working."

Rep. [Tim Burns](#) (R-Mandeville) says "politics" are delaying deployment of a rapid-response emergency communications system. He sponsored legislation to require the state to set up a system, but says the governor's office is ignoring the possibilities of the internet. "They're focusing on a radio-based system, which could cost hundreds of millions," he said.

Burns' team estimated that a text-messaging system like the one successfully employed by the Swedish government to [evacuate](#) thousands of citizens from Lebanon could be set up for \$20 million in less than six months. His bills, [HB540](#) and [HB619](#), passed the Louisiana House but were killed in Senate committee.

### Geeks to the rescue

Meanwhile, tech-savvy entrepreneurs showed officials an emergency-communications system they say would be effective and relatively inexpensive.

The founders of I-55, a New Orleans ISP that weathered Katrina without a significant loss of service, designed a disaster-communications system they say would let state and local authorities instantly push emergency information from an internet-based control center to citizens, first-responder teams and the news media.

"It would benefit the public. Anybody could sign up to get emergency alerts," said Ezra Hodge, co-creator of the system they called FIRST (for flexible immediate response and safety technology). "We've got the technology to connect the dots so people can get information -- better information -- quicker. And evacuations can be better coordinated."

Hodge figures the FIRST system would cost about \$2 million to implement and \$1 million a year to operate. It uses a variety of methods -- including internet chat protocols, cell phones, desktop alerts and text-pager messages -- to disperse critical information efficiently during a disaster.

It receives information from citizens on the ground to build an up-to-date, accurate database. Software groups high-priority or geographically connected messages to prioritize disaster communications, and the system reserves portions of cell-phone bandwidth for first responders.

The dynamic system can accommodate sudden and massive demands during an emergency. Data centers in several locations (some out of state) provide backup in case any one locale is hit. A future iteration would add levee sensors to transmit developing faults -- a kind of early warning system for breaches.

Some of the FIRST planning came from the experiences of DirectNiC, an IT company whose data center (housing I-55 servers) [stayed up and running](#) last year as Katrina shut down the city. According to CEO [Sigmund Solares](#), employees camped out on the 10th floor of their building in New Orleans' central business district and used a generator to power the servers in an air-conditioned room.

DirectNiC's blog became a hub for citizens to locate each other, an online village to connect people scattered by the storm while webcams documented what was happening on the streets below.

Hodge said he was ready to set up a FIRST-style system before the 2006 hurricane season arrived. "It's astronomically perplexing why this didn't get done," said Hodge, "Homeland Security met with us and said they needed us. We had lunch with Gov. (Kathleen) Blanco (in May) -- she said it was one of the most brilliant ideas she'd heard since the storm and wondered why it's not being done."

### **We've got it covered**

Governor's spokesman Smith, however, says there are so many redundant systems now that communications won't be an issue. "We've put our emphasis on communication; we've moved to improve it," he said.

"When I go out into the field, I'll take a 700-MHz and an 800-MHz radio, cell phone, BlackBerry and AirCard for the laptop," said Smith, whose job during an emergency will be to ride herd on the media. He says cell-phone carriers have "hardened their towers -- they're supposed to be able to take a hell of a lot more during a storm."

His agency has purchased three trailer-mounted, voice-over-internet-protocol satellite-communication systems. If a local jurisdiction loses its connectivity, one of these can be brought in by truck or helicopter and be up and running within 30 minutes, according to Smith. He added that the National Guard and the state police have "all kinds of new communications toys."

It's unclear how much the state has spent on its new toys or how effectively they will work together. Lack of interoperability was a major problem during Katrina. A December 2005 [letter](#) (.pdf) from Col. Henry Whitethorn of the Louisiana State Police to Tom Davis, chairman of the House Select Committee to Investigate the Preparation for and Response to Hurricane Katrina, states: "For (Louisiana) to achieve true interoperability, the initial cost for infrastructure and equipment is \$552,680,423, which must be supplemented by \$10,150,000 in recurring operating costs."

Smith did not address how information gets out to citizens who don't have all the gadgets he mentioned, or how the government agencies plan to hear from those people. "We are so much more prepared than we were a year ago, but a year ago, we thought we were very prepared," he said. "No one could have [prepared for Katrina](#) (.pdf). Now we have much better planning and preparation and every day that Mother Nature is nice to us, we're a little better prepared."

### **Going local and getting the news out**

Meanwhile, local officials in St. Tammany Parish -- an 854-square-mile area located across Lake Pontchartrain from New Orleans -- liked the sound of the FIRST system and decided to run with it. They're putting a slimmed-down version in place.

"We know this area," says Hodge, who lives in Mandeville. He's shifted his focus from the state level to the parish and formed a new company called Convergence Media Group with Jason Olivier, one of the designers of FIRST. "The concept has morphed -- now it's to work directly with media outlets," said Hodge. It's a privatized model paid for by businesses, but residents can still sign up for free.

Local authorities in St. Tammany Parish, about half of which was wiped out during Katrina, don't want to be [caught unprepared](#) again. They are working with Convergence Media Group and [StTammany.com](#), a local news site owned by Convergence. The sheriff's department has applied for a federal grant to establish a direct [satellite uplink](#) so it's not dependent on an outside satellite company for service.

I-55 will help with the deployment of the parish's emergency system, as well as provide IT support for StTammany.com. The online publication, which also broadcasts over local cable, will embed reporters and videographers with the sheriff's department when a hurricane is imminent.

"If an emergency develops, we'll be able to deliver news on the air at any time with a satellite uplink," said Milena Merrill, a broadcast producer for the site. In return, local authorities can take over the top third of the StTammany.com website for certain emergencies.

"We won't have video accessibility at all locations, but we'll be able to upload close to breaking news live. If we're with the sheriff as they're dealing with a situation, we can uplink and stream what's happening," Merrill said.

Whether embedded reporters will be able to disseminate news more effectively than *The Times-Picayune* did during Katrina remains to be seen. The newspaper published first from its "hurricane bunker" and then from an office on high ground across the river.

Posting audio and text blog entries, staffers detailed their [exit](#) through [rising floodwaters](#) and published articles by reporters on the ground as the catastrophe unfolded. (The *Times-Picayune* coverage during and after the storm landed the newspaper Pulitzer prizes for [public service](#) and [breaking news](#) reporting.)

### **If it ain't broke, don't fix it**

Another New Orleans group developing emergency communications is also focusing locally, using a hands-on approach to keeping people connected and safe. [Common Ground](#) has been working in neighborhoods hardest hit by flooding and hurricane winds to clean up homes and toxic soils, providing residents with medical and legal assistance, as well as basic supplies like food, water, tools and clothing.

Common Ground's emergency-response team developed a plan using [citizens band radios](#), satellite phones and computer access with a generator-driven wireless system. They'll use a [telephone patch](#) through a ham radio system.

The plan is similar to the system that existed before mass evacuations were mandated, according to "Sheik" Richardson, a photographer who heads the [Arabi Wrecking Krewe](#), a volunteer group helping musicians get back into their Katrina-drenched houses.

"I worked in communications for the city," said Richardson, who grew up in New Orleans' Upper 9th Ward and Gentilly neighborhoods. "We had a network of radios -- the Gulf Coast Hurricane Network. We practiced every week."

Although they used high-frequency amateur radios, it was not an amateur network, but part of the city's civil defense network from the '50s into the '80s. According to Richardson, the system was disbanded by "Dutch" Morial, the first black mayor of New Orleans, who favored [cell phones](#).

Neighbors helped neighbors, and detailed plans were in place. Folks who knew each other also knew who would need assistance, who had transportation, who needed medications. The neighborhood evacuations were disbanded during the Reagan administration, Richardson said, in favor of mass evacuations to central locations or out of the city.

The old plan resembled the highly effective [system](#) still in use in Cuba. The Cuban plan relies on civilian cooperation to make it work. There's plenty of water, stored food, a pre-hurricane drill that both prepares homes and instructs people where to go, and accelerated garbage pickup. The sick, elderly or pregnant are given priority, and doctors and nurses go with them to provide medical attention.

An [Oxfam report](#) (.pdf) noted that in Cuba, local officials are the civil defense workers, so people in the emergency situation are responding to someone they know. Reuters reports that a U.N. study found the risk of dying in a hurricane in the United States was [15 times higher](#) than in Cuba.

It's possible to reinstate such an efficient system in Louisiana, say the folks working on these systems. But a look at what worked in the past suggests technology can help but success depends on people-to-people communication.

"It's fixable, it's doable -- it just takes intelligence and a will," said Richardson. "It's common sense."