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BY JIM MCKAY | JUSTICE EDITOR

When Hurricane Bonnie tore through parts of Florida last year, the state was pretty well dug in and prepared.

When Charley came through, however, things got interesting. Charley made its way up the west coast, turned right toward the Port Charlotte area and dismantled most forms of communication — except the Statewide Law Enforcement Radio System (SLERS).

Hurricane Charley was followed in short order by Frances, Ivan and Jeanne. The 62-day siege produced widespread devastation and kept state officials going around the clock just to keep up.

Chaos Quelled

When Bill Tinsley, M/A-COM director of State Operations for Florida, received a request from the governor's office early one morning during the height of the hurricanes to get to the emergency operations center (EOC) pronto, he knew he was in for a long haul.

He grabbed four shirts and four pairs of pants and headed for the EOC.

"When I got there, I thought the real disaster was at the emergency operations center," he said. "Every cellular commercial carrier, every wireline company, the local county sheriff's systems — everything either got damaged or impacted in some way where it wasn't providing reliable communications. I'm not going to say there wasn't some police department with a radio system operating somewhere, but nothing with the wide area capability of SLERS."

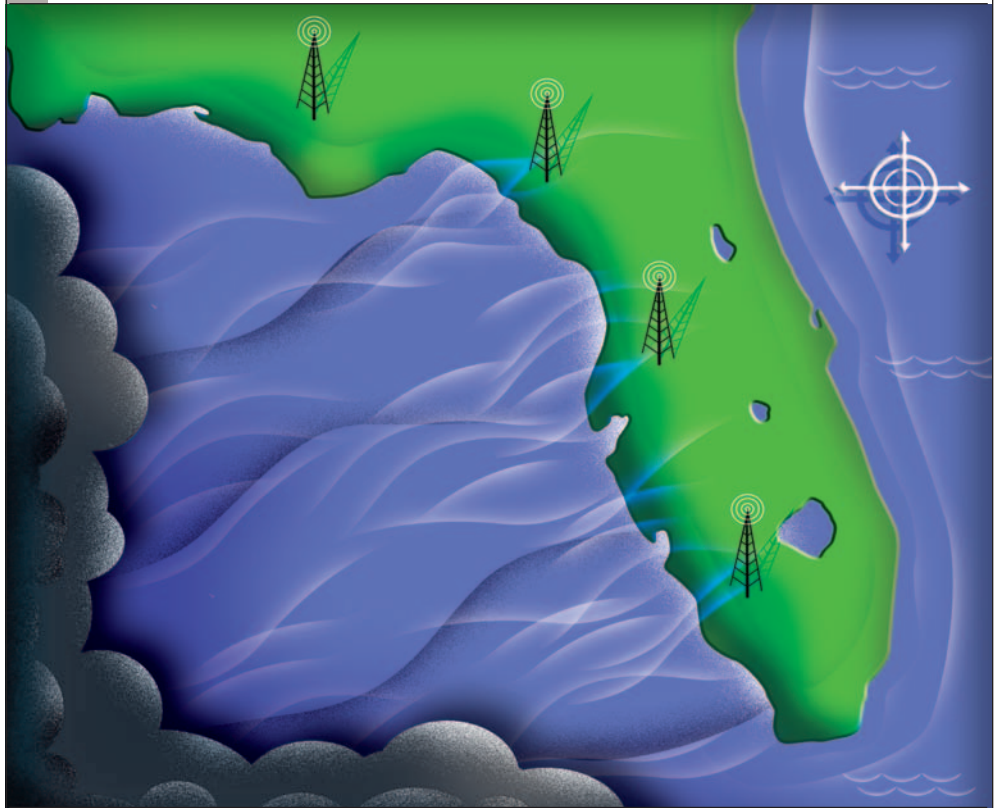
Within 72 hours, the chaos settled at the EOC, but the work was nonstop until the hurricanes subsided. That meant keeping communications open between 14 state agencies and the EOC through SLERS.

"You think of normal things like the highway patrol trying to prevent looting or directing traffic, or the Department of Transportation checking bridges to make sure they haven't been weakened and are going to fall, or the bridges had already fallen in and all the rerouting and logistics they had to come up with," Tinsley said.

Six bridges were felled or damaged to the point where they were unusable. The National Guard was on the system helping with traffic control and keeping looting to a minimum. The state Department of Environmental Protection was out making sure wastewater and sewage

Intact Amid Chaos

Florida statewide radio system keeps emergency operations running despite hurricanes.



tanks didn't overflow. "We just kept getting clobbered," Tinsley said. "The only part of Florida that didn't get affected was south of Miami in the Keys. Every place else in the state got slammed."

SLERS paid off for the department when a hurricane dismantled a paint and body shop, spewing chemicals in a local area.

"Nobody ever missed a conversation," Tinsley said, adding that M/A-COM distributed more than 500 radios to city, county and private personnel to maintain communications

during the storms and amid the constant personnel movement. "We were deploying, re-deploying and really moving people around."

IP-Based

SLERS is an 800 MHz trunked system, allowing for a large number of users to share a small number of channels. M/A-COM staff and personnel from various state agencies traveled hundreds of thousands of miles testing SLERS' mobile coverage levels, according to the company, and the tests certified that 98 percent of

Solution Summary

» **Synopsis:** Florida discovered just how valuable the Statewide Law Enforcement Radio System (SLERS) is when three hurricanes barreled through the state, knocking out most forms of communication — but not SLERS.

» **Jurisdictions:** Florida

» **Vendors:** M/A-COM

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Florida and its waters up to 25 miles offshore are reachable by SLERS.

It's also an IP-based system connecting approximately 300 radio frequency towers throughout the state.

"It's a huge, IP-based and Cisco-centric wide area network that happens to run public safety voice traffic over it," said Chuck Shaughnessy, vice president of operations for M/A-COM's Wireless Systems unit. "It dumps into IP packets, blasts it all over the network and goes all over the state. We operate that with our own people and subcontractors statewide."

Shaughnessy said SLERS looks like an office building's local area network, but in terms of numbers of nodes in the state, SLERS is bigger than the worldwide network of Tyco Electronics, M/A-COM's parent company.

SLERS has "public safety grade" fault tolerance (the redundant paths for communication built into the system). If a computer fails, that means just one channel of communications will be lost because each channel has its own computer controlling it.

"All the towers are built to withstand extremely high wind loads," said Ron Bender, director of system products for M/A-COM. "There were a few generators that didn't start, a few microwave dishes got out of alignment a little when those huge winds came flying through, but the system as a whole stayed up and running for the entire time."

Rough Start

The project really began more than a decade ago. After Hurricane Andrew slammed the state in 1992, Florida officials realized they needed more resources and an EOC to handle these kinds of scenarios, Tinsley said.

"When Andrew came through here and really wiped out the bottom part of the state, nobody was ready for it," he said.

Five regions of the state were defined and

assigned a phase for the project, which was originally bid to a different vendor. After the second phase was complete, the state felt the project could be done more cost-effectively and put the project out for re-bid.

By September, the former vendor's equipment will be replaced in certain parts of the state by M/A-COM equipment. That will complete the final phase. It will have taken M/A-COM about five years to complete the project.

The Contract

Officials from Florida's State Technology Office (STO) said the public/private partnership behind SLERS is built on a unique funding strategy. M/A-COM was paid \$40 million in advance for providing the services in the contract, and the company also receives approximately \$13 million to \$17 million annually from the ongoing proceeds of a motor vehicle and vessel registration surcharges.

M/A-COM provides the system infrastructure (towers, antennas, system equipment, system maintenance, radio consoles for dispatch) and 800 MHz service. A mobile data network will be included in the service later in the project.

In return for the conveyance of various state tower and tower site assets, M/A-COM gave the state \$25.5 million in credits for radios and accessories, and in addition, credited the state for the replacement of 6,000 radios used by Florida agencies in Phases 1 and 2.

The M/A-COM contract also provides for revenue sharing in three ways, STO officials said.

For the initial 20-year term of the contract, Florida will receive 15 percent of all net revenues from third-party tenants on towers conveyed to M/A-COM from Florida. After the initial term, Florida will receive 50 percent of all such revenues for another 30 years.

Though state agencies use SLERS, counties can be added to it for a monthly fee paid to M/A-COM. That money is shared with the

state, which gets 5 percent of collected fees. County payments vary depending on how much hardware is needed. Generally, counties need only purchase Enhanced Digital Access Communications System radios, which cost between \$3,500 and \$4,000 each.

If Florida chooses to use M/A-COM as the agent for the sale of the 800 MHz system used during the first two phases of SLERS, M/A-COM will receive 25 percent of the proceeds.

Adding On

In October 2004, the STO contracted with Motorola for Florida's Interoperability (IO) Network, said Simone Marstiller, Florida's CIO, using grant dollars from the U.S. Department of Homeland Security (DHS).

"This network will enable first responders on disparate radio systems and frequencies to communicate with each other as connected talk groups without requiring the replacement of local systems," said Marstiller. "State law enforcement officers using SLERS will be able to use the IO network as well to coordinate rescue and other efforts with local first responders. The system is already up and running in the Duval County area, in time for the Super Bowl."

Florida is also looking to begin expanding the mutual aid component of statewide radio communications, Marstiller said.

"Mutual aid channels provide radio service to first responders outside the range of their local system or when they need to communicate with users not on their local system," she said, noting that the mutual aid component is also funded by DHS grant dollars. M/A-COM was selected to expand and complete 10 mutual aid radio channels throughout the state. "The mutual aid build-out will substantially increase the geographic coverage of the mutual aid channels, ensuring that virtually wherever they go Florida's first responders will have radio communication capability." ☎

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