

Motorola's Integrated Solution Pays Off During the Storm of the Century



"The floods of September 2009 were record-breaking. We were impacted beyond any disaster we've had in our county. Everyone around us was impacted. We called for additional resources, like boats, and added manpower for incidents on our borders."

—Tracy Roberts, Communications System Manager, Cobb County, Georgia

SITUATION: A perfect storm for potential communications failure

Cobb County, the fourth largest in Georgia, serves over 600,000 residents with a state-of-the-art, digital communication network that unifies more than 7,000 users from county public safety agencies to municipal departments to schools. But that was not always the case, according to Mickey Lloyd, Director of Public Safety. "Our original analog radio system did not self-report systemic problems and was limited in monitoring the functions of all the components at our repeater sites. As a result, it was incomplete in the level of service and reliability it could provide." Especially during a disaster which can overwhelm networks, says Lloyd, "It is very important to have a dedicated, mission critical communications system that maintains the highest reliability standards."

SOLUTION: Integrated voice and data system, network services and support

Identifying the need for a dedicated, disaster-savvy network, Cobb County began working with Motorola to find the right fit. In 2006, the county implemented an advanced, mission critical, ASTRO® 25 communications solution that skillfully combines a digital voice and data system (18 channels, five sites), Fire Station Alerting, Motorola Weather Siren Alert, and a customized package of network services and support. The county's Motorola service package includes 24/7 Network Monitoring, Technical Support, Dispatch, On-Site Response and a dedicated, local system manager for the ASTRO 25 system.

RESULT: Rapid, reliable, uninterrupted response

During the historic floods of 2009, says Mickey Lloyd, "We enjoyed a new level of service during a time of strain on our radio system and our first responders. Motorola's integrated solution enabled our responders to continue functioning, unaware of any system issues, and with little effect on them. When lightning hit one of our repeater sites, the notification of the issue, dispatch, response, problem identification and repair was addressed in minutes versus hours as experienced in the past."

Cobb County, GA

- Fourth largest county
- Population of 600,000
- Over 7,000 radio users

Situation

- Aging analog radio system
- Unreliable and incomplete coverage
- Unable to self-report systemic problems

Motorola Solution

- ASTRO 25 digital voice and data mission critical system
- Fire Station Alerting and Weather Siren Alert
- Custom network services and support package
- XTS and XTL mission critical radios

Results

- Disaster ready, ultra-reliable communications
- External network monitoring and support
- Immediate problem resolution and service
- Accelerated response time



“I can’t emphasize how important it was that we had the situation stabilized before the first user in the field even called in.”

– Tracy Roberts, Communications System Manager, Cobb County, Georgia



As the floodwaters rise, the network rises to the occasion.

The weekend of September 19, 2009 marked one of the worst storms in the history of Georgia. Rivers swelled from two feet to 20 feet, vehicles were swept away and entire neighborhoods were submerged underwater. Seventeen counties were declared a “state of emergency” and more than 250 roads were closed in Cobb County, including major interstates. Tracy Roberts, Communications System Manager, recalls “The flood was so massive and had such a huge regional impact, even if we could have called our closest neighbors, they were busy, handling their own.”

With the county under storm, trouble reports for the Sandy Plains repeater site came in early Monday morning. Lightning had struck the site and created a potential site failure in the radio system. As Roberts explains, “I received three different emails from the Motorola Network Operations Center in Schaumburg, Illinois, about three component failures here in Georgia. Not only did I receive this information, but Motorola’s certified service shop did and immediately sent technicians out to evaluate and repair the site.”

By the time a user in the field called in to report an issue with his radio reception, a team of local technicians was already on site, stabilizing the system. “This was phenomenal, compared to what we’d done in the past,” says Roberts. “We would have received a complaint, gone out there, tried to locate and identify what’s wrong, and that could have taken us hours. Instead we received an immediate response of service personnel to the exact site,

to the exact components, and a resolution of the problem with minimal disruption of communications for users in the field.”

This is critical, she adds, because in emergency situations you must have a mission critical system you can depend on—whether for day-to-day incidents or for the one-time lightning strike—to keep communications up and running when our first responders need them most.

Coordinated services turn mission critical into mission-confident.

Hand in hand with Cobb County’s ASTRO 25 mission critical radio system is an annual maintenance contract which provides 24/7 system and site monitoring services. A dedicated line between Motorola’s Network Operations Center (NOC) and Cobb County’s Emergency 9-1-1 Center acts as a technological lifeline, managing data and maintaining uninterrupted communications.

This coordinated partnership between the NOC, authorized service shops and local system manager instills confidence in the county. “Our major disaster plan is contingent upon this configuration,” says Tracy Roberts. “Having an external view of what’s going on in our system from Motorola gives us another level of comfort and an external force that can respond, independent of having someone at our agency decide what the orders and directions should be. Motorola gives us that level of assurance and reliability that they are outside the disaster; they can get in touch with and notify the proper people when something’s gone wrong.”

“The radio system network and interoperability with our local municipalities ensured seamless communications occurred during this event.”

– Mickey Lloyd,
Director of Public
Safety

The benefits keep flowing—from faster response to greater efficiency.

Given the scope and severity of the floods, not only did the network services perform adeptly, but the ASTRO 25 digital system worked exactly as designed. The system processed transmissions and queued 9-1-1 calls with absolute efficiency despite the heavy volume, many from stranded motorists or calls to fire service. Call volume jumped from 2,075 on a typical day to 5,667 on that Monday alone, with very few busies. “The radio system and interoperability with our local municipalities ensured seamless communications occurred during this event,” says Mickey Lloyd, Director of Public Safety.

Although responders had already been deployed, Motorola’s Fire Station Alerting (FSA4000) operating on the ASTRO 25 system would have accelerated their response. The computer-aided dispatch (CAD) system enables Cobb County to alert all 36 of its fire stations almost immediately after the call has been entered into CAD. “Before the Fire Station Alerting system, we had to interface another station alert network, wait up to five minutes for a response from that unit, then call the next one,” explains Tami Conniff, Senior 9-1-1 Analyst.

Prior to installing the latest Fire Station Alerting system (FSA4000), major multi-unit response calls could take anywhere from two to five minutes to complete the multiple fire station alerting process. The implementation of Fire Station Alerting decreased this alert time by moving the alert process

to the computer-aided dispatch (CAD) system. As soon as the dispatcher assigns a unit or units to the call the Fire Station Alerting system is reaching out to the appropriate stations and equipment and alerting them of the call. Minutes have changed to seconds and seconds saved can make everyone more effective.

“On a major incident, when you’re dealing with multiple pieces of equipment and multiple units, you wouldn’t know who was responding until all the alert tones were out,” explains Tami Conniff. “Now it’s a simultaneous and coordinated response, with every station receiving their tone at the same time. Not only does Fire Station Alerting eliminate a step for the dispatcher and mean less possibility for failure, it makes the whole process faster.”

Ruggedized, disaster-ready radios take on the worst.

Not only did Motorola’s Network Monitoring services and 24/7 support keep critical communications flowing during the torrential rains, the XTS5000 portable and XTL5000 mobile radios proved to be practically flood-proof. “Right after the incident, when the rains died down and we were back in the station, we sent out an email to our responders,” explains Tracy Roberts. “If you dropped your radio in the water, if it got totally drenched, take it to the service shop. We had at least 1500 Motorola portable radios out in the field among our agencies and only one came in with a complaint.”

“The new system has decreased all the lost time. Instant identification of a system or component problem is known and responded to. There is no searching or guessing what the problem is.”

– Mickey Lloyd, Director of Public Safety, Cobb County, Georgia



“This was the return on our investment right here. This continues to justify why we have this service from Motorola.”

— Tracy Roberts,
Communications
Systems Manager,
Cobb County, Georgia



All photographs courtesy of the Georgia Water Science Center, Atlanta.

An investment that proves invaluable, weather or not.

Looking back at the catastrophic floods, Cobb County officials underscore the importance of having a private, reliable, redundant system. “Dedicated mission critical systems ensure that public safety emergency responders are there when our citizens need us the most,” says Mickey Lloyd. Over in the communications center, Tracy Robert agrees, “I don’t want to get to a level of disaster like some states have where commercial service is denied and cell phones are dead. That’s why we have a mission critical system in place.”

According to Roberts, the ASTRO 25 digital, private, mission critical radio system and its multi-faceted, customized service contract have paid for themselves with this one incident. “To truly depend on the services you’ve paid for, this is the value we’re getting out of our investment. It really performed in a time of crisis exactly the way we expected it to. After my experience,” she says, “there is no question, we received our return on investment.”



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