



# MISSION CRITICAL

MICHIGAN PUBLIC SAFETY COMMUNICATIONS SYSTEM (MPSCS)

"It is my goal that by 2008, every police officer, firefighter, emergency medical professional, and first responder at every level of government will be able to talk directly to each other in any emergency. When Michigan's citizens call for help, we must ensure that police and fire personnel can respond."

– GOVERNOR JENNIFER GRANHOLM



“Our personnel, their psyche and their training says ‘I’ve got to do it now’ and they expect the same of their equipment. The statewide system enables emergency responders to talk to anybody that we need to talk to. If I can communicate with you, that makes it easier for me to keep my folks safe.”

– TYRONE C. SCOTT, EXECUTIVE FIRE COMMISSIONER, CITY OF DETROIT



#### SITUATION

*Safety and homeland security across a diverse landscape.*

Michigan encompasses big cities, towns, farms, wilderness, and a 3200-mile shoreline. More commercial and recreational boats are licensed here than in any other state, and the 750-mile border with Canada is one of the nation’s most-traveled commercial crossings.

Local, county, state, and federal authorities protect Michigan and its borders, but joint communication has historically been difficult. “We had limited capabilities from an interoperability standpoint,” remembers Lt. Col. Thomas J. Miller, Deputy Director, Administrative and Information Services Bureau of the Michigan State Police. The state police were using a radio network first deployed in the 1940s. “We had locations where they had three and four radios in a car.”

#### SOLUTION

*A statewide network open to all communities.*

**System:** An 800 MHz simulcast voice/data network covers the state with alarm, control, and perimeter security at all sites.

**Coverage area:** The network’s 185 towers cover the state’s 96,800 square miles, both the Upper and Lower Peninsulas.

**Users:** Over 11,000 users and more than 300 agencies are on the system now, with another 10,000 users expected to join soon. Detroit is deploying a new system that will become the network’s 7th zone. Agencies that aren’t ready to buy a new system can link their existing radio systems to the network.

#### RESULT

*Unified communications on a budget.*

“The benefits are tremendous,” says Lt. Col. Miller. “In these times of tight budgets, it’s critical that local governments have an opportunity to enhance technology in a cost efficient manner. The local agencies have relayed to us, not only their surprise but their overall satisfaction with the level of coverage they get.”

“The 800 MHz system has greatly increased our capabilities within the State of Michigan. It also provides safety for my guys.” – Army CW5 Jim Estep, MICHIGAN RAID, Aviation Support to Law Enforcement.

“Having this system allows us to talk to a jurisdiction close, far, wherever the critical incident happens.”  
– Officer Eugene Malburg, Shelby Township Police Department.



## True Interoperability

“Michigan is one of only two states nationally that have been rated by the Public Safety Wireless Network as having a high level of interoperability. And we’re not even finished.”

– LT. COL. THOMAS J. MILLER, MICHIGAN STATE POLICE

“Interoperability starts at home,” observes Sgt. Orlando Watkins of the Detroit Fire Department. “We realize the advantages of being able to talk to the county, the state, all the municipalities, but it also solves internal problems. Now we’ll be able to communicate better as an organization.”

“Police work has no boundaries,” says Undersheriff Bezotte. “Interoperability affords us the opportunity to let other jurisdictions know we’re in the area and if we need assistance. It’s a safety issue for us. When you’re dealing with a serious situation the last thing you need to worry about is communications.”

“During the floods last year I was able to sit in my office in Lansing, Michigan and use my radio to talk to individuals up in Marquette who were evaluating damage,” says Brig. Gen. Michael C. McDaniel, the

Assistant Adjutant General for Homeland Security at the State Department of Military and Veterans Affairs. “The system works wonderfully during an emergency and it works wonderfully day to day for local law enforcement, emergency managers and fire departments, and other first responders that need to use it on a daily basis.”

MPSCS interoperability provided a vital link during President Bush’s visit in 2004, says Donald T. Arbic, Operations Manager for the Livingston County 911 Central Dispatch Center. “Timing was absolutely critical to not allow any gaps in presidential security. Because of the statewide network, we were able to follow that motorcade as it made its way east across the state. We couldn’t have asked for a better result or better communications.”

### Statewide coverage, local control

How can such a large network adapt to the unique needs of each agency? “We take a four-tiered approach,” says Lt. Col. Miller. “We allow the local agencies to have a set of talk groups that are only utilized by their department. So it’s their own radio system, so to speak.” The second tier has regional talk groups for communicating among agencies in the region. For the third tier, “We provide a standard set of statewide talk groups that allow all users to have statewide capability.

“Lastly, we programmed into each radio a suite of what we call special event talk groups. Those are talk groups that we control from a central location that are activated upon request by a local user. It allows us some flexibility for major events. Multiple agencies can get whatever level of interoperability they require to make sure they meet their service demands.”



## Critical Networks

"That's a controlled environment – and we control it"

### Lights out, radios on

On August 14, 2003, a massive blackout hit eight states and parts of Canada, including 2.3 million households and businesses in the Detroit area. "The one system that remained operational above all of the public communication systems was the MPSCS," says Gary Blair, Director of Communications Operations for the state. "We operated 24/7 without any issue."

"It's of paramount importance that the public safety communications network be self-sustaining and isolated from the public systems," says Robert C. Tarrant, Director of the state's MPSCS IT Department. "That was painfully obvious during the blackout in 2003 when all public communications were interrupted, but sites such as our tower site continued to operate as a closed system, affording us communications statewide throughout the entire event."

"Systems that rely on public networks end up being at the whim of the vendor's ability to keep that system up and running," says Lt. Col. Miller. "The reliability and security of the MPSCS is unmatched in my judgment. We don't have to be concerned about who may or may not have access. That's a controlled environment and we control it."

Brig. Gen. McDaniel echoes that. "We have a private mission-critical system, sort of a force multiplier. We have the ability to configure up to 16,000 talk groups on 64,000 radios, and there are other systems which can be integrated. We do not have to rely upon public systems."

Don Arbic in Livingston County says, "The benefit of having our own private network is twofold. Number one, we don't have to worry about the system being busied out by other users. The other benefit is we don't have to worry about being at somebody else's mercy if there's a system failure. System downtime is measured in seconds per year, which is a rate that no commercial carrier could guarantee."

### Bringing the city on line

Integrating a major city like Detroit into a statewide network is no small task. "The city has so many technical challenges with infrastructure," says Detroit CIO Dave Rayford, but, "it was something we recognized we had to do to have a more effective public safety environment."

Detroit is deploying its own 800 system to be integrated as a zone on the MPSCS. The two systems will mutually back up their network control centers.

"At the end of the day, we will have radio systems that are mutually compatible: separate but sharing," Rayford explains. "The State Police will be able to come into Detroit and get far better coverage and building penetration. The city will be enabled to work over a far larger footprint with more people, more municipalities, more agencies. So it has advantages for both sides."



## Mission Critical Data

“Any squad car becomes a mobile command post”

Both urban and rural areas look to mobile data for enhanced public safety. “When you look at some of the major terrorism events, there’s a good chance if data was shared efficiently between agencies, some of those incidents could have been stopped,” says Lt. Col. Miller. “To prevent an incident, you have to have and share information. This system has that capability and we’re excited about moving forward.”

“Rural law enforcement has to cover an awful lot of ground,” says Gen. McDaniel. “They could be 30 miles from the dispatch center. The ability to receive and print out information, to file their field reports, this is something we need to have.”

Commander Andrea Jackson, Detroit Police Department Emergency Communications, sees similar benefits. “We believe that deploying mobile data terminals in the vehicles allows the officer to be more efficient and provide better service for the citizens of Detroit. Any squad car becomes a mobile command post. The preemptive information is much richer, more valuable, because it is compiled and shared with all of the other officers.”

Michigan State Trooper Jeff Amley says, “It’s an officer safety issue. The mobile data terminal allows me to do my job more effectively where I get those immediate results. When I run a license plate on a traffic stop, if the vehicle is stolen that is immediately broadcast to the other units so they can check on my status and come to assist me if necessary.”

### Data Security

“One of the largest responsibilities I have as the Director of Communications Operations for the State of Michigan is ensuring the security of this system,” says Gary Blair. “I’m quite pleased that Motorola has worked so diligently in this data upgrade to provide a very robust security system for the entire MPSCS.”

“In today’s environment we face viruses and hacking attempts. The work the engineers have done is second to none in ensuring the security of this system.”

“Our work with Motorola was a true partnership. We had a product that was delivered on time, within budget, met the requirements that were established contractually, and gave us a state of the art communication system that today, over 11,000 public safety users in the State of Michigan are taking advantage of.”

– Thomas Miller

“My confidence in Motorola is very high. I’ve been in more situations than I can remember where that was my lifeline and I’m speaking as someone in the field, not from the commissioner’s standpoint. Now, having even more lives up under me, it gives me a sense of peace knowing that our people, going into dangerous environments, will have the reliability of Motorola with them.”

– Tyrone Scott

### Learn more about Motorola Mission Critical solutions.

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## Over 65 years of understanding the needs of public safety

In today’s world you need a partner who understands what mission critical is all about: the lives and well-being of your employees and the citizens they protect. That’s why Motorola is a leading provider of interoperable communications systems for public safety and first responders. Our experience in the public sector, along with our skills, people, partnerships and alliances, allow us to build innovative, fully integrated technologies that help organizations like yours share vital information with ease and confidence. We’ve been doing it for 65 years, and we’ll be standing by our customers for years to come.

We are committed to bringing all of our knowledge and technical expertise together so you can focus on what you do best... to serve and protect the public.



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1301 E. Algonquin Road  
Schaumburg, Illinois 60196  
1.800.367.2346