MOTOROLA

MISSION CRITICAL

ALASKA LAND MOBILE RADIO (ALMR) PROJECT

"Our commitment is to provide a wireless, cost-effective public safety interoperable communications system for all of Alaska."

— ALMR EXECUTIVE COUNCIL

"We probably have better working relationships between state, federal, and local governments than anywhere you'll find in the United States. We have unique relationships with the military as well. It's important because we rely on each other to get the job done."

— COMMISSIONER WILLIAM TANDESKE OF THE STATE DEPARTMENT OF PUBLIC SAFETY

SITUATION

Securing the "Last Frontier."

Alaska covers an area roughly one-fifth the size of the entire Lower 48 States. Most of those 570,000 square miles are sparsely populated, with extreme terrain and weather, but few roads. Yet 640,000 residents need protection, as do nationally critical facilities including military installations, the Trans-Alaska Oil Pipeline (which carries nearly 20% of the nation's oil supply), and refueling facilities for cargo flights between the U.S. and Asia.

It takes a multitude of agencies to serve such a vast area, and radio communication is a challenge. Jack Phelps, ALMR Project Manager for the State, notes that, "Even in populated areas, you have a major event and you might have 20 or 30 agencies coming. We had a wildfire a couple years ago where 22 different agencies responded and none of them had interoperable communications."

SOLUTION

An unprecedented partnership.

System: The nation's first statewide digital trunked radio network combines state, federal and local resources into a single, shared standards-based infrastructure.

Coverage area: Starting with the road system where 80% of the population is concentrated, it will grow to cover the entire state.

Users: Public-safety first responders and participating agencys' day-to-day operations, both military and civilian. For the state, ALMR replaces 25-30 year-old equipment. For the Department of Defense, it complies with Project 25 and the NTIA's narrowband mandate. For local agencies, it improves coverage and interoperability without having to replace their old radio systems.

RESULT

Joint communications for joint operations – and everyday.

ALMR is already supporting real-life operations as well as training exercises that involve dozens of agencies from multiple jurisdictions. "The final analysis," says Tandeske, "is can our people in the field do their work? This system is developing in such a manner that very clearly we're able to work and get the job done."

Phelps agrees that ALMR is doing its job: "Alaska's first responders, when this system is complete, will be able to meet their responsibilities better than just about anybody else in the country because it's integrated, it's interoperable, and it provides them the means to meet their mission critical responsibilities."

True Interoperability

"Car accident or nuclear explosion, it's essential that we have the tools"

"The governor's emergency response commission report identified interoperability as the number one reoccurring problem during emergencies in the State of Alaska," says Tim Woodall, ALMR Deputy Project Manager, Department of Defense. "When you're drawn together with a common purpose and say yes, this is a priority for us, then you can form a cooperative partnership at the senior executive level and provide on-demand, real-time, secure, interoperable communications for public-safety first responders."

"Whatever agency you come from, we need first responders to communicate with each other," says General Craig Campbell, Commissioner for the Department of Military and Veterans Affairs and the Adjutant General for the State of Alaska. "I think what Alaska will demonstrate with ALMR is there are lots of opportunities with technology to get interoperability, whether it's a rural or urban environment."

Flawless Performance: Northern Edge Exercise

During the March 2003, Northern Edge training exercise, ALMR facilities handled over 17,500 calls in 12 days for 1,500 participants and roughly 30 participating agencies – including federal (Army, Air Force, Navy and Coast Guard), state, local (Valdez police and fire, EMS, and Valdez Community Hospital), and private agencies.

"The system performed flawlessly," says Tim Woodall. "The greatest benefit was the greatly improved situational awareness provided to first responders from the moment they were dispatched. The on-scene commander and the responding forces were constantly aware of the situation at hand, and responders were able to talk securely among themselves."

Protecting the Homeland: Winter Talon

In December 2003, the nation went on a Homeland Security orange alert. One potential target was the Port of Valdez and the 800-mile Alaska Pipeline. In response, Operation Winter Talon brought together more than 200 personnel from the National Guard, the Alaska State Defense Force, State Troopers, local law enforcement and fire, and a private security firm.

Lt. Col. Jeff Badger, Operations Officer in the Alaska Army National Guard says, "ALMR really saved the day."

Once they understood what ALMR could do, many agencies chose to use ALMR instead of their own radios.

Jack Phelps says, "Every agency that was involved had nothing but good things to say about the radio communications. When we were finished, the oil was still flowing out of Valdez and the people of America could still drive their automobiles and heat their homes."

Critical Networks

"You can end up losing your rescuers"

"Having reliable communications from a patrol car is important anywhere in the country," says Commissioner Tandeske, but "in Alaska, given our relatively small numbers, we tend to do things with one or two troopers that other jurisdictions do with six, eight, or ten policemen. So communications becomes very, very important to us. You can end up losing your rescuers if you're not careful."

Because communication is a lifeline, Jack Phelps believes a privately-owned, mission-critical network is essential. "I was in Washington, D.C. when 9-11 hit, and I can tell you that within minutes my cell phone was worthless. It does not make sense for public-safety first responders to be dependent on commercial, public networks."

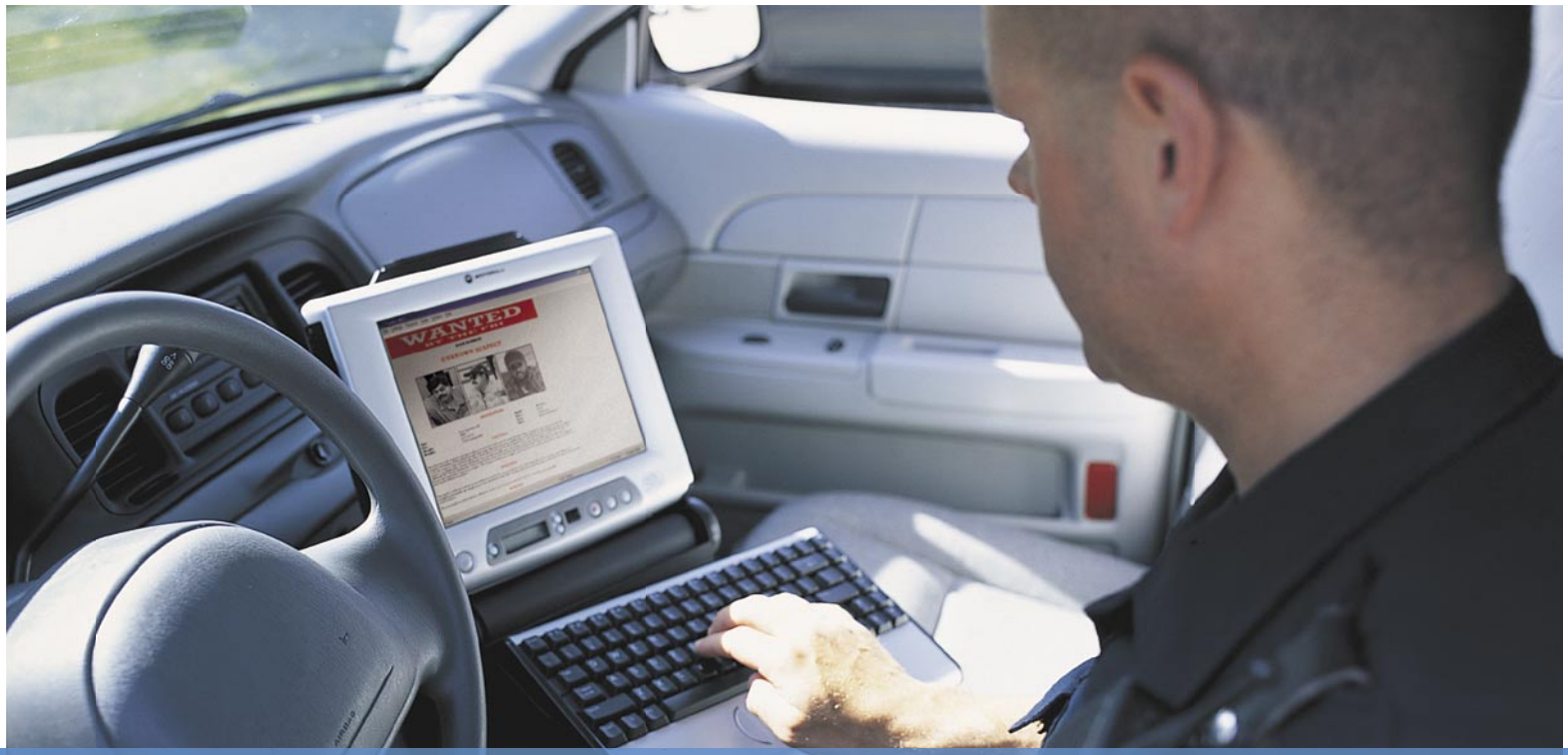
Tim Woodall adds, "In times of emergency, a single shared system provides a level of secure interoperable communications that can't be matched. A private system is more responsive to our needs because it provides the level of security, the level of quality and control that we need to do the vital missions. We can't rely on a commercial entity, who has a second objective of meeting the public customer base, to provide that."

Col. Julia Grimes, Director of the Division of Alaska State Troopers, says, "Without good communications, our ability to help people in life and death situations is severely limited. Our experience with ALMR up to this point has been extremely good. We see that as a huge advantage for us that will help us be better at what we do: providing service to the citizens in this state."

FCC Waiver: A spectrum of possibilities

"Our low-density population and isolated location make statewide shared spectrum a particularly effective solution," says Tim Woodall, but that's not business as usual for the FCC. "Spectrum is difficult. It's divided into islands, federal and non-federal."

Jack Phelps recalls, "We did something that everybody told us couldn't be done: we asked the FCC for a waiver letting us combine day-to-day operations spectrum, that normally is reserved for the military and federal government users, with spectrum that is normally reserved for local and state public safety. It took about a year and a half but the FCC ultimately agreed with us. I would encourage other states not to be daunted and to think outside the box. The FCC has proven that it's willing to consider reasonable requests."



Mission Critical Data

When a routine traffic stop turns to something else

"Data may not be as flashy and readily apparent as voice, but the ability to carry data is very important to all users of the system," Jack Phelps says. "The ability of an officer to use a computer in his vehicle to do an NCIC query or perhaps get visuals on wants and warrants could really make the difference between him surviving or not surviving a routine traffic stop that turned out to be something else."

Phelps sees other advantages as well. "If the officer's doing his own NCIC queries, it means fewer times he has to reach out to dispatch, which frees up the airways for more direct command and control issues, and frees up people in the dispatch center to do other things."

Phelps would like to see meteorological data and road status reports online. "We envision a radio system that can carry road condition data and post it in real time on smart signs along the highway, which will make travel safer for our citizens. At the same time, the Department of Transportation will use that data to assess needs and dispatch snowplows and graders more effectively."

Commissioner Tandeske foresees still more applications. "The possibilities with mobile data transmission are pretty much endless," he says. "And for jurisdictions it reduces costs for dispatch labor services because you're able to take a whole lot of the radio traffic off the air."

Project 25 allows for easy migrations

"The State of Alaska adopted the Project 25 standard in 1998," says Jack Phelps. "It was absolutely the right decision. Alaska simply cannot afford to build a very robust radio system and have it sitting around waiting for the next earthquake, so we wanted this to be a system that could be used on a day-to-day basis by state, federal and local agencies. But some of those local jurisdictions are not going to be able to afford full migration in the short term. The ability of Project 25 to reach back to legacy systems and allow them to integrate was a very important factor in our decision." Local jurisdictions can wait to migrate, and meanwhile they still get the immediate benefit of ALMR interoperability and improved coverage.

"The ALMR Executive Team would give high marks as a partner for Motorola, and this really has been a working partnership. This is obviously not an out-of-the-box system and it's been a lot of work with a lot of people. Motorola is the primary vendor who can provide the development expertise to make this happen. It's not about the portable that's in your hand, it's about what makes the portable functional."

– Commissioner William Tandeske

"Industry has to be a partner with you. Motorola has been with us from the beginning, from the RFI process through the SDA and into the planning and implementation, working with us to make this a successful project. If we didn't have the kind of partnership and support from Motorola that they gave us from the very beginning, it would have been difficult if not impossible to complete."

– Tim Woodall

Learn more about Motorola Mission Critical solutions.

We invite you to subscribe to the Motorola Mission Critical Solutions Series. You'll receive in-depth white papers on important Public Safety topics including **True Interoperability, Critical Networks,** and **Mission Critical Data**. Simply visit www.motorola.com/missioncritical or call 1-800-367-2346.

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.

MOTOROLA
intelligence everywhere™

1301 E. Algonquin Road
Schaumburg, Illinois 60196
1.800.367.2346

RC-99-2041