TWO COUNTIES, ONE SOLUTION
A PROACTIVE PARTNERSHIP KEEPS A BI-COUNTY COMMUNICATIONS SYSTEM UP AND RUNNING

TWO RURAL OREGON COUNTIES GET TECHNOLOGY AND GRANT ASSISTANCE FROM MOTOROLA

SITUATION

Federal funding for a UHF system built by Motorola in 2001 was about to expire. With no single entity able to fund operation and maintenance of the system going forward, the two counties served by the system turned to Motorola for technical and grant assistance.

SOLUTION

Grant assistance and guidance from Motorola helped make it possible for two rural counties to fund a system upgrade and put a plan in place for the future. Motorola was able to complete an in-depth study of the existing communications system with no disruption to communications among first responders. Following that study, Motorola developed a migration plan that built the case for an agreement from FEMA to award the Umatilla Morrow Radio and Data District with $2.7 million in funding for a system upgrade.

RESULTS

The new ASTRO® 25 system with SmartX provides expanded coverage and the flexibility to enable a phased migration to fully integrated voice and data in the near future. With the help of Motorola, public safety agencies in this remote, rural region will now continue to benefit from the interoperability of an advanced radio communications system. They also have a clear path that will enable users to leverage advanced integrated digital voice and data capabilities in the future.

> **"Out here, fire districts cover as much as 1,000 square miles. Our system connects all police and fire over a two-county area. We couldn't get by without it."**
>
> — Mike Roxbury, Fire Chief, Umatilla Rural Fire Protection District

CUSTOMER PROFILE
Umatilla Morrow
Radio & Data District

Location
- Pendleton, OR

Industry
- Public Safety

Solution
- Grant assistance
- Migration plan for phased migration from existing UHF analog SMARTNET system to ASTRO P25
- Installation and deployment of upgraded system in less than 12 months
- Ongoing support with plans complete digital migration and update digital subscribers in 2015

Mike Roxbury, Fire Chief, Umatilla Rural Fire Protection District

MAINTAINING A CRITICAL REGIONAL PUBLIC SAFETY COMMUNICATIONS SYSTEM

Since 2001, when it was first deployed, a single Motorola SMARTNET trunked radio network has served as the primary means of daily public safety communications for 24 public safety agencies and 8 public works departments in Umatilla and Morrow Counties—two rural counties in eastern Oregon.

That original system was constructed with funds provided by federal grants associated with the Chemical Stockpile Emergency Preparedness Program (CSEPP), a program— managed by the Federal Emergency Management Agency (FEMA) and the Department of the Army—that provided emergency preparedness assistance to communities surrounding five Army chemical depots, one of which was located in Umatilla and Morrow Counties. With the end of CSEPP looming, the two counties recognized the urgent need to find a way to continue to maintain and operate the system.

A WIDE AREA TO COVER

"That system connected all police and fire over a two-county area," says Mike Roxbury, fire chief for Umatilla County. "Out here, we have fire districts that cover 1,000 square miles, so communicating over a single network is huge. We couldn't do without it."

In a geographic area that spans mountains and deserts and experiences frequent dust storms and wildfires, these two counties had a critical need for interoperability among many public safety agencies. The region has all the issues of a rural area. It's remote, mountainous, with many volunteer fire departments, rural county sheriff departments, and a total population in both counties less than 100,000. If it had not been for the FEMA program, the bi-county communications district would not have been able to afford a communications system of this magnitude.

FUNDING THE FUTURE

With federal funding coming to an end, no single jurisdiction could afford to operate and maintain the communications system on its own. So, the two counties took a historic step. Mike Roxbury, Fire Chief, Umatilla Rural Fire Protection District, and Shawn Halsey, administrator for the communications system, went before the Oregon legislature to generate new legislation that would allow the formation of a district—the Umatilla Morrow Radio and Data District (UMRDD). The first ever in state history, UMRDD was a new government entity that would be responsible for the ongoing maintenance and expansion of the radio system.

As the new district was being formed, the customer also needed to take another important step: request a final round of FEMA funding to upgrade the existing SMARTNET system. To that end, an unlikely group of stakeholders came together to work toward developing a plan for migrating to a digital system and meeting ambitious funding objectives.
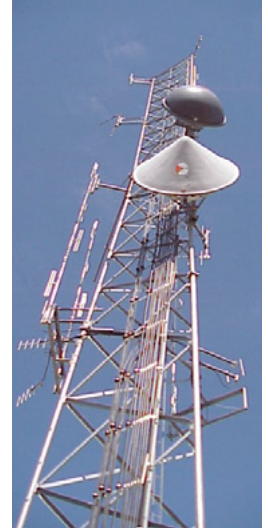
A MULTI-AGENCY PARTNERSHIP

At this point, representatives from Motorola Global Government Affairs stepped in to provide guidance in developing a proposal and a system migration plan to present to FEMA. "We asked Motorola for support and we were able to make it happen," says Chris E. Brown, Oregon CSEPP program manager. "There were a lot of meetings in which we talked about the advantages that the system could provide and FEMA bought our thought process."

Over the months it took to get the funding, Motorola was involved at every phase of the complex process. At monthly meetings, the UMRDD board treated their Motorola team as a true partner. There were also regular conference calls involving a number of senior officials, including the head of Motorola's Global Government Affairs and former FEMA director David Paulson.

Thanks to the efforts of everyone involved, UMRDD finally received the word: FEMA agreed to provide $2.7 million to fund the upgrade of the system. "This was a real multi-agency partnership," Brown says. "No one could have done this alone."

A SYSTEM FOR THE LONG HAUL

Motorola has been an active partner with the public safety agencies operating in Umatilla County for more than a decade. For the original system, an advisory board headed by Roxbury worked with Motorola to develop the system design. "We sat with Motorola and decided what we needed," he says. "We gave that information to FEMA and they provided funding for the original construction and for its ongoing operation over the last 10 years."

According to Halsey, the original system was a seven-channel, seven-site trunked Motorola SMARTNET analog system. The prime site is located at the Umatilla County Justice Center in Pendleton, Oregon, where all of the equipment needs to tie the remote radio repeater sites together in a simulcast configuration. Seven trunked repeater sites were connected to the prime site via microwave radios and T1 circuits provided by Umatilla County. Three dispatch centers were directly linked to the trunked radio system.

In 2009, when Motorola began developing a technology plan for migrating the analog system to digital, they completed an in-depth coverage analysis of the existing system, visiting six Umatilla County sites to determine equipment requirements—all with no disruption to current users.

In the end, the Motorola team provided two options—a new 800 MHz P25 system or a phased SmartX migration. When it became clear that the $10 million for a completely new system wasn't an option, the recommendation was that UMRDD migrate their master site to SmartX.

Because interoperability and flexibility were two factors that could not be compromised in the transition, the SmartX migration solution would help ensure that all individual agencies remain interoperable in the event of an emergency or disaster.

Moving forward, the Motorola team helped the district leverage the investment in the infrastructure that was already in place and provide a smooth path to the future that included P25 compliance, while providing flexibility for adding new coverage and capabilities in the future.

When all was said and done, deployment of the upgraded system was completed in record time. "Ron Spencer [the Motorola senior account manager who worked with the district before and after the system upgrade] was instrumental in making contacts with everyone we needed to get it all done—the state radio people, Day Wireless, Mission Critical Partners [a FEMA consulting firm], and other agencies," says Roxbury. "Chris Brown brought in state resources to Umatilla to help get the building and towers completed. The installation went smoothly. It was like they were performing open heart surgery on a beating heart."

STATE-OF-THE-ART INTEROPERABILITY IN RURAL OREGON

According to Halsey, the original radio system served about 30 agencies and 3 Public Safety Answering Points (PSAP's). "Today, we have 46 agencies on it," he says.

"People can't believe we have a state-of-the-art system here in rural eastern Oregon," Brown says. The interoperability has been huge for us." Now, according to Roxbury, his team is working with the state of Oregon to ensure that parts of the UMRDD system are interoperable with the state radio project. "We are making sure they can use portions of our system and, in return, they will build portions of theirs to work with ours. Between the two of us—and with Motorola's overarching technical guidance—we managed to build a radio system that works for us day to day and allows the state to more cost-effectively build their system."

"There's been a lot of money saved in construction costs. And we've delivered a sophisticated, battle-tested system to the community and to the new state emergency network."

> **"The partnership has been a win-win for the radio district and the two counties and for the state radio project."**
>
> — Chris E. Brown, Oregon CSEPP Program Manager

WHAT'S NEXT

The Motorola team is working to help the district migrate the UMRDD system consoles in 2013/2014. And, in 2016, Motorola will complete the digital migration and update the digital subscribers.

For more information about grant assistance and the products featured in this case study visit www.motorolasolutions.com/govgrants

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