MAX Dispatch Equips PSAP to Meet the Challenges of Change

With its new IP-based MAX Dispatch system, North Dakota's State Radio Communication System is now equipped to respond to its increasing responsibilities and the demands of the region's recent rapid growth.

North Dakota's public-safety communications are anything but typical.

In most states, local, city, and county agencies provide 9-1-1 call-taking and dispatch services for their respective jurisdictions. But in North Dakota, a state entity—the State Radio Communications System (State Radio for short)—is the hub for much of North Dakota's public-safety communications. It serves as the primary public safety answering point (PSAP) and dispatch center for 24 of 53 counties in the state and provides backup for most of the rest.

Given the scope of these responsibilities, it's easy to see why State Radio requires up-to-date, reliable communications equipment that can support their diverse needs as well as the state's recent, rapid growth. When their existing dispatch system reached the limits of its ability to expand, State Radio went in search of a new system. The Zetron IP-based MAX Dispatch system they installed in the spring of 2013 is providing State Radio with the updated functionality and flexible IP-based platform necessary to support their current and projected operations.

The State Radio Communications System

Located in Bismarck, North Dakota, State Radio has been in some form of operation since 1951. The 4,000 users currently on the system represent 87 local, state, and federal agencies.

Partly due to a major oil boom in northwestern North Dakota, State Radio's responsibilites are expanding—and rapidly. From 2012 to 2013 alone, their computer-aided dispatch (CAD) events increased nearly 14 percent.

In order to accommodate this change and ensure reliable coverage for all of the areas they oversee, State Radio recently determined that they would need to add a significant number of new radio towers to their system. But their dispatch equipment was being used to capacity. It was clear that the agency would need to obtain a new dispatch system if they were to undertake the expansion their circumstances were beginning to require.

Defining core requirements

Before launching into the purchase of a new system, State Radio performed a thorough needs assessment. They then issued a request for proposals (RFP) for a new dispatch system that would address the core requirements the assessment helped them define.

ZETRON®

"Our RFP called for a system based on IP," says State Radio director, Mike Lynk. "It would have to be adaptable, expandable and able to support additional towers. We also wanted a system that would allow us to control operations from our backup site."

This last point was critical. Communities throughout North Dakota could be seriously affected if State Radio ever had to vacate their center and were unable to continue operations from a backup location.

IP, interoperability...and more

Of the vendors who responded to the RFP, several emerged as serious contenders, including Bismarck-based Electronic Communications Inc. (ECI) with their bid based on Zetron's MAX Dispatch system.

"After a process that involved numerous amendments, meetings, presentations, and question-and-answer sessions," says ECI president, Marshall Pudwill, "we were awarded the contract."

"ECI's proposal met our criteria and came in at the best price," explains Mike Lynk. "The MAX system is IP-based and would support our tower expansion. Another key factor is that MAX is highly interoperable. Not everyone in the jurisdictions we serve uses the same technology—especially when it comes to paging. Some use phone paging, some use radio paging. The MAX Dispatch would be able to support all of those pagers on one system."

The project begins

The first phase of the project involved installing the MAX Dispatch backroom equipment in parallel with State Radio's existing system and setting up eight MAX Dispatch positions.

"At State Radio, each console is assigned a particular geographical area," says Pudwill. "We set up the positions, then switched them to the new system one at a time and according to the geographical region each one handles. Once this was done and everyone was comfortable with the new system, we dismantled the old system and removed it."

IP all the way

The next phase involved moving State Radio over from their copper wireline connections to IP.

"When we first moved State Radio to their new console system, they were still using leased copper wirelines to connect the consoles to the towers," says Pudwill. "The next stage involved moving 75 MAX Dispatch modules out to the 37 tower sites located throughout North Dakota. This would allow them to abandon the wirelines and connect over IP all the way from the consoles to the transmitters at each of the tower sites. We made this switch three towers at a time; it took about four months."

'Greater flexibility to respond and adapt'

The system went live in June of 2013. Mike Lynk says that, in addition to meeting their requirements, the system allows them to do things they were never able to do before.

"Each position typically handles traffic from several towers in a particular area of the state," he says. "With the MAX Dispatch system, if an incident is generating a lot of traffic to a position, we can customize profiles on the fly and reroute some of the tower traffic so the dispatcher is handling only the towers associated with that incident. This gives us greater flexibility to respond and adapt to incidents as they occur."

Kudos for ECI

When asked how the installation process went, Lynk says that he's very pleased to have been able to work with ECI on the project. "I can't say enough good things about ECI," he says. "They're so responsive. It doesn't matter if it's an equipment question, a training issue, or it's one in the morning. They are really there for us."

Looking forward

State Radio already has plans to increase their number of tower sites from 37 to 46 by the end of the year. And in addition to the eight console positions installed at their main center, they have eight more laptops ready and waiting to be set up at their backup site. MAX Dispatch will not only support them in these efforts, but in any further expansion they might require. The system is well suited to an agency that must be able to plan strategically for the future, even as they respond moment by moment to events on the ground.■