ZETRON® ADVANTAGE

MISSION-CRITICAL COMMUNICATION SYSTEMS

Dispatcher Esther DeOrnellis monitors multiple screens, including the MAX Dispatch intelligent UI (far left).

Zetron's IP-based MAX Dispatch Moves Missouri PSAP Forward

Zetron's MAX Dispatch is providing Ralls County, Missouri, with a system that is reliable, easy to use, locally supported, and at the forefront of public-safety communications technology.

Ralls County, Missouri, is located on the Mississippi River in the region of the county where Mark Twain spent his boyhood and where he subsequently set the stories of Tom Sawyer and Huckleberry Finn. As a result, the area will forever be associated with the author and the era in which the boys' adventures take place. But in other ways, the region is not only keeping up with the times, but moving forward into the future as quickly as technology will take it.

Such is the case with the Ralls County's public safety answering point (PSAP) and dispatch center. The agency's recent installation of Zetron's innovative, IP-based MAX Dispatch system puts them at the very forefront of radio dispatch communications technology.

Ralls County 9-1-1

Situated in northeast Missouri, Ralls County has a population of just over 10,000 in an area of approximately 483 square miles. This gives it a relatively low population density of only about 20 people per square mile.

The Ralls County 9-1-1 center is located in New London, Missouri, the county seat. The center is responsible for answering 9-1-1 calls for the county and administrative lines for all of the county's law enforcement. They also provide dispatching for four fire departments, four law-enforcement agencies, and two ambulances.

Director Laurie Means says the agency was prompted to seek out a new dispatch system because of problems they were having with their existing equipment.

"We'd had our system for about 12 years, and we were having trouble getting replacement parts," she says. "Then, one of the consoles stopped working altogether."

This was not a situation the PSAP could tolerate for long. They called on their service provider A & W Communications to help them determine the best way to resolve the problem.

> "After working her first shift on the new MAX system, one dispatcher texted me the message: 'I love it'."
>
> *Laurie Means, Director, Ralls County 9-1-1*

A & W Communications

With offices in Eolia and Jefferson City, Missouri, A & W Communications has been in business for 27 years.

"We focus on two-way communications sales and service, primarily for public safety, but also for construction and large electrical contractors," says A & W Communications president, Tom White. "We also specialize in tower installation, testing, maintenance and repair."

Repair the old or install the new?

White analyzed the problems Ralls County was having with their dispatch console, then he presented them with a choice. "I told them I could fix it if they wanted me to," he says, "but this would mean investing time and money in an old system they were going to have to replace anyway. Or I could install a new system instead."

Means took this information to the agency's board of directors, and together they weighed their options and decided that the time had come to obtain and install a new system.

Analog or IP?

They next had to decide whether to buy an analog or IP-based system.

"It seems pretty clear that IP-based technology is the way of the future," says Means. "And Missouri is going to a new, state-wide IP-based network. We knew we'd eventually need a console system that would be able to connect with that network when it becomes available. But I was still a little bit nervous about the idea of going to IP-based technology because it's new and I'm not very

MAX Dispatch

MAX Dispatch gives you the solid reliability and performance you expect from Zetron in a breakthrough, IP-based dispatch console system.

- **Intelligent UI:** Highlights information pertinent to the task at hand; reduces information overload.
- **Built-in Network Health Monitor:** Provides constant feedback about network status.
- **Advanced tools:** Streamline installation and minimize field time.
- **Dual connections:** Ensure end-to-end network redundancy.

Zetron's Acom System Evolves to Meet South Australian Utility's Changing Requirements

Peter Gutte works his position at the SA Power Networks NOC.

The Zetron Advanced Communications (Acom) system installed for South Australian utility, SA Power Networks, is exceeding performance expectations and proving that it has the flexibility to support the utility even as its needs change over time.

It would be difficult to overstate the importance of the role communications play in the coordination and control of a utility company's operations. South Australia's electricity distributor, SA Power Networks (formerly ETSA Utilities), is a case in point.

The company's overarching responsibility is to ensure that power is being delivered reliably to homes and businesses throughout the state of South Australia. This undertaking involves a host of complex operations that SA Power Networks manages through its Network Operations Centre (NOC). In 2005, Zetron's Advanced Communications (Acom) system was installed at the NOC to provide the up-to-date, integrated communications their operations require.

The system's initial implementation fully met the utility's requirements and performed beyond expectations. But in addition to that, Acom's flexibility has allowed several important system updates and expansions since it was first installed.

SA Power Networks

As South Australia's electricity distributor, SA Power Networks manages and maintains a regulated network that provides electricity across South Australia to approximately 830,000 customers. Their responsibilities include delivering electricity from a high-voltage network through poles and wires to residential and business customers; installing, maintaining and reading meters; maintaining street lighting; and providing an emergency response when an outage occurs. They also maintain the reliability of the network, connect new customers, and extend and upgrade the network to meet changing demand.

Why a new system?

Errol Zobel, a project manager with SA Power Networks, explains the factors that first prompted them to seek a new communication system.

"Our previous equipment was not an integrated system, but consisted of a combination of PABX extensions and a mobile radio system," he says. "This limited the information displayed concerning the origin of a call and also didn't allow us to prioritize calls to ensure that the most urgent calls would be handled first. We wanted to remedy this with a system that would give us more control and flexibility in these areas. We also wanted to integrate our mobile radios and telephone system into the console so operators could move between them smoothly and communications between the systems would be seamless."

Zobel says that of several solutions submitted through a competitive process, Zetron's Acom system was chosen for the project because it offered the "...functionality, support, and ease of administration ..." they were seeking at a competitive price.

A smooth install

The initial implementation that took place in 2005 at SA Power Networks' headquarters in Adelaide, South Australia, involved nine console positions. It also included E1 interfaces to the utility's existing MD110 PABX and private mobile radio system. The interfaces were adaptations Zetron provided specifically for SA Power Networks.

According to Zetron Australasia project manager John Kitchen, it was a "greenfield installation" — that is, the installation of an entirely new system—that went very smoothly "...with only a minor impact on SA Power Networks' operations and the NOC."

Zobel concurs. "We encountered very few issues during the cutover to the new system," he says. "One unique aspect of the installation was that it was subject to rescheduling right up until the very last moment so we could ensure that voice telecommunications at the NOC would not be interrupted. Zetron was extremely flexible and worked very well with us to meet our requirements."

The project was completed to the satisfaction of everyone involved, and over the next few years, the system delivered the improved functionality for which it had been chosen. Then in 2011, the system underwent its first major update and expansion.

Disaster recovery, enhanced functionality

The 2011 project included both an update of the Acom software and the addition of a disaster recovery (DR) site about nine kilometers (five miles) north of SA Power Networks' headquarters.

"The DR's purpose," says Kitchen, "is to provide continuity of operations if the main NOC must ever be evacuated or its operations are interrupted."

The update resulted in many new and improved capabilities, including:

- Enhanced functionality that routes callers to the correct operators.
- Alternate telephony routing to and from the PSTN through both the primary and disaster recovery site to ensure that if one of the PSTN/ISDN links goes down, the Acom system will still be able to receive calls.
- Acom's Call Stack feature, which improves the visibility of incoming calls and operators' ability to prioritize them.
- The ability to forward incoming calls to a cell phone or other number if the NOC ever has to be evacuated. Call forwarding can be cancelled once the DR is staffed and ready to assume the NOC's operations.
- Full redundancy at the DR site for Acom's common control equipment (CCE).
- An increase in their total number of consoles from 9 to 21.

Latest update

SA Power Networks' Acom system continues to evolve. At this writing, another update is underway and scheduled to be completed in the fall of 2012. It involves installing new Zetron speakers and desk microphones at the main center, and increasing the number of consoles at both the NOC and the DR to a total of 31 positions.

Into the future

According to Errol Zobel, SA Power Networks is very satisfied with their Acom system and the ways in which it supports their operations.

"The Acom has met or exceeded the goals we set for it in the initial project," he says. "Our staff is pleased with its performance. Our operators find it very easy to use and understand —which is extremely important in an environment where the workload can be very demanding. And we appreciate that the system is easy to modify and that Zetron provides such good support. We are happy with the current incarnation of the system and confident in its ability to support us well into the future." ■

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>
> Errol Zobel,
> Project Manager,
> SA Power Networks

Acom
Advanced Communications System

Features:

- Flexible architecture.
- Supports P25 CSSI and DFSI.
- Efficient, intuitive, configurable user interface.
- Access to PSTN and PABX.
- Radio dispatch for up to hundreds of operators.
- Hotlines, intercom, and public address.
- Network (LAN/WAN) interfaces and protocols.
- Voice-over-IP (VoIP).
- Trunked-radio interfaces and protocols.

Zetron Series 4000 Improves Reliability, Stands up to Isaac

Zetron's Series 40000 makes it easier for dispatchers to do their jobs at Walton County's busy PSAP and dispatch center.

Walton County, Florida's new Zetron Series 4000 dispatch system is not only delivering the improved reliability, support and interoperability the customer was hoping for, but it passed the test as Walton County dealt with the effects of Hurricane Isaac.

Public safety communications in Walton County, Florida, have been undergoing important changes in recent years. In 2009, Walton County combined two public safety answering points (PSAPs) into a single center—a strategic move that allowed them to combine and centralize their resources. But because of a convergence of issues, Walton County's public safety administrators knew that their consolidated center wouldn't be complete until it was equipped with a new dispatch system.

This summer, with the help of Zetron reseller, Williams Communications, Walton County went live with their new Zetron Series 4000 dispatch system. According to Lt. Keith Chamblee, commander of Walton County's Emergency Management and Public Safety Communications Division, this has put the finishing touches on their consolidation and given them a system that is reliable, interoperable and easy to use. The system also passed the test when the PSAP had to deal with the effects of Hurricane Isaac.

Walton County, Florida
Walton County is located between Pensacola and Tallahassee in Florida's panhandle—the narrow strip of land at the top of the state that juts out to the west. Southern Walton County sits on the Gulf Coast and is known for its white-sand beaches and turquoise waters. The northern section is more rural, but its population is expanding along with the growth tourism is bringing to the area.

Public safety communications
Walton County's public safety answering point (PSAP) and communications center is part of the sheriff's office. The agency answers the county's 9-1-1 calls as well as administrative calls for the sheriff's office, fire departments and emergency medical services. It also provides dispatching for most of these agencies. In 2011, the busy center processed more than 160,000 calls for service—an average of nearly 440 calls per day.

Why a new console system?
Lt. Chamblee says that their existing system's poor performance and lack of support contributed to the decision to replace it. "Our dispatch console was only about five years old, but it was a constant maintenance nightmare," he says. "In addition to that, the system wasn't expandable enough to handle what we would eventually need. So we knew we had to get a new dispatch system."

Another factor spurring the decision was the FCC's looming narrowbanding deadline. In an effort to free up channel space, the FCC is requiring all users of public safety radio frequencies to move from 25 MHz radio equipment to narrowband 12.5 MHz equipment by January 1, 2013. Walton County hadn't made this transition and wasn't yet equipped to do so.

"To meet this requirement," says Chamblee, "we decided to switch over to the SLERS [State Law-Enforcement Radio System] system. It's a P25 EDACS system that would support our move to narrowbanding and give us much better interoperability. But we needed a dispatch system that would be able to interface to the SLERS."

Williams Communications
Once the decision had been made to obtain a new system, Walton County enlisted the help of their local service provider, Williams Communications, to find the best solution for the task.

Headquartered in Tallahassee, Florida, Williams Communications is run by the same family that started it in 1959. They provide and maintain mission-critical communications systems for customers in public safety, business, industry, education and transportation. Their service area runs from Orlando, Florida, north and up into Georgia and Alabama.

The system of choice
Lt. Chamblee says that Williams Communications presented them with two manufacturers' consoles as possible solutions. From this process, Zetron's Series 4000 emerged as the system of choice.

"The Zetron system was more cost-effective," says Chamblee, "but even more important was its user friendliness. We also liked the Zetron system's ability to connect us to the SLERS and to support both trunked and conventional radios. We need to be able to communicate with our fire departments that are using conventional radios. Interoperability is a top priority for us," he adds, "and the Zetron console supports just about everything."

Staging, testing and cutting over
Zetron's Series 4000 system was purchased for Walton County and shipped to Williams Communications' office in Tallahassee. The 10-position system was assembled and programmed, then underwent factory acceptance testing (FAT) with the customer. During this phase of the implementation, Zetron trainers also delivered onsite technical training to technicians from both Williams Communications and Walton County. The system was then taken to the customer's site for installation.

"We installed the Series 4000 in parallel with the old system," says Williams Communications vice president Bryan Kocher. "Getting fire paging up and running was a bit of a challenge, so we did a lot of equipment testing to make sure it would run smoothly once it was cut over."

Thanks to the great care and conscientiousness with which Williams Communications performed the installation, the final cutover was completed on schedule and without incident.

'They love it'
The system, which has been up and running for several months, is delivering the benefits Walton County was hoping for and even exceeding their expectations.

"The dispatchers love the system's instant recall recorder," says Chamblee. "It gives them immediate access to their recordings. Also, we plan to install new routers soon so that in addition to the SLERS, we'll also be able to connect the FIN [Florida Interoperability Network] IP-based radio system. This will give us additional interoperability with surrounding counties."

Chamblee notes that both Major Joe Preston and Walton County Sheriff, Michael A. Adkinson Jr., provided vital leadership on the project. "They both played an important role in ensuring that this effort succeeded," he says.

Passing Isaac's test
In late August of 2012, Hurricane Isaac rolled into the Gulf of Mexico. Although Florida's panhandle was spared the main brunt of the storm, the area was well within the reach of Isaac's feeder bands. Walton County's new dispatch system was put to the test as the PSAP coordinated their response to Isaac and its aftermath. The system passed with flying colors. "We were prepared and had every console occupied," says Chamblee. "The system worked very reliably throughout the storm. It performed just as we needed it to." ∎

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>
> *Lt. Keith A. Chamblee*
> *Commander, Walton County Emergency Management and Public Safety Communications Division*

Series 4000
Communications Control System

The Series 4000 is designed for medium-sized communications centers. In addition to exceptional reliability, it offers easy programming and economical upgrades.

The Series 4000 includes:

- Support for multiple trunked radio formats/protocols.
- Integrated instant-recall recorder that captures radio traffic on each channel.
- P25 compatibility and interoperability.

Featuring three styles of operating positions and two common controller sizes, the Series 4000 can be scaled to accommodate from 2 to 48 channels and from 1 to 16 operator positions.

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familiar with it. Then I talked to several people who were already running IP systems at their agencies. It was an eye opener. They told me that their IP-based systems were great, easy to update, and much better than analog. IP looked like the way to go. So that's what we did."

Choosing MAX Dispatch

Ralls County sent out a request for proposals. A competitive bidding process ensued, and A & W Communications won the project with a proposal based on Zetron's IP-based MAX Dispatch system.

"We chose the MAX system because it's easy to use, more cost effective than other systems that were proposed, and A & W Communications would support it," says Means. "A & W's support factored very prominently into our decision. They know us and what we need our system to do; we really wanted to continue to work with them."

Staging and implementation

A MAX Dispatch system was ordered for Ralls County and shipped to A & W's main office at Eolia.

"Their system involves two positions of the MAX Dispatch system, 10 channels, paging integrated into the console and auxiliary I/O so doors can be controlled from the console," says White. "We set it up and staged it for a few weeks at our office because the system was new to us. We wanted to take the time we needed to make sure everything was done right. We then took the system to the site, and it only took about two days to install. We kept their old system running just in case, but they never had to use it. Once the MAX system was installed, it ran flawlessly."

Getting up to speed

Dispatchers took to the new system quickly.

"Tom trained a few of us on the system, and then we trained others as they came on shift," says Means. "The new screens were laid out like our old ones, which made it all very easy to learn. It only took a couple hours of training, and we were up to speed."

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>
> Laurie Means,
> Director, Ralls County 9-1-1

Mark Twain's boyhood home in Hannibal, Missouri.

'I love the new dispatch console'

Means says that although the initial decision to move to an IP-based dispatch system had felt risky, it is now very apparent that the MAX Dispatch system was the right choice for the PSAP—and its dispatchers.

"After one dispatcher completed her first shift on the new equipment," says Means, "she sent me a text saying 'I love the new console.' Change is really hard, so for our dispatchers to respond so positively says a lot about the MAX system's quality and ease of use. Plus, the audio is great. Even our first responders say they can hear us better."

Means adds that she couldn't be happier with the support they're getting from A & W Communications. "Tom calls me almost every day to ask whether everything with the system is OK," she says. "And the answer is always yes." ■

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