MISSION-CRITICAL COMMUNICATION SYSTEMS



Al Wallace, manager of iXP Corporation's Northeast region, also serves as the SSRECC's temporary director.

The new South Shore Regional Emergency Call Center in Hingham, MA, recently went live with Zetron's radio dispatch console and VoIP call-taking system. The successful center is now serving as a model for other communities considering consolidation.

There's no question that communities within a region can reap substantial benefits from combining their individual public-safety answering points (PSAPs) into a single, consolidated, regional center. Consolidation allows the participating communities to combine and share resources and to centralize their operations. This usually improves interoperability and information sharing among agencies that use the center. It can also result in significant cost savings over time.

It was with these considerations in mind that four towns in Massachusetts—Hingham, Hull, Norwell and Cohasset recently decided to combine efforts and create a new regional communications center in Hingham. With the help of a team that included a newly created regional board; Zetron reseller, ALL-COMM Technologies; and public-safety consultant and solutions provider, iXP Corporation; a new consolidated center was planned, built and equipped. The new South Shore Regional Emergency Call Center (SSRECC) opened to great fanfare in October of 2011.

Thus far, the SSRECC has already improved the area's emergency and law-enforcement response times and services. It is has also become a model for other communities that are considering consolidation.

Foresight and funding

Al Wallace, manager of iXP Corporation's Northeast region, played a kev role in the planning and implementation of the SSRECC and also serves as its temporary director. He says that foresight on the part of the Massachusetts legislature helped get the consolidation project rolling.

"The key for us was being able to match the quality and reliability of the Zetron product with ALL-COMM's excellent service and support."

Al Wallace Manager, Northeast Region, iXP Corporation

"A few years ago, those at the state level recognized the benefits that could come from consolidating Massachusetts' numerous. small PSAPs into larger, regional ones," he says. "So they passed legislation that allowed revenues to be collected and dedicated to that purpose. The SSRECC is the first center to be created and awarded funds under this program."

Choosing the equipment and vendor

Once funding for the SSRECC had been secured, planning got underway. Wallace helped establish requirements such as the number of channels, phone lines, and dispatch positions it would need. He also helped select the center's new communications equipment and the vendor who would implement and support it.

"We reviewed a number of vendors on the state's contract list." Wallace says. "From that, we created a short list of finalists and evaluated their training, response times, and reputation for service and support. Support was a key consideration because, even if you have the best system in the world, if you don't have good support when you need it, you're not going to be happy."

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Dispatcher Michael Gironda demonstrates the Woodbury Police Department's new MAX Dispatch console.

"MAX Dispatch...
[is] everything we were looking for in a console—it's IP-based, flexible, redundant and customizable."

Rob Sivco, Project Manager, New York Communications Company (NYCOMCO) The MAX Dispatch system that was recently installed for the Woodbury, New York, police department is greatly improving the ease and speed which with the agency's dispatchers perform their tasks and send first responders to the scene.

One might assume that a large urban center would be the most likely place to find state-of-the-art public-safety communications equipment. But this is not necessarily so. And the town of Woodbury, in the southeastern corner of New York State, is a case in point. Woodbury's public safety answering point (PSAP) and dispatch center just went live with Zetron's new and much-touted IP-based MAX Dispatch console. The system has been hailed by industry experts as one of the most significant advances in dispatch technology in the last ten years. And thus far, Woodbury's system is living up to these positive reviews. It has already improved the speed, ease and efficiency with which dispatchers are able to execute their tasks. As a result, first responders can be dispatched to the scene of an emergency more quickly. In the world of public safety, this is a key gain that helps save lives.

Woodbury, NY

The Town of Woodbury, in Orange County, New York, has a population of about 11,000 and a total area of the roughly 37 square miles. Its most famous attraction is the Woodbury Common Premium Outlets mall. One of the largest and most popular outlet malls in the world, it draws from 10 to 12 million tourists each year.

The Woodbury PD communication center

The communication center at the Woodbury Police Department serves as a secondary PSAP and dispatch center for the Town of Woodbury and for the Village of Harriman, a small community located within the towns of Woodbury and Monroe.

A new lease on dispatching

Woodbury's approach to their public-safety communications equipment is different from many communities in that Woodbury leases their equipment rather than buying it. Zetron reseller and two-way radio shop, New York Communications Company (NYCOMCO) is Woodbury's partner in this arrangement.

"Woodbury pays a monthly fee that covers equipment upgrades and service calls," explains NYCOMCO project manager, Rob Sivco. "Everything related to their communications equipment is covered 24/7, 365 days a year."

When asked what prompted the upgrade to the new system, Sivco says that Woodbury's lease on their previous equipment was expiring, and NYCOMCO often upgrades their customers' equipment when it's time to renew a lease. He then explains why MAX Dispatch was chosen for Woodbury.

"As soon as we saw what MAX Dispatch could do, we knew it was the product we'd be upgrading many of our customers to," he says. "It's everything we're looking for in a console— it's IP-based, flexible, redundant and customizable. Another determining factor was that we like Zetron and the way the company stands behind its products."

A straightforward install

The MAX Dispatch system for Woodbury included two console positions, eight IP gateways, and 12 channels that will soon be expanded to 14.

"We set up one console to give Woodbury's dispatchers an opportunity to get familiar with it," says Sivco. "Then we let it run for the night and made sure everything was stable. Once it was clear that we could move ahead, we cut over to the new system, and the dispatchers used the first console while we installed the second console and got it up and running. When the second console went online, the transition was complete."

Making dispatching easier

Mike Gironda, one of Woodbury's more experienced dispatchers, says that MAX Dispatch offers many new features and functionality that make his life easier. This includes the ability to talk over multiple channels simultaneously.

"If I need to send the same message to five different departments or agencies, I can communicate with them all at the same time," says Gironda. "This is much faster than having to send a message to each of those departments or agencies individually as I did before. I can also stack tones and send them to multiple agencies simultaneously instead of sending each tone separately."

"The door switches are also much easier to manage," Gironda continues. "The dispatchers control the police department garage doors, cell doors, and doors to all of the rooms. Where before we had to do this from a single, centralized switch, we can now handle it from our consoles. You have no idea how nice it is not to have to interrupt what you're doing to get up and go across the room to open a door, but to be able to do that from the console instead."

Another feature Gironda finds helpful is the new system's ability to tape and play back each channel independently. "With our previous system" he says, "if I was talking on the primary channel and somebody was talking on the secondary channel, I wouldn't be able to hear what was being said on the secondary channel. And because the system would record only the channel I was talking on, I wouldn't be able to play the second one back later. With the MAX console, I can listen to whatever channel is talking at any time. If I'm dispatching an officer somewhere, and the fire department or ambulance comes up on another channel, I might not be able to attend to them immediately, but I can go to that channel later and play back the tape and hear what was said."

Success repeats itself

Both the reseller and customer are happy with the way MAX Dispatch is improving communications at Woodbury.

Rob Sivco has glowing praise for the system and the Zetron technical support team who assisted him during the installation. "I can't say enough good things about the system and Zetron's tech support," he says. "The MAX Dispatch tech-support specialist in particular was very helpful throughout the whole project."

As a result of this success and the many advanced features MAX Dispatch offers, NYCOMCO is already preparing to upgrade many of their other public-safety customers to 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.
- IT EZ: Automatically configures
 IP parameters; reduces labor costs; minimizes system conflicts.
- Dual connections: Ensure end-to-end network redundancy.



Ashley Fairbarn works her position at the South Simcoe Police Service.

The South Simcoe Police Service's integrated Zetron/NEXEDGE solution has improved the coverage and quality of the agency's communications.

The South Simcoe Police Service has been using Zetron communications equipment for over 20 years. The agency's loyalty to Zetron products speaks volumes about both the quality of the equipment and the Zetron reseller, Telequip Systems, who installed it. Telequip has not only continued to maintain South Simcoe's communications equipment, but has also managed its evolution over time. And the changes over the years have been considerable.

Most recently, with the help of Telequip Systems, and Kenwood Canada, South Simcoe adopted Kenwood's NEXEDGE® digital trunking system as their radio communications infrastructure and integrated it with their Zetron dispatch system. The result is a comprehensive solution that has improved the quality and security of South Simcoe's radio communications.

South Simcoe Police Service

The South Simcoe Police Service serves Innisfil and Bradford West Gwillimbury—two towns in Simcoe County, Ontario, Canada. The police service provides policing, 9-1-1 call-taking, and dispatch services for both communities.

A single-vendor solution

South Simcoe's first Zetron system was a button-based Series 4000 dispatch console that Telequip installed in the early 1990s. It performed so well that when South Simcoe decided to move to a new facility some years later, they asked Telequip to install an updated version of the equipment, as well as the agency's first dedicated E9-1-1 system—Zetron's Series 3200 E9-1-1 Telephone System. This gave South Simcoe an up-to-date, single-vendor solution that was easier for them to use and maintain.

Radio network issues

Although South Simcoe's Zetron systems were performing well, the agency was having issues with its simulcast radio network. The radio problems, which were unrelated to their Zetron equipment, included spotty coverage, poor security and uneven audio quality. "We needed better coverage in areas where the topography interferes with radio and cell-phone coverage," says South Simcoe's acting police chief, Alan Cheesman. "We also needed our communications to be more secure. Our old system allowed the public to listen in on our radio transmissions, and people who didn't belong there would sometimes show up at the scene of an emergency. This could make it difficult for first responders to manage events."

According to Telequip Systems general manager, Kelly Best, many of South Simcoe's audio problems were typical of the two-site, analog simulcast system they were using. "These systems are designed to give the best audio quality at the exact mid-point between two tower sites," he explains. "Unless you're standing at that mid-point, the two channels will beat together and create a third, harmonic tone known as a beat tone that interferes with the audio and makes it sound as though the conversation isn't quite synced up."

Enter NEXEDGE

South Simcoe tolerated their radio issues for some time because the only available solutions were complicated and costly. Then Kenwood released its NEXEDGE trunking system—a digital, encrypted, multi-site radio network solution.

When Kenwood gave a NEXEDGE presentation to South Simcoe, it was immediately clear that the system's updated technology would help solve many of the agency's communications issues. What's more, the system was available at a price even a small, municipal police department could afford. South Simcoe worked with Kenwood Canada and Telequip to obtain and install the NEXEDGE system.

A smooth transition

Kenwood Canada and Telequip both participated in the design of the NEXEDGE solution for South Simcoe. When the system was ready to be implemented, the Telequip technicians kept the previous equipment in place and built the NEXEDGE system around it. Best says the transition was a smooth one. "Because their new NEXEDGE radios are backwards compatible," he says, "we were able to program them for both the old and new systems. When the system was ready, we told the officers to just turn their radio channel to the new system, and they were using it."

Best says that Zetron's Intelligent Radio Interface Modules (iRIMs) were critical to the installation. "The iRIMs allowed this project to happen," he says. "They integrated the console seamlessly to the NEXEDGE system. And they work very well."

Benefits of NEXEDGE

South Simcoe's new network solution has brought a host of benefits to the agency. This includes the solution's unique use of in-car repeaters to boost radio coverage. Because no such repeater is yet available for NEXEDGE, Telequip redesigned and customized an existing repeater for this purpose. It proved to be very effective. "Each patrol car is now equipped with a repeater," says Kim Taylor, South Simcoe Police Service's manager of information services and resources. "Each officer has the ability to turn on the repeater to enhance his or her portable radio coverage area."

Another improvement is the audio quality of the agency's radio communications. The new system not only allows them to conduct multiple, simultaneous radio conversations, but also eliminates the beat tone that was a problem with their previous system.

Acting chief Cheesman says that the NEXEDGE system's support for encryption has resulted in the improved security they were hoping for. "No one is following us to an emergency who isn't essential to managing the event," he says. "This makes it easier to manage a scene and helps minimize the danger to bystanders when a situation is volatile or hazardous."

Enhanced safety with AVL GPS

One important feature currently being implemented for South Simcoe is an automatic vehicle-location feature known as AVL GPS. It will allow an officer's location data to be sent through the radio. The officer's location will then appear on a map in the police service communications area. "When an officer goes out of radio communication," says Taylor, "we'll be able to track their location. And if we get a non-response, we'll be able to send someone to help the officer or assess the situation."

Results

Best, Cheesman and Taylor all agree that the integrated Zetron/NEXEDGE solution is a boon to the South Simcoe Police Service. Its encryption, higher-quality audio, expanded coverage, in-car repeaters, and AVL GPS are all great improvements over what they had before. But more importantly, these improvements have increased the safety of South Simcoe's first responders and community. This is perhaps the most significant benefit of all.

"When an officer goes out of radio communication, we'll still be able to track their location.
And if we get a non-response, we'll be able to send someone to help the officer or assess the situation."

Kim Taylor, Manager of Information Services and Resources, South Simcoe Police Department

Zetron, ALL-COMM Equip New Consolidated Comm Center

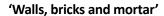
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"As far as the communications equipment is concerned," he continues, "we wanted updated, reliable functionality and the ability to integrate multiple resources into a single console. Based on all of these criteria, Zetron reseller ALL-COMM Technologies was awarded the project with a proposal based on Zetron radio dispatch and telephony equipment. We felt that their solution offered the best combination of reliable equipment and solid, reputable support."

ALL-COMM's solution for the SSRECC included:

- Zetron's Series 4000 Communication Control dispatch system
- Eight positions of Zetron's Integrator RD dispatch console
- Zetron's Series 3300 VoIP Call-Taking System
- Eleven Zetron Intelligent Radio Interface Modules (iRIMs) to connect the console to 22 Kenwood radios

"The Zetron dispatch system provides interoperability between the four towns' different radio equipment," explains Paul Boudreau, president of ALL-COMM Technologies. "The system's flexibility also allows for expansion over time as more communities come into the SSRECC. The Series 3300 phone system is used for the non-emergency 9-1-1 calls that an emergency often triggers. This is important because for every 9-1-1 call you take, you might have to summon any number of additional secondary services to the scene."



The second floor of the Hingham Town Hall School Department building was chosen to be the SSRECC's new home. Before the equipment could be installed, the area had to be entirely renovated in a process Wallace calls a "gut rehab."

"This phase was all about walls, bricks and mortar," he says. "Then we installed a generator and battery backup and entirely new dispatch console furniture."

It wasn't until all of the construction, renovation and remodeling had been competed that ALL-COMM could step in and coordinate the equipment installation, testing and finalization. According to Wallace, this went "...very smoothly."

Boudreau concurs and explains some of the benefits they encountered as they set up the new radio equipment: "We were able to program radios with multiple frequencies," he says. "This gives the radios multi-channel control. This is a very efficient way of doing things and is much less expensive than having to dedicate an individual radio to each channel resource.'

Training and transition

The next stage involved training and then transitioning each of the four towns into the center, one at a time, at a rate of about one town every six to eight weeks.

Hingham was the first to move, so they were the first to be trained. ALL-COMM provided the technical training. It was particularly effective because, with ALL-COMM's knowledge of the equipment, the site, and the region, they were able to tailor the training to the project's unique requirements.



Multiple screens at an operator position in the SSRECC.

Training for the dispatchers was provided by iXP Corporation. This included training on the new equipment as well as introducing dispatchers to the new procedures and resources that would apply to the SSRECC.

Once Hingham's training was completed, their dispatchers moved into the facility, and it went live. About six weeks later, dispatchers for the town of Hull moved in. The processes of moving Norwell and Cohasset into the SSRECC are expected to be completed by the end of March.

A model center

The SSRECC is already delivering the benefits that Boudreau and Wallace were hoping for. "With the Zetron equipment, we were able to put multiple communities' radio resources on each screen," says Boudreau. "This is important because if a SSRECC dispatcher assigned to one community gets too busy, another dispatcher can pitch in to cover it. The flexibility of the channel allocations and resources is tremendous."

"The key for us was being able to match the quality and reliability of the Zetron product with ALL-COMM's excellent service and support," says Wallace. "Based on what we're getting at the SSRECC and what we've gotten at previous deployments, we'd definitely use Zetron again."

Additional proof of the project's success is the fact that two more towns are considering moving to the SSRECC in the near future.



UPCOMING TRADE SHOWS

Texas APCO/NENA

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President, ALL-COMM Technologies

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Paul Boudreau

dispatcher can pitch

dispatcher

April 1 - 4, 2012 | Dallas, TX

New Jersey NENA

April 11 - 12, 2012 | Atlantic City, NJ

Louisiana APCO/NENA

April 16 - 18, 2012 | Marksville, LA

APCO World Congress

May 1 - 3, 2012 | Dubai, UAE

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MAX Dispatch June 6 - 8, 2012

Series 4000

May 15-17, 2012

Series 3200 June 18 - 20, 2012

Series 3300 June 21 - 22, 2012

Please contact Zetron before scheduling factory training as dates are subject to change.

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