ZETRON®

ADVANTAGE

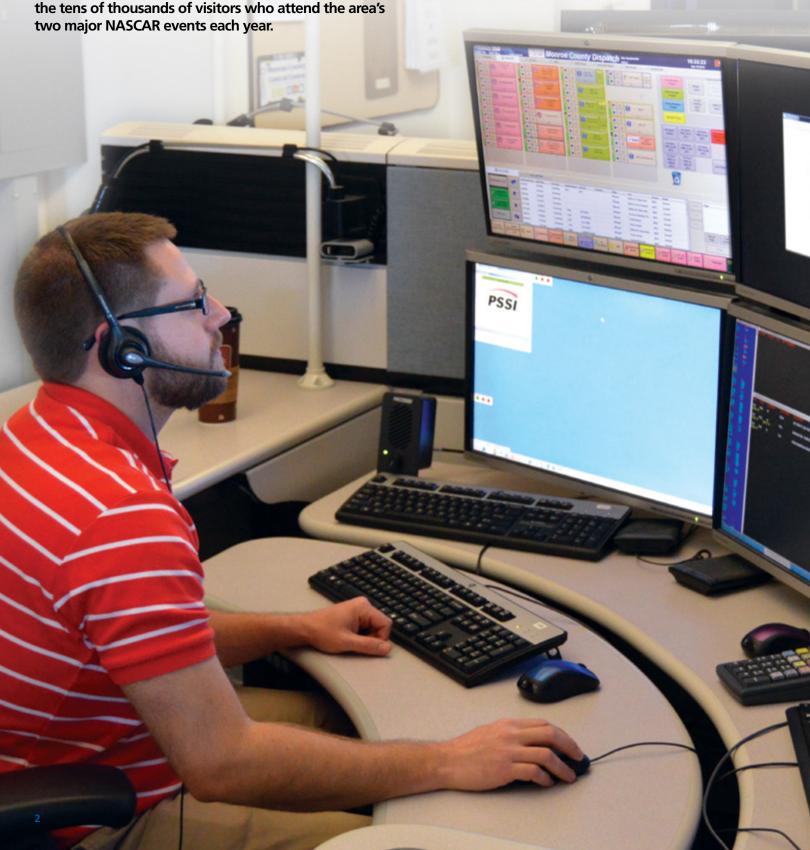# 35-Position MAX Call-Taking Cuts Response Times

Doubling Redundancy
Monroe County, PA

Controlling a Vast Rail Network
Brookfield Rail

PSAP's Two-Site Zetron Solution Doubles Redundancy

The 28-position AcomEVO solution Monroe County 9-1-1 recently installed provides the flexibility the PSAP needs to serve the county's resident population as well the tens of thousands of visitors who attend the area's two major NASCAR events each year.

It has been said that trust is hard to earn and easy to lose. Nowhere is this truer than in the world of public safety. A communication system that falters in its ability to answer a call or send first responders to the scene not only erodes trust but can cost lives. On the other hand, a solution that performs reliably and supports the efficiency mission-critical situations require can inspire trust and loyalty that span years—even decades.

So it's no small thing that the 9-1-1 center at Monroe County, Pennsylvania, just installed two Zetron AcomEVO dispatch systems—one in their main center and one in their overflow/backup facility. Monroe County had implemented an earlier version of Acom in 2007. (See Zetron's *Advantage*, March 2008.) Agency director Gary Hoffman says that, ever since then, not only has Acom run reliably and well, but the support provided by both Zetron and TuWay Communications, the vendor who installed and maintained the original system, has been above reproach.

That's why, when the time came for Monroe 9-1-1 to obtain new communications equipment, Zetron's AcomEVO was such a strong candidate. An updated version of Acom, AcomEVO is based on cutting-edge technology that offers levels of flexibility no other vendor could provide.

Since its installation, the system has more than proven itself. And its ability to support the PSAP's expanded operations during two major NASCAR events each year has been a siginificant boon to the agency.

Monroe County

Located in the Pocono Mountains, Monroe County's population is roughly 170,000. But this number more than doubles twice each year when the area's Pocono Raceway hosts two weekend-long NASCAR events. The lush beauty of the region also makes it a popular summer destination for tourists, especially New Yorkers looking to flee the city. One impact this has on Monroe County is that its 9-1-1 center must be equipped and ready to respond effectively to calls from its considerable and fluctuating population of visitors as well as its permanent residents.

Monroe County 9-1-1

As the county's only public safety answering point (PSAP), Monroe County 9-1-1 provides emergency call-taking services to Monroe County and Lehman Township in Pike County, Pennsylvania. It also provides dispatching for 21 volunteer fire departments, 10 emergency medical services (EMS) agencies, 15 additional governmental agencies, and 5 local police departments—two of which are among the largest regional departments in the state.

The move to Acom

For many years prior to installing their first Acom system, Monroe 9-1-1 had been using another manufacturer's dispatch system. But by 2007, the center's needs had changed and their system had become outdated. Instead of merely updating the system, however, Monroe 9-1-1 decided to install Zetron's Acom system. "Acom offered the capacity, functionality, future expansion capabilities, and advancements we were looking for," says Hoffman. "Other manufacturers' consoles couldn't touch what Acom could provide."

Keeping pace with technology

Acom worked well for Monroe 9-1-1. But in 2014, the agency had another decision to make if they were to keep their operations current. Should they simply perform a technical refresh of their existing processors and PCs, or should they install a new dispatch system based on new technology? They opted for the latter and issued an RFP for new equipment. Zetron reseller TuWay Communications responded and won the project to install Zetron's AcomEVO system and 18 console positions at the Monroe 9-1-1's main center, and a second AcomEVO system and 10 console positions at their overflow/backup center.

TuWay Communications

Headquartered in Allentown, Pennsylvania, TuWay Communications specializes in systems design, optimization, and maintenance for public safety, education, health care, and business.

"We've enjoyed a long and very successful relationship with TuWay," says Hoffman. "And their proposal blew the competition out of the water. AcomEVO would allow us to dynamically group resources on our screens for specific uses. This might not seem like much, but it means everything to us. With a simple drag-and-drop procedure, we'd be able to populate a screen with just the resources required for a specific incident or event. No other system would let us do that."

Another critical benefit of AcomEVO is that it would allow the agency to run both their main and backup centers simultaneously. "The overflow/backup center would be able to either take over for the main center or supplement operations at any time," says TuWay Communications president and CEO, Bill Landis.
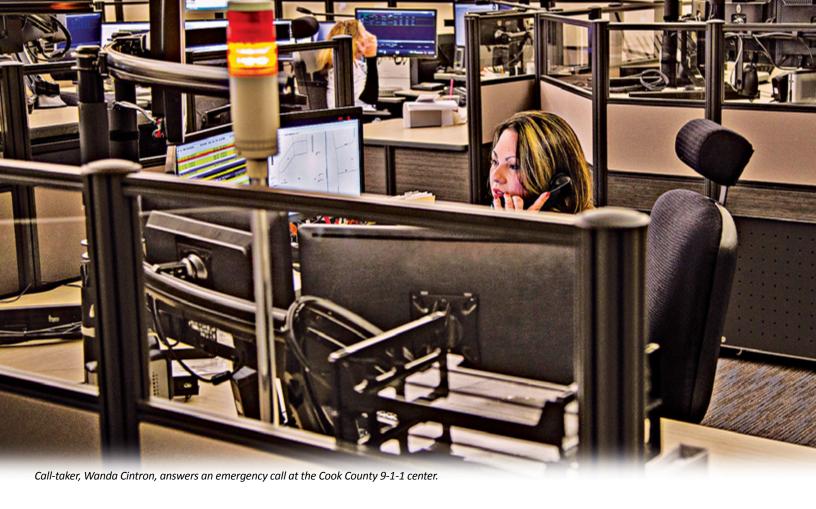
An easy install and transition

It takes extensive planning to dismantle a major communications system, install a new one, and ensure that not a single call is lost in the process. Landis explains how they managed it.

"We did the backup center in its entirety while the old system continued running in the main center," he says. "We installed the system, did all the programming, then brought the dispatchers in and trained them. Although the system offers expanded and advanced functionality, it operates very much like the previous system, so the dispatchers didn't have much of a learning curve. They worked in the backup for about ten days while we completed the installation in the main center. By the time we cut the main center over, the dispatchers had the system down pat."

Keeping up with races

Ever since the project was completed in the spring of 2015, AcomEVO has indeed been providing the advanced, flexible operation and ease of use Monroe 9-1-1 was seeking. "On race weekends, we can populate the overflow center and have a total of 28 positions all running at the same time," says Hoffman. "This greatly improves our ability to stay on top of these events. In addition, the dynamic screen groupings not only improve our ability to have a dispatcher focus on a specific incident, but it's a great training tool. We can put a limited number of resources on a particular screen to direct the focus of the training so the trainee isn't overwhelmed. We love the features and user friendliness of the system; it's a fantastic product."

"AcomEVO has outdistanced the competition with the advancements it's made and continues to make," Landis adds. "Zetron's got the Cadillac of the industry right now."■

Call-taker, Wanda Cintron, answers an emergency call at the Cook County 9-1-1 center.

35-position MAX Call-Taking Streamlines Operations, Cuts Response Times

The Cook County, Illinois, 9-1-1 center's new MAX Call-Taking systems has cut response times and improved operations between the agency's main and backup sites. The system's expandability also allows the agency to serve as a consolidated center if this ever becomes necessary.

Emergency 9-1-1 public safety answering points (PSAPs) must be able to meet a number of bottom- line requirements in order to fulfill their responsibilities to the communities they serve. They must be equipped to answer 9-1-1 calls and send first responders to the scene as quickly as possible. They must be redundant and able to ensure the reliability of their operations at all times. And they must be equipped to keep pace as services expand, technology changes, and budgets tighten.

These are some of the reasons why Cook County, Illinois, recently installed Zetron's MAX Call-Taking system in their newly remodeled PSAP. MAX Call-Taking is IP based, highly redundant, and able to support the agency's main and backup sites as well as remote operations anywhere there's network access. The system's streamlined functionality also cuts precious seconds off the time it takes for operators to answer 9-1-1 calls.

Cook County 9-1-1

With approximately 7,000 sworn employees, the Cook County sheriff's office is the second-largest sheriff's office in the nation. It comprises three departments: courts, corrections, and the police department. The Cook County 9-1-1 Center falls under the jurisdiction of the police department, which has approximately 500 sworn officers and is the third-largest police department in the state of Illinois.

Cook County 9-1-1 is not a typical PSAP. The sheer size of the agency and the population it serves, and the high number of specialized units it supports make the job of a Cook County telecommunicator particularly demanding.

 "Our telecommunicators answer calls from an area that covers over 140 jurisdictions," says Martin Bennett, Executive Director of the Cook County Sheriff's Police Department Emergency Communications/9-1-1 Center. "We handle an average of about 360,000 calls per year. This includes 9-1-1, non-emergency and administrative calls."

Reasons for the upgrade

The recent update and remodel for Cook County was triggered by the need to expand operations and keep up with an increase in their phone and radio traffic.

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"It was time for a change because our existing equipment was 20-years old and no longer meeting our needs," says Bennett. "Another factor was Illinois' new requirement for PSAPs serving communities under 25,000 to consolidate. Because we're a large agency, we're a likely candidate to provide services to smaller communities at some point."

Other benefits Cook County 9-1-1 was seeking from the new equipment included improved operations between their main and backup centers, and the ability to accept text, photos, and video over their 9-1-1 system. Although this Next-Generation-i3 functionality is not yet required, it is on the horizon and something PSAPs have to plan for.

Choosing Mercury Systems and MAX Call-Taking

Through a competitive process, Mercury Systems Corporation was chosen to implement Zetron's MAX Call-Taking system for Cook County. Mercury would also provide project management services for the entire center remodel and upgrade.

Mercury Systems Corporation, which is based in Naperville, Illinois, offers a range of communications systems and products, including 9-1-1 telephone systems, communications consoles, logging and video-surveillance recording systems, backup power solutions, and communication-center furniture. "A customer gives us an empty room, and we turn it into a cutting-edge, turnkey communication center," says Howard Gadorus, V.P. of sales and engineering for Mercury Systems Corporation.

When asked why Cook County selected this particular reseller and equipment, Bennett is very positive about both: "We've worked with Mercury in the past and have enjoyed a very productive relationship with them. I know I can always rely on them. We chose MAX Call-Taking because we like the system's flexibility, expandability, and advanced features. Plus, it is IP-based, and supports i3 functionality."

A 35-position solution

The MAX Call-Taking solution for Cook County would include two controllers and a total of 35 stationery and transportable positions:

- One controller and 20 positions at the main communication center in Des Plaines.

- A second controller and six positions at the backup center in Maywood.

- Five supervisory positions installed in a variety of locations throughout the communications center building.

- Four transportable positions that can be deployed instantly from any location that has access to the network.

"We decided to install a controller at each site because it would provide double redundancy," says Bennett. "It would also allow us to use a low-bandwidth connection between the main and backup centers."

Planning, staging, and implementation

The first step of the project involved comprehensive discussions between the customer and Mercury. The equipment was then ordered, shipped, and staged at Mercury's staging facility. "We always stage, program, and fully test a system before we deliver it to the customer," says Gadorus. "This makes the installation process go very smoothly in the field."

> **❝ With MAX Call-Taking, we're answering 94.41 percent of our 9-1-1 calls within ten seconds.❞**
>
> *Martin Bennett,* Exec. Director, Cook County Sheriff's Office

The implementation started with setting up the backup center at Maywood and installing the main controller at Des Plaines. The dispatchers were then able to sit at the consoles in Maywood and log into and use the main controller at Des Plaines. This kept their operations up and running while the remodel and implementation at the main center were underway.

Once the installation at Des Plaines was finalized, the dispatchers were moved back into the main center, and the cutover was completed. The new center made its official debut September 18, 2015. It has been running flawlessly ever since.

Improved features, capacity, and response times

MAX Call-Taking is delivering a host of important benefits to Cook County.

The agency is now prepared to serve as a consolidated center. And the integration of the agency's many phone lines and PBXs into the console has greatly simplified operators' tasks.

Bennett also appreciates the powerful reporting capabilities MAX Call-Taking puts at his fingertips. "We used to be able to log just our 9-1-1 calls, which represent only one-third of our call volume," he says. "Now we can also track admin, regular, and outgoing calls for a much more accurate picture of what we do, which helps our reporting and staffing."

Zetron engineer John Scott, who oversaw the project, says Cook County's MAX Call-Taking system provides "…multiple levels of redundancy that protect against everything from network to hardware failure." Gadorus concurs: "The system's redundancy is unmatched in the industry. No other product can do what MAX Call-Taking does as well as it does it."

Last but not least is the improvement MAX Call-Taking brings to Cook County 9-1-1's most fundamental activity—answering 9-1-1 calls.

"With MAX Call-Taking, we've nearly tripled our capacity," says Bennett. "What's more, with our old system, we answered 90.2 percent of our 9-1-1 calls within 10 seconds. With MAX Call-Taking, we're answering 94.41 percent of our 9-1-1 calls within ten seconds." ∎

AcomEVO Controls Vast Western Australia Rail Network

Brookfield Rail operates the only rail-freight network in southern Western Australia.

The Zetron AcomEVO systems installed at each of three control centers for Brookfield Rail of Western Australia are providing the updated operations the rail company requires to oversee its vast rail infrastructure effectively and efficiently.

Brookfield Rail is responsible for the safe, efficient, and reliable operation of one of Western Australia's most vital elements of transportation–its 3,418 mile (5,500 kilometer), multi-user, rail-freight network. The rail infrastructure extends across the southern half of Western Australia, spanning an area twice the size of Great Britain. As the only rail-freight network in the southern half of Western Australia, it provides access to the eastern states of Australia and also serves as an important link to six government ports that connect to markets overseas. In 2013 alone, freight carried over the rail system exceeded 71 million tons.

The responsibilities required to ensure the 24/7 operation of such a network are many and varied. They include everything from managing track access, train control, and signaling, to overseeing communication systems, rail construction, and maintenance. That's why Brookfield Rail recently installed Zetron's AcomEVO to update their centralized communications equipment. The solution, which includes three separate but linked systems, has already improved the quality and reliability of Brookfield Rail's communications. What's more, it is based on updated technology that will be able to support their evolving operations well into the future.

Midland, Avon, and Picton

Owned by global asset management company Brookfield Infrastructure Partners L.P., Brookfield Rail is one of the few independent rail-infrastructure providers in the world. It utilizes train control centers in Midland, Avon, and Picton at Bunbury to coordinate and control its diverse operations. These include the daily movement of over 180 trains across the rail network, and making sure the network runs efficiently and is maintained to meet all safety and compliance standards.

Choosing AcomEVO

Zetron Australasia technical operations engineer, Matthew Essex, explains why Brookfield Rail decided the time had come to update their communication equipment.

"The Zetron Acom system they'd been using in two of their three centers had performed very well for many years," he says. "But a newer version of the system, AcomEVO, offered updated technology and functionality that would better support their

activities and plans. They also wanted to install the same type of system at all three sites and expand to include additional train-control desks."

When asked why Zetron's AcomEVO was chosen for the project, Essex says that, for one thing, it would fully meet the project's considerable list of requirements. Brookfield Rail's past positive experiences with Zetron and satisfaction with their previous Acom system also played a key role. "The upgrade to an improved version of an excellent system from a tried-and-proven partner was the most attractive and logical choice," says Essex.

Three centers, three systems

The extensive project for Brookfield Rail involved installing one AcomEVO controller and seven consoles at Midland; one controller and four consoles at Avon; and one controller and four consoles at the Picton site in Bunbury.

This was conducted in two phases, with the Picton and Midland installations taking place in early May of 2015, and the Avon installation taking place a month later. Hardware component upgrades had to be completed before the installations could get underway. But overall, challenges during the project were minimal.

Each system was designed and set up so any console would be able to log into and use any of the three systems. This was done to provide additional layers of redundancy to an already highly redundant solution. In addition, the screens used by the train controllers were configured to have a consistent look and feel across all three centers. So if one center were to go down, the train controllers would be able go to any of the other locations, sit down, log in, and continue operations without missing a beat.

Training at one site only

No training was required at the two locations where Acom had been used previously because operators at those sites were already familiar with Acom, and the screens on the new systems were

designed to resemble those on the earlier version. The operators at Picton were new to the Acom platform, however. They received training at the company's offices in Perth prior to the upgrade, and then onsite once the system had been installed. The screens were designed to be easy to learn and use, so even operators new to the system caught onto it quickly.

Reaping the benefits of AcomEVO

Brookfield Rail's AcomEVO three-site solution is now delivering the features and functionality for which the system was originally chosen—and a few more besides.

For one thing, not only is the equipment fully supported, but the Brookfield Communications Group is trained and equipped to provide first-line maintenance if and when it's needed.

Another important benefit is the ability to log onto any of the systems from consoles at any of the three sites. "This functionality is crucial," says Essex. "It ensures the continuity of Brookfield Rail's operations if a site ever has to be evacuated or a fault condition occurs."

AcomEVO also removes a layer of complexity from their setup. Previously, their equipment's dual-tone multi-frequency (DTMF) signaling had been provided by third-party equipment. But because AcomEVO is able to connect directly to the radio through their telephone infrastructure, they no longer need third-party equipment to make the connection. This direct connection eliminates a possible point of failure.

The updated solution is also designed to support telephone integration into the consoles. "They are planning to implement ISDN phone integration as soon as funding permits," says Essex. "Brookfield Rail is indeed happy with the results of the overall project," he adds. "AcomEVO has met and even exceeded their expectations." ■

The Acom Platform

The Acom platform represents the highest tier in IP-based dispatch solutions. It seamlessly integrates voice, data, paging, and video into one easy-to-use system. Acom's redundancy, advanced features, and flexible configuration help ensure the efficiency and integrity of critical operations.

Features:

- **High interoperability:** Supports legacy and emerging radio and telephony equipment and interfaces.

- **Single- or multi-site platform; supports 2,000+ interfaces:** Supports over 2,000 radio and telephony interfaces and more than 200 IP-based dispatch positions.

- **Bandwidth efficiency:** Improves bandwidth efficiency by providing a combined audio stream to the console rather than separate streams for each radio/telephony connection.

- **High configurability:** Can be configured to meet your organization's unique operational requirements.

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Border Security EXPO	April 13-14, 2016 | Phoenix, AZ
PA APCO	April 17-20, 2016 | Lancaster, PA
LA APCO/NENA	April 18-20, 2016 | Lake Charles, LA

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