

## MAX Dispatch Scores a Touchdown at Appalachian State University!

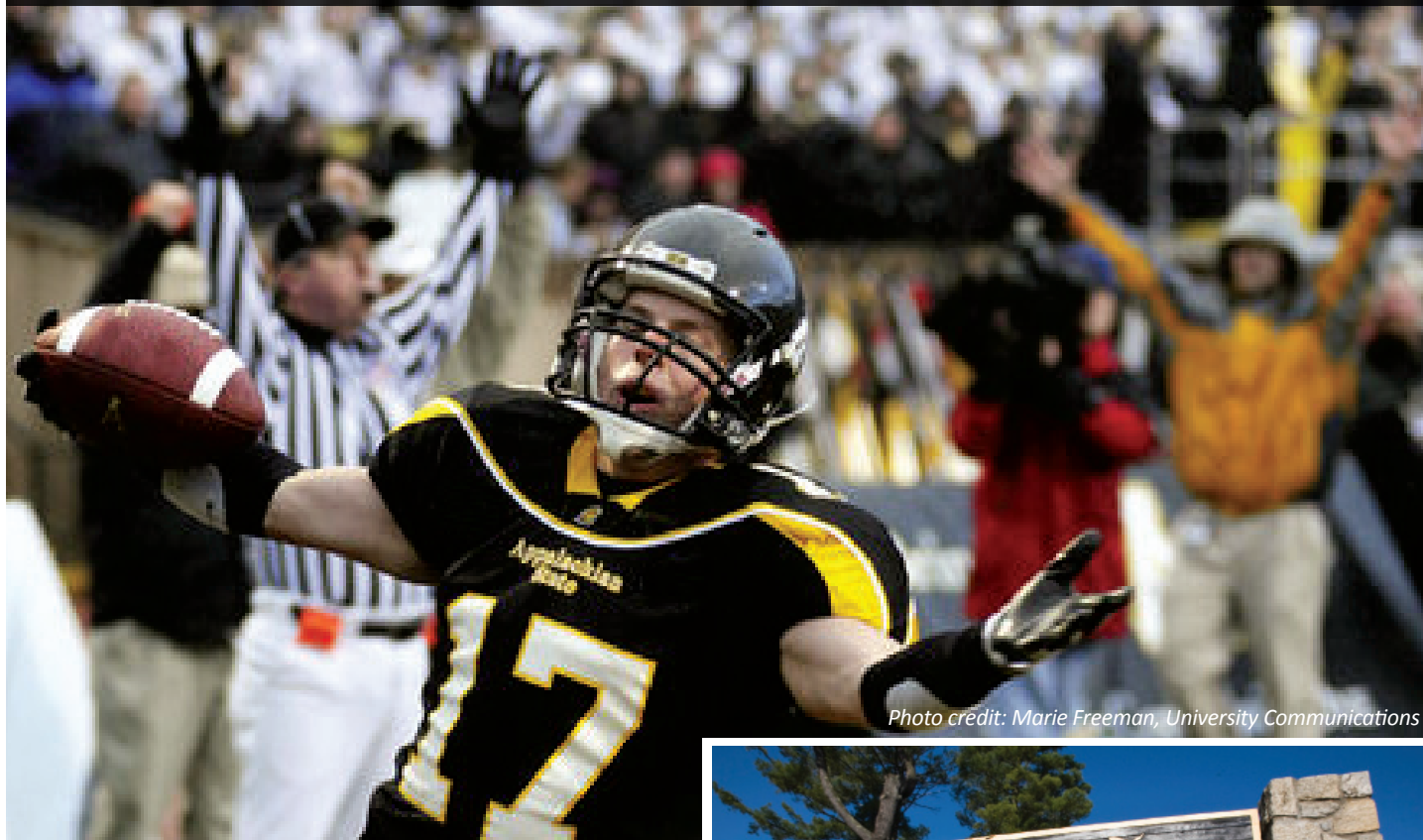


Photo credit: Marie Freeman, University Communications

The Appalachian State University Mountaineer football team won the 2005, 2006 and 2007 NCAA Div I FCS national championships.

The police department on the campus of Appalachian State University recently upgraded to Zetron's MAX Dispatch system. MAX Dispatch was chosen for its cost-effectiveness and end-to-end IP functionality as well as its support for remote and backup dispatching.

There are good reasons why many universities have their own campus police departments. For one thing, even institutions of higher learning are not immune from the public-safety and law-enforcement issues that arise in any community. Campus populations also include a high percentage of students in their late teens and early twenties who tend to engage in exuberant activities that are typical of their age group—especially on Friday and Saturday nights. Universities also host events that draw sizeable crowds—fans packing a college football stadium on a Saturday afternoon can number in the tens of thousands.

For all of these reasons and more, the police department on the campus of Appalachian State University in Boone, North Carolina, has an important role to play when it comes to protecting the safety and security of its students, staff, and visitors. That's why the agency recently decided to replace their outdated, decades-old dispatch system with a new one. With the help of their long-time radio equipment provider, High Country Communications, they installed Zetron's MAX Dispatch system. The new system not only offers expanded functionality and end-to-end IP, but will allow them to dispatch from remote and backup sites whenever they're ready to make use of that capability.

### A top-ranked university

Located in the Blue Ridge Mountains of North Carolina, Appalachian State University is a public, co-ed institution that is consistently ranked among the top colleges in the nation by publications such as *Time* magazine, *U.S. News & World Report*, *Kiplinger Personal Finance* magazine, and *Forbes*. The university is also known for the success of its football team; they won three consecutive NCAA Division I national championships from 2005 to 2007.

### Police operations and communications

The Appalachian campus police department's jurisdiction comprises the main campus and its 21 residence halls as well as university facilities throughout Watauga County, where the main campus is located.



Photo credit: Marie Freeman, University Communications

Sandra Evans, the support services manager for the campus police department, explains some of the reasons why they decided to install a new dispatch system. "Our existing system was aging and we were no longer able to obtain replacement parts," she says. "Our audio transmissions were also sometimes unclear and garbled, so it was hard for our dispatchers and officers to hear each other."

To remedy these problems, the agency issued a request for proposals for a new dispatch system. Zetron reseller, High Country Communications, won the project with a proposal based on Zetron's MAX Dispatch system. High Country Communications designs, integrates and maintains two-way radio, E9-1-1, and single-site and wide-area communications systems for customers throughout North Carolina and Tennessee. Their proposal included two workstations; four IP radio gateways; and for redundancy, two controllers.

### Built for IP

High Country Communications president, Chris Bertolini, says MAX Dispatch was a good choice for the Appalachian campus police department. "MAX Dispatch will be well supported, easy to use and provide more reliable transmissions," he says. "It is also designed and built for IP functionality. In many so-called IP consoles on the market, IP integration is an add-on to a product that wasn't originally engineered to be IP-based. Those consoles can connect to a network, but they're built on old technology. Zetron's MAX Dispatch, on the other hand, is designed from the ground up to be pure end-to-end IP. So while other consoles offer IP network connectivity as an afterthought, MAX Dispatch provides true, state-of-the-art IP design and functionality."

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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.



# MAX Dispatch Chosen by Those Who Save Lives

Dispatcher Craig Frost tracks activity and information on multiple screens at his workstation.

**Rural/Metro Medical Services recently chose MAX Dispatch to replace their poorly supported and aging dispatch system. The new system provides the IP-based functionality Rural/Metro requires to expand and improve its services. It is also supported by local provider, Saia Communications.**

When someone calls for an ambulance, there's little time for mistakes or miscommunications. Whether the triggering incident is a heart attack, a car accident, or a baby who's decided to enter the world ahead of schedule, the situation must be responded to without delay. That's why the dispatch system used to send an ambulance to the scene of such an event is considered a "mission-critical" piece of equipment. Someone's life might depend on it, and often does.

It's a testament to Zetron's reputation for reliable, effective equipment that Rural/Metro Medical Services (Rural/Metro), an ambulance company in western New York State, recently installed Zetron's MAX Dispatch system in their communication center. Zetron reseller, Saia Communications, was chosen to implement and support the new system.

## Rural/Metro Medical Services

Rural/Metro Medical Services provides ambulance services for 22 hospitals, over 100 nursing homes and health care facilities, and more than one million residents of western New York. Headquartered in Buffalo, they also have offices and ambulance bases in Cheektowaga, Hamburg, Niagara Falls, and West Seneca.

Rural/Metro also provides "pre-arrival" instructions to those calling for an ambulance to help them deal with the emergency until an ambulance arrives. This can include everything from instructing the caller on how to perform CPR to helping them deliver a baby.

## A study in contrasts

Until recently, Steven Pollard was the communications manager at Rural/Metro. Although he now serves in a different capacity at the company, he is very knowledgeable about why Rural/Metro needed a new dispatch system. "We were having an increasing number of issues with our existing dispatch console and the support its manufacturer was providing," he says. "The vendor was out of state, and they provided their support over the phone or dial-in. If we had a hardware issue, we'd have to pack up the equipment and send it to them to be serviced. This was a nightmare."

The situation only worsened as the system got older and service calls became more frequent.

This experience contrasted sharply with the solid performance of the Zetron system they'd had some years previously and the effective support for all of their other radio equipment they were getting from their local radio maintenance provider, Saia Communications. Saia had also supported their previous Zetron system.

"The Zetron system we had in the past was extremely reliable," says Pollard. "If we ever had an issue—which was rarely—we'd call Saia, and one of their technicians would be here within 20 minutes, day or night."

## A good investment

Given all this, it's not surprising that when the time came to obtain a new dispatch system, Rural/Metro decided that Zetron's IP-based MAX Dispatch system, installed and supported by Saia Communications, was their preferred choice.

Pollard says that, among other things, MAX Dispatch offered the cutting-edge functionality Rural/Metro needs. "We're always looking for new approaches that will improve our services and put us ahead of the competition," he says. "In this case, we also wanted a system that would be a good investment for the future, not one based on technology that's already outdated. The MAX system offered the up-to-date technology we need to expand features, add positions, and dispatch remotely."

The MAX Dispatch system ultimately chosen for Rural/Metro included seven positions: four for dispatchers, two for call takers who provide backup dispatching when needed, and one for the shift supervisor.

## Customer input

The system arrived at Saia Communications, and they went about staging it with plenty of input from the customer. "Their dispatchers and supervisors came to our shop to give us feedback on things like volumes, colors and screens, and which channels they wanted where," says Saia Communications project manager, Chris Krzemien. "So by the time we cutover, many of the dispatchers were already quite familiar with it."

## One night's work

Just prior to the final cutover, Saia Communications set up several positions in their office and brought Rural/Metro's dispatchers there to perform their tasks while the system was being put into place and finalized at the customer's site.

"We got the new equipment installed, tested and brought online in one night while the dispatchers were operating from our office," says Saia senior technician, Mark Evans. "When the next shift showed up at Rural/Metro's office the next day, the new equipment was ready to go. It was seamless as far as they were concerned. And it only took one night's work."

## Consolidating information

As part of the implementation, Saia Communications integrated MAX Dispatch into Rural/Metro's wide-area trunking network and brought into the console MDC-1200 IDs that had previously required a separate piece of equipment.

"Our dispatchers used to have to look in one place for the radio channel and another place to see the IDs. This is now combined onto the MAX console. Having this information consolidated in one place reduces clutter and is much better for our dispatchers."

## Sharpening the competitive edge

Bill Szewc, who stepped into Pollard's former position just as the new system was being adopted, is full of praise for MAX Dispatch.

"The MAX system is very powerful, customizable and able to adapt to our needs," he says. "It's sophisticated, but very easy to use. Our dispatchers were as surprised to discover this as I was. Most, if not all, of the training was done 'on the fly,' which proves just how easy it is to use."

"We provide services at many large events throughout the region," Szewc continues. "We're now looking at how the MAX system's IP capabilities will allow us to offer higher levels of service at these events. This helps sharpen our competitive edge. More importantly, it improves our ability to provide help where it's needed." ■

“The MAX system is very powerful, customizable and able to adapt to our needs. It's sophisticated, but easy to use.”

**Bill Szewc**  
Communications Manager,  
Rural/Metro Medical Services

# Zetron Update Adds Capacity, Functionality and P25 to Brazilian Rail System



Photo by William Molina - 2011 flickr.com/photos/wmolina

Brazilian commuter rail line CPTM carries over 2 million passengers per day.

**An update recently applied to the Zetron Series 4000 dispatch system used by the CPTM commuter rail system in the state of Sao Paulo, Brazil, has added new capacity and functionality to the system. It has also enabled CPTM to utilize a new P25 network, and helped them meet the country's new narrowbanding requirements.**

The state of São Paulo, Brazil, is the major industrial and economic powerhouse of the Brazilian economy and the richest state in Brazil. Its capital, also named São Paulo, has a population of over 11 million and ranks as the eighth most-populous city in the world. By comparison, even New York City seems small.

Like most heavily populated urban areas, São Paulo's public transportation system is a critical component of its infrastructure. Not only must it run effectively and efficiently for those who use it each day, but it must be kept current and able to respond to São Paulo's highly dynamic environment.

That's why the Companhia Paulista de Trens Metropolitanos (English: São Paulo Metropolitan Train Company) recently updated and expanded the Zetron Series 4000 system with which they had equipped their newly consolidated communication center in 2007. (See *Zetron Advantage*, January 2007). With the help of São Paulo-based Zetron reseller, SGM Telecom, CPTM installed updates that have improved their dispatching capacity, quality and functionality, and have also enabled them to utilize a new Project 25 (P25) digital network and meet the state's narrowbanding mandate.

## Companhia Paulista de Trens Metropolitanos

Companhia Paulista de Trens Metropolitanos (CPTM) is a commuter rail company that serves the state of São Paulo. Part of the Greater São Paulo rail system, CPTM is one of the busiest rail networks in the world, carrying over two million passengers daily. It works with the São Paulo Metro system to form São Paulo's suburban rail network.

## The Series 4000 in São Paulo

The Zetron Series 4000 Communication Control dispatch system installed for the CPTM in 2007 was the third major communications project SGM Telecom had deployed for São Paulo. In 2000, SGM installed the Series 4000 to control all of São Paulo Metro's subway lines; and in 2002, SGM installed a three-site, 12-channel MPT 1327 trunking system for CPTM that is now being operated by São Paulo Metro Line 5. As a result, all of the suburban train and subway lines in the state of São Paulo utilize Series 4000 systems.

In 2010, it became clear that the CPTM's communication needs had evolved and expanded beyond the capacity of their existing system. Rubens Boucault, a senior engineer for SGM Telecom, explains: "Not only was CPTM's increase in passenger and train traffic putting more demands on the system," he says "but they also needed to make adjustments that would help them address ANATEL's narrowbanding requirement to operate within the 12.5 kHz channel space." ANATEL is Brazil's national telecommunications agency. "To meet these new requirements, the CPTM decided to change their analog VHF platform to a P25 digital network," Boucault continues, "but they wanted to keep their Series 4000 console system because they liked its reliability and toughness."

Through a bidding process, SGM Telecom was chosen to head the project to update CPTM's equipment. "We were selected because of our well-known expertise with this type of integration, and also because the project involved an update of equipment we had originally installed," says Boucault.

## The solution for CPTM

The solution for CPTM involved installing an additional Zetron Model 4048 Common Controller (one had been installed in 2007) and 28 Zetron Integrator RD console positions. The consoles would connect the CPTM to the P25 network SGM would also install.

## Late-night update

The installation for CPTM took place between midnight and 4 a.m., the period of time during which the train service is routinely stopped for the night. "We performed the installation by pairs of train lines," says Boucault. "It involved setting up the Series 4000 consoles to control both the CPTM's analog and digital P25 networks. The consoles had to be set up to handle both analog and digital technologies because CPTM allows cargo trains that have not migrated to digital to use their train tracks, and these cargo trains must be included in the overall communications system." Boucault adds that a Tait internal gateway was used to connect and control the Tait P25 base stations remotely. "The gateway converts P25 signaling to the MDC-1200 signaling the Series 4000 system already supports," he says.

## Easy to learn

To help ease the transition from button-based to PC-based equipment, the center's 120 dispatchers underwent a week of training on the new consoles. Thanks to the Integrator RD's intuitive design, the dispatchers learned the new equipment quickly. In addition, although most of the system configurations had already been defined, input provided by the dispatchers during their training was taken into account as the configurations were finalized.

## Another success in São Paulo

The update has proven to be yet another winning project for SGM Telecom and the Series 4000 in São Paulo.

"The installation and migration to the new equipment went very smoothly," says Boucault. "The updates are providing the CPTM with the improved functionality and expanded capacity they need. And the dispatchers really appreciate the new equipment's improved audio quality and enhanced features like PTT [Push-to-Talk] ID and selective calling. The Series 4000's inherent reliability and flexibility, combined with SGM Telecom's deep knowledge of the system, made this a very successful upgrade and migration." ■



## 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.



Zetron's Series 4000 is used to manage operations at CPTM's sophisticated communications control center.

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Photo credit: Marie Freeman, University Communications

The Carol Grotnes Belk Library and Information Commons at Appalachian State University.

“Other systems don’t become cost effective until you install four or five positions. **MAX Dispatch is cost effective even with just one or two positions.**”

**Chris Bertolini**

President, High Country Communications

“MAX Dispatch also offers a better return on investment more quickly than other systems,” Bertolini continues. “Other systems don’t become cost effective until you install four or five positions. MAX Dispatch is cost effective even with just one or two positions.”

### Prior planning ensures a smooth install

Planning and preparation are important aspects of any dispatch system installation, and the project for Appalachian was no exception.

High Country Communications staged and tested the system at their offices before moving it to its final destination on the university campus. High Country’s technicians also performed the necessary re-wiring at the customer’s site before the final install.

Bertolini says that the thoroughness of these preparations, combined with the excellent training Zetron gave his technicians and the system’s inherent ease of installation all made it an extremely smooth implementation. “The installation took only a day,” he says. “All we had to do was plug things in.”

Evans concurs: “We had no downtime whatsoever,” she says, “and our dispatchers took to it very quickly.” The MAX Dispatch system went live in July of 2012.

### Statewide interoperability

One important feature of the Appalachian campus police department’s MAX Dispatch system is its ability to connect to the North Carolina State Highway Patrol’s statewide Voice Interoperability Plan for Emergency Responders network. “The MAX system is able to interface with the network through the police department’s radios,” says Bertolini. “This enhances the MAX system’s considerable interoperability even further.”

### ‘A good direction for the future’

It’s been nearly a year since the Appalachian campus police department switched over to their new MAX Dispatch system, and Sandra Evans reports that she’s very pleased with its performance and functionality. “Our transmissions are clear and dependable, and our dispatchers really like it, especially the instant recall recorder,” she says. “The system is also very reliable and very well supported, which we appreciate.”

“Looking forward,” she adds, “we’ll be able to dispatch from major events like football games or a backup location if we ever have to evacuate our office. These are important capabilities we aren’t using yet. But we soon will be. It’s a good direction for the future.”



### International EDACS

Apr. 27 - May 2, 2013 | San Antonio, TX

### Minnesota SIC

May 6 - 8, 2013 | St. Cloud, MN

### NYS 911

May 9, 2013 | Oswego, NY

## ZETRON FACTORY TRAINING

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

**MAX Call-Taking**  
May 20-24, 2013

**MAX Dispatch**  
May 7-10, 2013

**Series 4000**  
May 14-16, 2013

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