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THE ZETRON ADVANTAGE

Improving Safety
& Security in
Bengaluru, India

Photo courtesy of Mike Wyner

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Improving Safety & Security in Bengaluru, India



The Bengaluru City Police's new mobile command vehicle has improved their ability to deploy onsite surveillance operations and maintain safety and security during an incident or event.

With a population of over 10 million, Bengaluru (formerly Bangalore) is a true megacity. The third most-populous city in India, not only is Bengaluru large—it is booming: the population has more than doubled in size since 2001.

Such explosive growth can create considerable law-enforcement and security challenges. That's why India-based Mistral Solutions was recently chosen to provide the Bengaluru City Police (BCP) with a new mobile command-and-control vehicle equipped with Zetron's Digital Console System (DCS) 5020.

Implemented in August of 2014, the vehicle is delivering the centralized communication and surveillance capabilities the BCP requires to deploy their operations quickly and manage events effectively on the ground.

Bengaluru, India

Located in southern India in the state of Karnataka, Bengaluru is a bustling, diverse metropolis that is known for its high concentration of high-tech firms. Indeed, it has been dubbed the "Silicon Valley of Asia" because it is the nation's leading exporter of information technology.

Bengaluru City Police

The BCP is responsible for the city's law-enforcement and security activities. This includes maintaining law and order, providing security when needed, participating in community crime-prevention activities, and managing traffic.

The BCP fulfils its mission through a network of "beats" that are staffed by foot-patrol and vehicle-patrol officers day and night. Additional support is provided by special mobile-patrol units; traffic-patrol units; and armed, mobile strike-force units that are stationed in strategic areas throughout the city.

The police modernization plan

To keep pace with Bengaluru's growth and establishment as a major technological hub, the Karnataka state government recently invested in a police modernization plan to update the BCP's security and law-enforcement operations. This included obtaining and equipping a new mobile command vehicle.

The equipment the BCP had used previously for such events was time-consuming and cumbersome to set up. Surveillance cameras and power and data cables had to be installed several days before an event. And communications took place over walkie-talkies that were not centrally coordinated. Not only was it difficult to set up



for planned events, but it did not support the rapid deployment or centralization required to effectively manage quickly developing situations or emergencies.

“The BCP wanted a new command vehicle that would provide improved security and surveillance and a communication infrastructure that they could deploy in a matter of hours,” explains Pawan Vashisht, Mistral Solutions’ General Manager for Homeland Security. “This would improve police presence at public gatherings such as parades, religious functions, political rallies, cricket matches, and mega exhibitions, and would help ensure the safety and security of citizens and VIPs attending these events.”

Mistral and Zetron win the project

In November of 2013, the BCP issued a request for proposals (RFP) for a mobile command-and-control vehicle equipped with state-of-the-art surveillance and communications equipment.

The proposals they received in response to the RFP underwent technical and business evaluations. As a result of this process, Mistral Solutions was awarded the project with their proposal featuring Zetron’s DCS-5020 integrated dispatch system.

Based in India, Mistral is a systems design and engineering company that provides services and solutions for customers in the fields of defense and homeland security.

Vashisht explains some of the reasons why Mistral and Zetron were chosen for the project. “Mistral has a well-established reputation for partnering with global technology leaders to provide solutions that meet clients’ needs very effectively,” he says. “Plus, the Karnataka State Police were already using a Zetron system that they were very happy with, so they provided a great reference for Zetron. Compared to other solutions, the DCS-5020 is a more appropriate size for vehicle deployment and offers better sound quality. And while the other solutions proposed were button based, the DCS-5020 is PC-based and utilizes touchscreens. This makes it much easier to learn and operate. When all of these factors were taken into account, it was clear that the DCS-5020 offered the best features for this application; it also came in at a better price.”

The integrated communications solution chosen to equip the command vehicle included: two Zetron DCS-5020 digital switches; two basic, dual radio-module channels; two telephone exchange modules; and one operator console with push-to-talk (PTT) footswitch, headset, PTT microphone, and one instant recall recorder license.

Surveillance equipment included a mast-mounted, pan-tilt-zoom (PTZ) camera and Wi-Fi antenna; six wireless, battery-powered cameras; two wireless transceivers with body cameras; and two operator stations.

The challenges of a mobile environment

Implementing multiple systems in a mobile environment required some creative problem solving. For instance, because the equipment was being installed in a medium-sized vehicle, the available rack space for the dispatch console and other systems was severely limited. So Mistral set up the equipment to make highly efficient use of the space. The equipment also had to be installed to withstand the rigors of its mobile setting. “Mistral put the IT racks on a ‘ruggedized’ base with shock and vibration mounts,” explains Vashisht. “With the help of Zetron’s Australasia team, Mistral also designed and installed rack-mount trays for the speakers to minimize vibration.”

Hands-on and onsite training

Once the equipment installation was complete, operators were introduced to the DCS-5020 and other systems through a one-day, hands-on training session. Mistral’s team followed this up by accompanying the police on several deployments to make sure operators felt confident using the new equipment.

“Even operators who are not very familiar with English were able to quickly understand the touchscreens, icons, and features on the DCS-5020,” says Vashisht. “Within a short time, they were operating the equipment very successfully in the field.”

Successful deployments

The new mobile command vehicle has been in use for the better part of a year and has been deployed successfully at a number of events. It was part of the post-incident surveillance effort in response to the late-December 2014 bomb blast on Church Street in Bengaluru. It was also used on New Year’s Eve to ensure the safety of the crowd in the Bengaluru Central Business District, and it was deployed again during the 2015 Republic Day Parade in January.

“The DCS-5020 has greatly improved the speed and agility with which the BCP is able to respond to events as they happen,” says Vashisht. “It is also delivering important functionality that allows the BCP to conference and patch across different systems and agencies, which is critical during a large-scale event.”

As is so often the case, the success of one project gives rise to others. Mistral is already planning to provide the DCS-5020 to police control rooms that dispatch help whenever a citizen calls in with an emergency.■



DCS-5020 Digital Console System

The DCS-5020 is designed to meet the demands of the smaller control room. It is particularly suited for use in public safety, transportation, utilities, and private industry.

Features:

- Integrates telephone call handling and radio dispatch.
- Based on a resilient, distributed architecture.
- Supports 16 console positions and 28 line ports.
- Supports and integrates analogue radio, MPT 1327 and TETRA.

Not for sale in North America.



Courthouse Butte is one of the Verde Valley's famous Red Rock formations.

AcomEVO Prepares Arizona PSAP for Regionalization

The Zetron AcomEVO integrated communication system recently installed at the new Public Safety Communications Center in Cottonwood, Arizona, supports the agency's expanding operations.

Until recently, a 10- by 18-foot room served as the Public Safety Communications Center in Cottonwood, Arizona. The size and arrangement of the space weren't ideal. But this didn't prevent the center from doing its job of answering emergency 9-1-1 calls and dispatching for the Cottonwood Police Department.

But by early 2014, change was in the air. Plans were underway to construct and move into a new, larger center by December of 2014. Then the agency was notified that, as of July 2014, three fire agencies and an ambulance would be added to their dispatching duties.

Starting July 1 and for the next six months, center administrators and dispatchers did what was necessary to meet their additional responsibilities. And they did so using outdated equipment in a room where, as Cottonwood Public Safety Communications Center manager, Marie Carpenter, puts it "...there was no personal space whatsoever."

But on December 1, 2014, the agency made its move to a newly constructed, 6,500 square public-safety communication facility equipped with Zetron's Advanced Communication (AcomEVO) System. Since then, they have been operating out of a center

designed to meet their current and emerging needs. Not only do the dispatchers and administrators love the new space and its equipment, but the agency is now prepared to serve as a more regional facility for multiple communities.

Cottonwood, Arizona

Cottonwood is a town of about 12,000 located in the Verde Valley of North-central Arizona, an area of high, semi-arid grasslands and dramatic geologic formations.

The Police Department's Public Safety Communications Center is the local primary public safety answering point (PSAP). As such it provides 9-1-1 call-taking for the town and dispatching services for the Cottonwood Police Department, the Cottonwood Fire Department, the Jerome Fire Department, the Clarkdale Fire District, and the Verde Valley Ambulance.

The impacts of change

Marie Carpenter explains how adding new clients to their responsibilities impacted her PSAP. "In order to service the additional agencies that were added in July, we had to hire new staff even before we moved to the new space," she says. "The change in our responsibilities also required our dispatchers to be trained and certified in Emergency Medical Dispatch because that's the standard of care for handling medical calls. We also opted to be certified in the existing protocols for fire and police as well."

“Even though our expanded responsibilities give our dispatchers more channels to **monitor and manage**, the system allows them to do so **easily and efficiently**.”

Marie Carpenter, Manager, Public Safety Communication Center, Cottonwood, AZ

The impending move to a new facility was yet another major change. Carpenter says this was why, when she went in search of a dispatch system to equip the center, she sought one that would be easy to learn and use. “We wanted something our dispatchers would be able to adopt easily and use without thinking,” she says. “It should be so intuitive and transparent that they can just push a button and get the action they want.”

Choosing AcomEVO

Carpenter initially assumed that their new dispatch system would be an updated version of their existing, non-Zetron dispatch system. But prompted by advice from Tad Coyner, the city engineering consultant who helped with the project, she took a closer look at what the agency actually needed. She also did some research and comparison shopping.

This process took her on a field trip to the 9-1-1 center at Prescott, Arizona, where they were using Zetron’s AcomEVO integrated communication system. “It made sense to me the moment I saw it,” she says. “I talked to Prescott’s dispatchers, and they showed me a few things they do with the system. It was very intuitive, and the dispatchers spoke very highly of it. I immediately realized it was the way we should go.”

AcomEVO offered other advantages as well, including advanced IP functionality and the end-to-end network redundancy that is so vital to public-safety operations.

“Their solution would be fully redundant all the way through,” says Coyner. “That level of redundancy is something other vendor’s were not able provide.”

Carpenter and her team formalized their decision, and Cottonwood purchased seven positions of Zetron’s AcomEVO integrated dispatch system.

“Greater coverage and flexibility”

Even as operations continued at the old center, the new center and a new radio infrastructure were being constructed. Coyner says that the new radio infrastructure would be a vast improvement over their previous one. “They were moving from a standalone repeater system to a multi-site microwave network with multiple receivers and transmitters,” he explains. “This would give them much greater coverage and flexibility. It was also another reason why they needed a new dispatch system; their previous system would not support this new network.”

A successful move

Carpenter and Coyner both say that when the time came to install the AcomEVO system in the new communication center, the process went smoothly. The cutover took place right on schedule, at midnight Dec 1, 2014. “Before the sun came up, we were fully operational and everything was working,” says Carpenter. “It was a very successful move. And things have been running well ever since.”

Reaping the benefits of AcomEVO

After nearly a year of operation, it’s clear that Cottonwood’s new AcomEVO system is delivering a host of improvements.

“It has raised the quality of their dispatching,” says Coyner. “It allows them to steer a transmission to the tower site that gives them the best coverage and gives them access to more channels. It also integrates seamlessly with their existing paging and fire-station alerting systems. Overall, it’s a much more effective solution for a multi-discipline agency.”

AcomEVO’s clean graphical user interface is also delivering the ease of use Carpenter was hoping for. “Even though our expanded responsibilities give our dispatchers more channels to monitor and manage,” she says, “the system allows them to do so easily and efficiently. Plus, it allows us to not only hear what’s going on, but to also see who’s transmitting on which channel, so we can back each other up and change roles on the fly.”

“We’re ready and equipped to handle it”

Over the next few months, Cottonwood will add four more fire districts to their client roster and will start sharing backup with Prescott. “We didn’t expect to be adding more agencies so quickly,” says Carpenter. “But that’s the nature of what we’re dealing with. And we’re ready and equipped to handle it.” ■




AcomEVO

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

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.



MAX Call-Taking Equips McCormick County for NG9-1-1

Strom Thurmond Lake

A recent installation featuring Zetron's MAX Call-Taking is equipping McCormick County 9-1-1 to meet emerging Next-Generation 9-1-1 standards. The equipment also has the ongoing technical support the agency requires.

As director of the McCormick County, South Carolina, Emergency Services Center, Chris Doolittle must have confidence in his communications equipment. That's because his agency is the county's public safety answering point (PSAP)—the first place most people call when they're faced with an emergency. He has to be sure that his center's equipment is reliable. And if for any reason the equipment goes down, he has to know he can get help quickly to fix it.

Recently, the vendor who had provided and maintained Doolittle's communications equipment for many years called to tell him that, because of its age, the equipment could no longer be supported. This was an untenable situation that sent Doolittle on a search for new call-taking and computer-aided dispatch (CAD) solutions. In Zetron and GeoConex, he found partners who could deliver the equipment and services he needs and the future readiness he requires.

McCormick County, SC

Located on the western edge of South Carolina, McCormick County is separated from Georgia by J. Strom Thurmond Lake and Dam, one of the Southeast's largest and most popular public recreational lakes.

Although McCormick is primarily rural and has a resident population of only about 10,000, its hunting and fishing and other recreational activities draw as many as 20,000 to 30,000 visitors each weekend. Thus, the McCormick County Emergency Services Center has to be equipped to provide emergency assistance to anyone living in or visiting the area who dials 9-1-1. The center's services include emergency medical response, emergency management, and fire response. They also manage addressing and mapping for the county.

The call to change

Doolittle says the call that sent him in search of new equipment was a blessing in disguise.

"Initially, this seemed like bad news," he says, "but the truth is that we hadn't been getting the service we needed to get things fixed promptly and adequately. We were never able to get our CAD to work the way it was supposed to. And our 9-1-1 system was based on old technology that wasn't designed to support the emerging call features we have to be ready to provide."

Finding a new solution

Doolittle began researching CAD and 9-1-1 call-taking solutions. This included visiting other PSAPs to look at installations of next-generation-capable equipment. "We were looking specifically at the track records of phone controllers, radio systems, and CAD products," says Doolittle. "We were also looking at ease of use for dispatchers and the quality of service and support that would be provided once the equipment was installed."

Hitting every point

Doolittle invited several vendors to give presentations of their equipment. It was at this stage of the process that Zetron and GeoConex gave a joint presentation of a solution featuring GeoConex's CAD and mapping solution and Zetron's MAX Call-Taking system. Both the equipment and the presenters immediately caught Doolittle's attention.

Headquartered in Knoxville, Tennessee, GeoConex provides comprehensive communications products, customized hardware and software solutions, and systems-integration services to public-safety and Homeland Security agencies throughout the United States.

"From the start, we liked GeoConex and Zetron," says Doolittle. "They hit on every point that mattered to us. I was impressed by how thorough they were, how well they listened to us, and the fact that they seemed to have exactly what we needed."

In accordance with the required process, Doolittle issued a request for proposals (RFP). He received responses from about seven vendors, but the proposal he got from GeoConex and Zetron stood out from the rest and only reinforced his initial positive impressions. "Of all the vendors who responded," he says, "GeoConex and Zetron were the ones we thought would provide the complete solution we need at the best price."

GeoConex and Zetron were selected for the project.

'Deployment magic'

Ned Patterson, GeoConex's account manager for the Southeastern U.S, says that the equipment installation for McCormick County 9-1-1 was completed in only two weeks with a fair amount of what he calls "deployment magic."

“...MAX Call-Taking has already put us in a position to add new technology and NG9-1-1 capabilities.”

Chris Doolittle,

Director, McCormick Co. Emergency Services Center

"A temporary emergency communication center was set up at the PSAP so their operations could continue during the remodel of the room where the new equipment would be installed," he explains. "As the remodel was underway, the new systems were assembled and configured at our office in Knoxville. At the same time, Doolittle

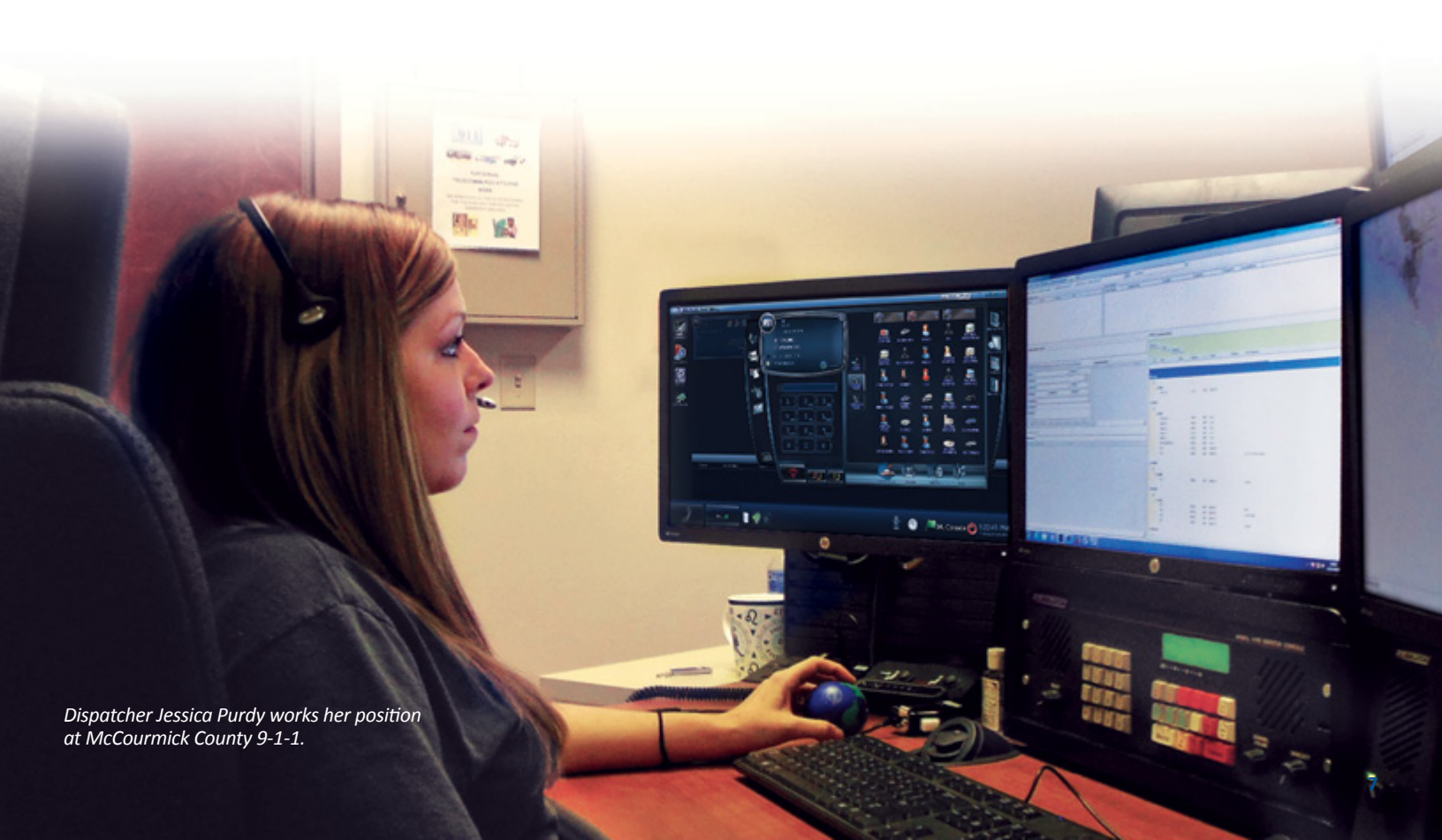
and two of his management team spent about a week at our offices taking administrative training on the system. They were able to provide input even as the systems were being built. This allowed us to pre-populate the CAD and phone systems with the customer's code numbers and dispatcher names and units. By the time Doolittle and his team left, the system was pretty much ready to go. Once the remodel at their facility was done, all we had to do was load the equipment into the back of a van, take it to their site, roll it in, hook everything up, and apply the finishing touches."

When the time came for the cutover, all of the preliminaries had been completed, including the operational and technical training necessary to use and administer the system. Both Patterson and Doolittle say that the transition was seamless.

Trusted partners

The solution has been operating successfully since early 2015, and Doolittle is very pleased with its performance thus far. McCormick County is equipped with updated, IP-based equipment that supports next-generation functionality. And the quality of the support and service Doolittle is getting for the new equipment continues to surprise him—in a good way.

"About a month ago, GeoConex came to install an update for the new phone system," he says. "The technician performed the update, and then he asked how things were going. He showed us a few ways to improve how we're using our new CAD system. It was very helpful. They take time with us, and they're proactive, so we're learning how to use the equipment more effectively. In Zetron and GeoConex, we know we have partners we can trust to make sure our equipment is functioning optimally and being used to its best advantage. Plus, MAX Call-Taking has already put us in a position to add new technology and NG9-1-1 capabilities." ■



Dispatcher Jessica Purdy works her position at McCormick County 9-1-1.



COME SEE US AT THESE UPCOMING TRADE SHOWS:

LSA

July 19 - 22, 2015 | Shreveport, LA

APCO International

August 17 - 18, 2015 | Washington, DC

KY ESC

September 8 - 11, 2015 | Louisville, KY

NC APCO/NENA

September 12 - 17, 2015 | Sunset Beach, NC

PA NENA

September 16 - 18, 2015 | State College, PA

ASIS

September 28 - 30, 2015 | Anaheim, CA

EWA Summit

October 7 - 9, 2015 | Atlanta, GA

For a more complete listing of Zetron-attended events, visit www.zetron.com/news/tradeshows.

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