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THE ZETRON ADVANTAGE

Toronto Airport Takes Off with Zetron's AcomEVO

Photo courtesy of Toronto Pearson International Airport.

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Toronto Pearson International Airport.

Photo courtesy of Toronto Pearson International Airport.

AcomEVO Controls Toronto Airport Operations

Zetron's AcomEVO system using the open-standards P25 CSSI is serving as the master dispatch console at Canada's Toronto Pearson International Airport.

The Greater Toronto Airports Authority (GTAA) requires the most advanced, robust, reliable communications equipment available to fulfill its mission. That's because the GTAA operates Toronto Pearson International—Canada's largest and busiest airport. Located in Mississauga, Ontario, about 15 miles west of Toronto, Toronto Pearson is the hub for some 435,000 flights and nearly 35 million passengers each year.

The GTAA relies on a centralized radio dispatch solution to ensure that the airport's operations and activities occur as they should. The system is critically important because nearly all airport operations revolve around the use of two-way radio by airport staff, public-safety agencies, and supporting organizations.

Over the last few years the GTAA has opened a new Integrated Operations Control Center (IOCC) at the airport, updated their communications equipment to Zetron's Advanced Communications (AcomEVO) dispatch solution, and connected through the Console Subsystem Interface (CSSI) to a new, P25 digital trunked radio infrastructure. The state-of-the-art system not only keeps the airport running with the clockwork-like efficiency such operations require, but it is designed to adapt to the airport's changing needs.

The GTAA and the IOCC

Unlike in the U.S., where most airports are run by municipalities, the Canadian government leases the operation and maintenance of Toronto Pearson International Airport to the GTAA, which is a private company. This arrangement has been in effect since 1996.

The GTAA has strong commitment to making the ongoing improvements and innovations necessary to ensure that Toronto Pearson is one the world's premier international airports. Their new IOCC is a clear manifestation of that commitment.

"The GTAA created the IOCC several years ago to amalgamate the airport's various operations centers into a single, centralized unit," says Dan Elliott, GTAA's Manager of Communications Systems at the IOCC. "The IOCC oversees all airport operations, security operations and intelligence, resource management, gate planning, and customer service."

The control centers that were consolidated into the IOCC include the Operations Control Center, the Security Operations Control Center, the Resource Management Unit, the Call Center Paging Center, the IT&T Service Desk, Baggage Operations and the Maintenance Dispatch Center.

"Each of these control centers functions as a separate unit," says Elliott, "but when the staff are in the IOCC, they are accountable to the IOCC's manager of airport ops. This helps ensure the cohesiveness of the IOCC's operations."

AcomEVO wins the project

In 2012, Zetron's AcomEVO system was selected through an RFP process to equip the new IOCC. "Our existing system was an older analog system that was out of date," Elliott explains. "We needed newer equipment that would be able to integrate with our radios and phones, PBX system, and legacy analog infrastructure. It would also have to be able to support our eventual move to a P25 radio infrastructure and our transition over time to other new technologies. After reviewing the proposals submitted in response to our RFP, we picked AcomEVO for the project because it was the system we felt would best meet our immediate and ongoing requirements."

> "Zetron was **right there all the way** along and **very helpful** and **willing** to make the changes we needed."
>
> ***Dan Elliott,***
> *IOCC Manager of Communications Systems, Greater Toronto Airports Authority*

Phase I: Installing AcomEVO

The project was handled in two phases by a team consisting of representatives from the GTAA and Air Canada; Zetron; and Fleetcom/Lakeshore Communications, the Toronto-based reseller that would provide ongoing local support for the system.

Phase I involved installing 26 positions of AcomEVO, each equipped with four speakers, one headset, one desk mic, one footswitch and two jack boxes. The main backroom equipment consisted of five cabinets that held 18 iDEN interfaces, 36 redundant two-wire/four-wire conventional interfaces, 168 redundant analog phone interfaces, and 16 redundant digital I/Os. During this phase, AcomEVO was integrated with the IOCC's existing analog radio network.

Phase II: P25 integration

Phase II, which took place about a year later, integrated AcomEVO with the GTAA's new P25 digital network through the CSSI. By necessity, it was what Zetron Project Engineer, Doug Neal, calls a "live retrofit."

"Because the airport can never be without its communications," says Neal, "we updated the hardware, software, and system configurations and performed all of the testing while the system was up and running. It was intense because, in an environment like that, you have to make it work, or all kinds of dire consequences can unfold. You can't afford to slip a digit! But everything went beautifully."

Photo courtesy of Toronto Pearson International Airport.

Moving walkways at Toronto Pearson International Airport.

An iterative process

According to Elliott, Zetron's flexibility played a big role in the success of both phases of the project.

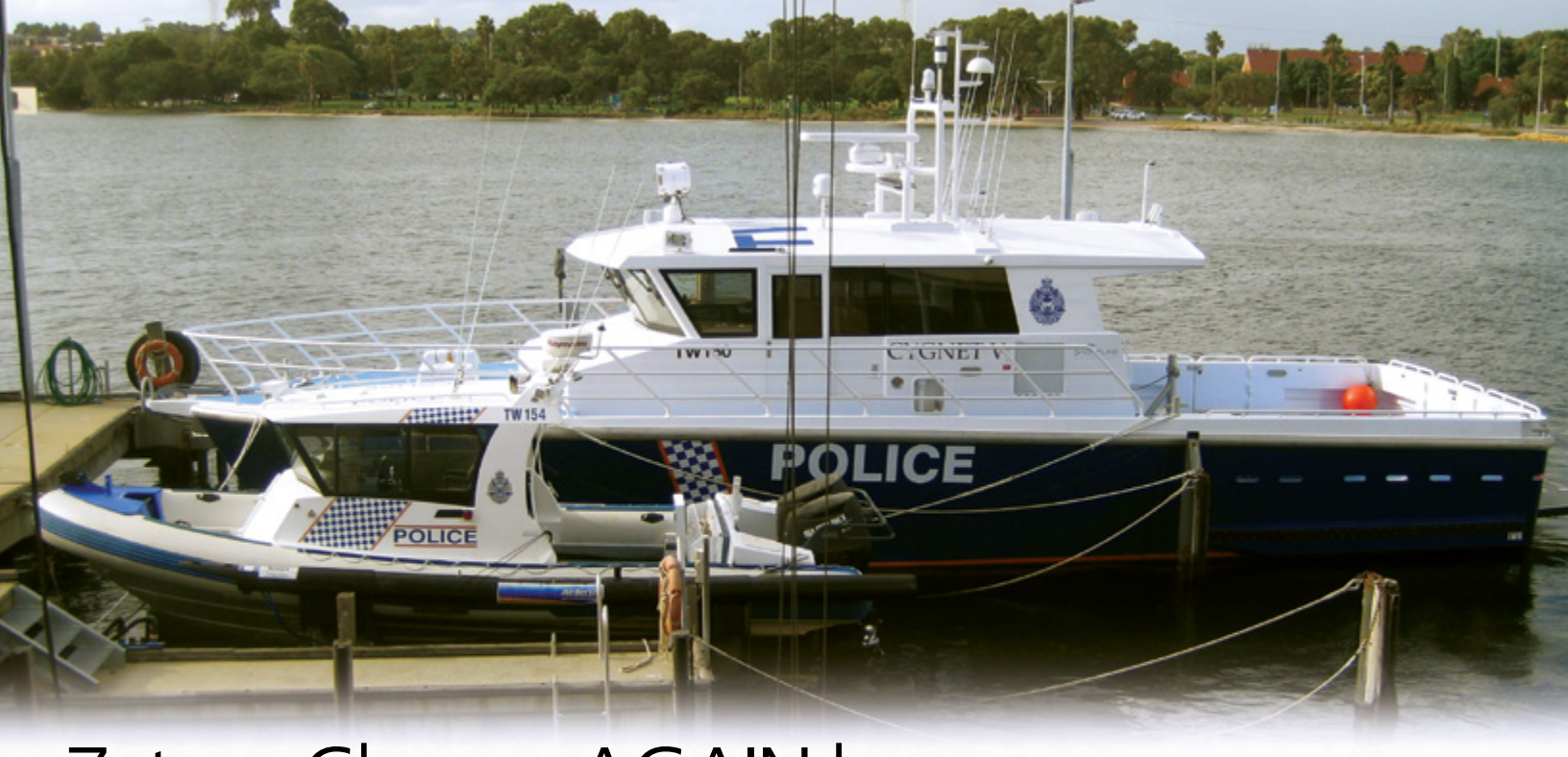
"Zetron was right there all the way along and very helpful and willing to make the changes we needed," he says. "For the initial installation of the Acom system, the screen design was an iterative process. We'd create a design, send it to Zetron, and they'd tweak it and send it back to us for another round. This process continued until we had a live screen we were all happy with."

"The success of project was also greatly helped by the success of the training," Elliott adds. "Between Zetron's on-site training and the one-on-one training we provided, we were able to cut over with very few issues."

Master console

The new 26-position AcomEVO system is now serving as the master dispatch console for the airport's three-site, 12-channel simulcast P25 radio solution. It is a highly interoperable system that allows airport personnel to communicate with each other and with emergency personnel on other networks in nearby municipalities when the situation requires it.

Elliott especially appreciates the system's ability to support the IOCC over time. "It's expandable and allows us to add more staff as the need arises," he says. "Plus, we review and upgrade the screens on a nearly annual basis to ensure that they're up to date with our operations. We're going through a business review right now that will probably result in some changes. And we know that AcomEVO will support us in that."■



Zetron Chosen AGAIN by Western Australia Water Police

Upgrade to AcomEVO Supports Emerging Technologies and Future Expansion

The Western Australia Water Police's recent upgrade to Zetron's AcomEVO console is their second implementation of Zetron equipment.

If you look at a map of Australia, one thing you'll notice almost immediately is the sheer size of the state of Western Australia (abbreviated as WA). It covers 976,790 square miles (2,529,875 square kilometers)–the entire western third of the Australian mainland.

The WA Water Police is responsible for policing WA's extensive 8,077-mile-long (13,000 kilometer) coastline. Since 2006, they have used Zetron's Advanced Communications (Acom) system in the Water Police Coordination Centre (WPCC) to manage their activities.

Although the system worked well for the WPCC for eight years, over time, their needs were changing. They began to require equipment that would support emerging technologies as well as their projected expansion. The WPCC's recent installation of Zetron's AcomEVO console system is providing the updated features, functionality and flexibility the agency was seeking.

Managing maritime safety and security

The responsibilities of the WA Water Police are focused primarily on ensuring the safety and security of those involved in maritime activities along Western Australia's coastline. This includes overseeing search-and-rescue operations, boating activities, and emergency operations. They also manage "Marine Watch," a program similar to the Neighborhood Watch programs many municipal police departments provide. Other activities the Water Police monitor and oversee include:

- Flare sightings
- Coast Radio Perth/Coast Radio Hedland
- 24/7 marine-radio listening watch
- Maritime investigations
- Stolen vessel and motor inquiries

The WA Water Police also supports a variety of local, regional, and national agencies, including those that manage parks and wildlife, customs, transportation, and fire and emergency services.

Equipping the WPC

Zetron was originally chosen in 2006 to help the Water Police install and implement communications equipment in what was then their new coordination center—the WPCC. Zetron provided and assisted with implementing a new Acom console system in the center as well as upgrading the agency's radio network and integrating their existing equipment with the new Acom system.

The installation was a success, and for years, the system performed reliably and well for the agency. Eventually, however, the agency's requirements changed. They initiated a process to purchase new, updated communications equipment that would address these new requirements.

Choosing AcomEVO

The project was put out for bid. And once again, Zetron was selected, this time for its newest and most advanced incarnation of Acom—AcomEVO.

"We chose Zetron because of the suitability of their proposed products, personnel, and services; their capacity and experience undertaking a project of this size and type; and their proposed training and warranty," says Pickerill. "We had confidence that Zetron would deliver the functionality and flexibility we need."

Passing the test

The project for the WPCC included one AcomEVO digital switch, two AcomEVO consoles, and the AcomEVO information management system.

The equipment setup and factory acceptance testing (FAT) were conducted at the Zetron Australasia office near Brisbane. "The FAT was comprehensive and positive," says Pickerill.

The next stage involved installing the equipment at the customer's site. To ensure that there were no disruption to the WPCC's operations while the implementation was underway, the new AcomEVO equipment was installed and tested alongside the existing system, which was kept running. Once the installation and integration of the new console system were finalized, the cutover was completed, and the previous system was removed.

Onsite training

Zetron provided onsite training to the Radio and Electronics Support Unit technicians and the WPCC operators. Technicians were trained in the configuration of the equipment, and operators were trained in the use of the console.

"Our operators were able to learn the new system easily and quickly," says Pickerill. "Not only is the AcomEVO system inherently easy to use, but the new system is an advanced version of our previous one and very similar to it in operation. So the operators were able to transition to it more easily than if it had been an entirely different system or more challenging to operate."

Supporting remote sites

Several aspects of the project that were unique to the WPCC included the number of remote sites the equipment had to support and the level of integration the WPCC required.

"The new system had to give us operational control of HF and VHF radio transceivers at 18 remote sites, with connections to these sites by microwave link and ROIP," Pickerill explains. "In addition, our existing radio systems had to be integrated into the new AcomEVO console. This was a complex process, but any issues that arose were resolved readily by Zetron and the Radio and Electronics Support Unit."

A successful outcome

The WPCC's new AcomEVO system went live in April of 2014. Pickerill has praise for the improvements the equipment is delivering as well as the process that went into installing it. "Our operators appreciate the fact that the new system combines into one console all of the radios that were previously operated by handsets and other consoles," he says. "This greatly simplifies the operators' tasks."

"Not only did the installation go smoothly," he adds, "but the approach that was used allowed us to maintain operational functionality the entire time, which was critically important to us. In addition, all issues relating to integration were resolved to our satisfaction. The solution fully meets our goals."■

"We had confidence that Zetron would deliver the **functionality** and **flexibility** we need."

***David Pickerill**, Coordinator, Water Police Coordination Centre*

Fall colors in Tennessee.

MAX Call-Taking Connects Tennessee PSAP to NetTN i3 Network

Zetron Solution Brings Next-Gen to Claiborne County

With Zetron's MAX Call-Taking system, Claiborne County, Tennessee, is Next-Gen-i3 ready and connected to Tennessee's NetTN network.

The move for public-safety agencies to adopt Next-Generation i3 technology is gaining momentum throughout the United States. This transition is necessary for several important reasons. It will allow 9-1-1 centers to receive messages in a variety of formats, including text, photos video and voice. It will also allow agencies to connect to statewide, regional and country-wide Emergency Services IP Networks (ESInets).

With their recent installation of Zetron's MAX Call-Taking system, Claiborne County, Tennessee, is at the forefront of this effort. They are now i3 Next-Gen-ready and connected to NetTN—Tennessee's statewide ESInet.

Claiborne County 9-1-1

Claiborne County is located in northeastern Tennessee, in what is known as the "Ridge and Valley Province" of the Appalachian Mountains.

The Claiborne County consolidated 9-1-1 center is housed in the Claiborne County Justice Center at Tazewell, the county seat. "We serve a population of about 32,000," says Claiborne County 9-1-1 director, Roger Hager. "We handle all 9-1-1 calls and also dispatch for all of the law-enforcement, fire, rescue, emergency-management, and ambulance services in the county. "

Why a new system?

Prior to installing MAX Call-Taking, Claiborne County had been using Zetron's Series 3200 Call-Taking system. "The 3200 is a brick," says Hager. "It's the greatest equipment I've ever had. But we needed new equipment in order to connect to our statewide NetTN network. Our existing system would not upgrade to that."

The NetTN network

Tennessee's NetTN network is one of the nation's first, statewide ESInets. It utilizes IP to deliver redundancy and features that analog-based 9-1-1 platforms are not able to provide. In order to connect to NetTN, however, agencies must be equipped to do so. Thankfully, the State of Tennessee is helping with the process.

"Districts throughout the state are upgrading their controllers so they can connect to NetTN and meet upcoming NENA [National Emergency Number Association] i3 standards," says Hager. "This is possible partly because Tennessee's 9-1-1 board has set money aside to help agencies make the transition to the IP-based technology the network requires. Claiborne County was one of the beneficiaries of this program."

> **“I love the system**, and I can’t stress enough how **responsive** Zetron and GeoConex have been helping us implement it.”
>
> ***Roger Hager,*** *Director, Claiborne County 9-1-1*

Choosing GeoConex and MAX Call-Taking

Once Claiborne County had completed their preliminary planning and had secured the funding necessary to obtain new equipment, they issued a request for proposals (RFP) for a four-position, IP-based call-taking system.

GeoConex and Zetron were awarded the project for a number of reasons, including the quality and technology of the solution GeoConex was proposing, and both companies’ ongoing relationships with Claiborne County 9-1-1.

“We currently use GeoConex for our GIS mapping and CAD system,” Hager explains. “So we have a long history with them and have been very satisfied with their performance. Plus, their bid included the IP-based Zetron MAX system. MAX Call-Taking would fulfill our i3 Next-Gen requirements, it would deliver the IP features and functionality we need at an attractive price, and GeoConex would provide 24/7 remote and onsite service.”

GeoConex president and CEO, Craig Dotson, explains why they based their bid for the project on MAX Call-Taking. “Of all the Next-Gen systems on the market,” he says, “MAX Call-Taking is not only the newest, but it’s also the best-engineered and most thoroughly thought-out system available. Its redundancy and failover features give it great reliability. ”

Preparation pays off

MAX Call-Taking was ordered and shipped to GeoConex. GeoConex then set the system up in their office and asked the customer to provide information that could be programmed into the system during preliminary staging, including details as specific as the numbers, speed dials, and transfers the agency needed to be programmed into the system.

“We were able to get it all programmed and pre-installed before we took the equipment to the customer’s site and connected it,” says Dotson. “This made the entire process go very easily.”

“The installation was seamless,” adds Hager.

Testing for NetTN compatibility

A very cooperative process took place between state officials and contractors and GeoConex to verify that the system would connect to Tennessee’s Next-Gen i3 network. “The state’s technicians came in, hooked it up to the NetTN, and confirmed that the system was running properly and meeting the state’s requirements,” says Hager. “It passed all of their tests.”

When asked whether this oversight felt like an intrusion, Hager says it was quite the opposite. “We have state requirements to address, and the more checks and balances I have to make sure the solution meets them, the better.”

Easy and adaptable

Although the new system was taking the agency from a button-based system to a PC-based user interface, dispatchers adopted it quickly and with minimal training. Hager says that the more their dispatchers use the system, the more they’re able to provide input on how its configurations can be adjusted to improve their workflow.

“At least once a week, a dispatcher hands me a suggestion that can improve how we use the system,” says Hager. “The system is so easy and adaptable, we can make changes on the fly. In our business, that’s critical.”

Dotson concurs: “It’s very easy for us to make any changes that the center can’t make themselves. And because we can handle many of these changes remotely, we can also usually make them very quickly. It saves everyone time and money.”

‘An excellent reference site’

Claiborne County’s transition to their new MAX Call-Taking system was completed in March of 2014, and shortly thereafter, the solution was connected to the NetTN network. Thus far, the system is performing just as everyone had hoped it would. But Hager is not resting on his laurels.

“With next-generation technology coming at us full force, you can never really settle in,” he says. “But I love the system, and I can’t stress enough how responsive Zetron and GeoConex have been helping us implement it.”

“Based on the success of this project,” adds Dotson, “Claiborne County will be an excellent reference site for other agencies that are looking to upgrade. In fact, we already have several more MAX Call-Taking installations on the horizon.”■

MAX Call-Taking

Zetron’s new MAX Call-Taking gives you the solid reliability and performance you expect from Zetron in a breakthrough, Next Generation 9-1-1 system. MAX Call-Taking is SIP-standards-based, ready to meet i3 industry standards and scalable for multiple PSAPs.

Features:

- State-of-the-art UI
- Skills-based routing
- Automatic Call Recovery
- IP-based flexibility
- Stand-alone or hosted design

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