THE ZETRON ADVANTAGE

Equipping Taiwan for the Future

Also in this issue...

MAX Dispatch and Call-Taking Deliver Efficiency over IP

3 MAX Dispatch Systems Connect to Share Resources and Backup

Meeting the Challenges of Growth

Hsinchu County FIre Council dispatcher Ulysses Kao.

MAX Dispatch/NEXEDGE Solution Equips Taiwan Fire Department for the Future

An advanced communication solution featuring Zetron's MAX Dispatch system integrated with a regional NEXEDGE® digital network is helping the Hsinchu County Fire Council (HCCFD) in Taiwan meet the challenges that a recent economic boom has brought to their region.

Rapid economic development can be both a blessing and a curse. While it can greatly improve opportunities for those who live and work in an area, it can also result in an increase in population that has a major impact on local infrastructure and services. Agencies responsible for protecting the health and safety of a growing community must find ways to respond to these changes or fall behind in their ability to meet their responsibilities. Such was the case recently for the Hsinchu County Fire Council (HCCFD) in Hsinchu County, Taiwan.

To keep pace with the region's growth, the HCCFD decided to replace their outdated communications equipment with Zetron's MAX Dispatch system. Not only is the agency the first location in Taiwan to install MAX Dispatch, but the system connected to an 18-channel NEXEDGE® digital radio network is providing the HCCFD with one of the most advanced and flexible public-safety communications solutions in Taiwan.

Hsinchu County and Hsinchu Science and Industrial Park

Hsinchu County in northwestern Taiwan covers roughly 1,427 square kilometers (887 square miles) and has a population of about 500,000.

In recent years, the establishment of the Hsinchu Science and Industrial Park (HSP), which straddles Hsinchu County and Hsinchu City, has had a dramatic impact on the area. Created in 1980 to foster scientific and technological development, the HSP is one of the world's key semi-conductor manufacturing centers. More than 400 high-tech companies established in the park employ approximately 150,000 people. In recent years, these companies have accounted for as much as 10 percent of Taiwan's gross domestic product.

The economic development the HSP has brought to the area has resulted in an average population increase of 12 percent annually in Hsinchu County. This has put a strain on its infrastructure and public-safety agencies, including the HCCFD.

The HCCFD

The HCCFD provides fire-fighting, rescue, ambulance, and military support services for 13 districts. Even before the county's recent dramatic changes, the HCCFD's aging analog dispatch system was falling behind in its ability to support the agency. "The system was unable to provide the scalability, logging reporting, and IP-based functionality that were becoming necessary for the HCCFD to manage operations effectively," says Gene Wong, Zetron Australasia's country manager in North Asia.

Proposing MAX Dispatch

Taipei-based Systemcom proposed a solution to the HCCFD's problem. They had been providing and servicing the HCCFD's equipment for over 10 years, so they understood the agency's past needs, current pressures, and future direction. In 2010, they suggested that the agency replace their existing dispatch equipment with Zetron's IP-based MAX Dispatch system.

At first, the customer was reluctant to make this change because it would mean transitioning to a console manufacturer they had not used in the past. But the MAX Dispatch platform offered the affordable, next-generation, IP-based features and functionality the HCCFD was seeking, as well as the requisite integration to Kenwood's NEXEDGE® radio network.

After taking into account Systemcom's recommendation as well as Zetron's reputation and positive references from sites throughout Taiwan and the Asia Pacific, the HCCFD decided to purchase and install a six-position MAX Dispatch console system. A condition of the project was that the system would have to be localized to Chinese.

A two-phase process

The solution for the HCCFD was implemented in two phases.

The first involved installing the MAX Dispatch system and connecting it to the NEXEDGE infrastructure. This phase went smoothly; the MAX Dispatch system integrated seamlessly with the NEXEDGE solution.

> **❝ MAX Dispatch** is an **outstanding system** that offers **powerful expansion** and **integration capabilities.❞**
>
> *Monika Tien,*
> *Manager, Systemcom, Ltd.*

For the second phase, MAX Dispatch was expanded to include an additional position. This phase, too, went smoothly and routinely. The project was completed in June of 2014.

Meeting the customer's needs

Systemcom manager, Monika Tien, says that the new solution's performance and features far exceed those of the system it replaced.

"MAX Dispatch is an outstanding system that offers powerful expansion and integration capabilities," she says. "It is also delivering many useful new features, including improved file tracking and an instant-replay feature operators can use to double-check anything they may have missed during a call. What's more, the system is easy to learn, which reduces the time, effort, and costs required for training. The fact that the system's user interface has been localized to Chinese is also very important to the customer."

The project has proved to be a great success for all of the parties involved. It is clearly delivering the features, functionality and flexibility necessary for the HCCFD to rise to the challenges of growth and change. Because of this, the customer already has plans to expand the system over a LAN/WAN to create a multi-node solution that will allow them to use MAX Dispatch at a second command center.∎

Zetron Wins 'Hot Product' Award for Innovation in Public-Safety...Again!

Zetron's AcomEVO utilizing the Project 25 (P25) Console Subsystem Interface (CSSI) to link to a P25 Phase-II network has been named one of *Public Safety Communications* magazine's "Hot Products" for 2014. This is the sixth time in seven years Zetron has won the award.

Once again, Zetron has won *Public Safety Communications (PSC)* magazine's Hot Product award that recognizes the year's most innovative public-safety communications products. This is the sixth time in seven years Zetron has won the award.

This year, the award was given to Zetron's Advanced Communications (AcomEVO) system utilizing the Console Subsystem Interface (CSSI) to integrate with an APCO Project 25 (P25) Phase-II network. The selection was based on the recommendations of *PSC*'s team of experts at the APCO International Conference in New Orleans, LA, in August of 2014.

The winning solution was implemented at the Monmouth County, New Jersey, Sheriff's Department Public Safety Center. It is the first deployment in the industry to connect a radio dispatch console

system to an APCO P25 Phase-II infrastructure. It is also the first implementation of a non-Motorola dispatch system using the CSSI to interoperate with a Motorola network.

In its announcement of the award, *Public Safety Communications* noted that "Zetron has long been an advocate of P25 and a leader in implementing multi-vendor solutions to ensure customers have the freedom and flexibility to take advantage of the benefits open standards offer. Our judges particularly liked the [solution's] customizable graphical interface, updated functionality, and interoperable capabilities."

Making One of America's Safest Cities Even Safer

Zetron's MAX Dispatch and Call-Taking Deliver Efficiency over IP

With their new Zetron MAX Dispatch and Call-Taking systems, the Mundelein, IL, PD has a single-vendor solution that is improving their efficiency, preparing them for the future, and helping ensure that Mundelein maintains its status as one of the safest cities in the U.S.

If you want to live in a safe community with a low crime rate, the village of Mundelein, Illinois, may be the place for you. It was recently rated one of the 100 safest cities in the nation by NeighborHoodScout.com, a company that uses FBI and law-enforcement data to rate the safety of communities throughout the U.S. In fact, Mundelein came in as the country's 56th safest city. Their recent installations of Zetron's IP-based MAX Dispatch and MAX Call-Taking systems might make them even safer. That's because the solutions' streamlined user interfaces, ease of operation, and updated features allow dispatchers to respond more quickly and accurately whenever someone in Mundelein dials 9-1-1.

Mundelein, Illinois

The village of Mundelein is located about 35 miles northwest of Chicago in Lake County, Illinois, very near Lake Michigan. Although Mundelein covers an area of only about 10 square miles, with a population of roughly 31,000, it is larger than its designation as a village would seem to suggest.

Mundelein 9-1-1

The Mundelein 9-1-1 call-taking and dispatch center is housed in the police department and serves as the public safety answering point (PSAP) for the village. "We're a full-time, full-service call-taking and dispatch center," says Mundelein Police Department communications supervisor, Mike O'Brien. "We average about 8,000 9-1-1 calls per year. Because the police department is always open, we also answer after-hours calls for public works, the village hall, and other village services."

New equipment for Mundelein

O'Brien says that over the last few years, there was a growing realization that Mundelein would have to install new emergency call-taking and dispatch systems because their existing equipment was reaching its end of life. "It was no longer supported, so we knew we'd have to replace it sooner rather than later," he says. "Plus, with Next-Gen 9-1-1 and the recent advances in technology, we needed something that would equip us for the changes we know are coming."

Finding the right solution

To become acquainted with current public-safety communications solutions, O'Brien began researching equipment and viewing product demonstrations at trade shows. That's where he first saw Zetron's MAX Dispatch and MAX Call-Taking systems.

O'Brien says that although he and other decision makers reviewed several vendors' equipment, they preferred Zetron and its IP-based MAX systems from the start. "We were impressed with Zetron's reliability, reputation and high levels of customer satisfaction," he says. "They have a great track record throughout the industry. Plus, our fire department uses an older Zetron dispatch system that's still working well. This is the kind of reliability we need."

Another important consideration was Zetron's ability to provide both call-taking and dispatch systems. This presents dispatchers with a consistent look and feel across equipment and helps them complete tasks more quickly and automatically. It would also result in a "single-vendor" solution. "Of the vendors we contacted, Zetron was the only one able to provide both call-taking and dispatch," says O'Brien. "We like this because we only have one manufacturer to call if we ever need to. For all of these reasons, we went with the Zetron systems."

> **"** [T]he new equipment has **exceeded expectations.** We got **everything we were promised**, including the **integration** with our existing systems and the Lake County network.**"**
>
> *Mike O'Brien*
> *Communications Supervisor, Mundelein Police Department*

Vicki Doryath dispatches help and answers 9-1-1 calls at the Mundelein police department.

About Radicom

Zetron reseller, Radicom, was chosen to install the new equipment. Based in McHenry, Illinois, Radicom has been in business for a half-century. Their primary focus is providing and supporting advanced two-way-radio and telephone solutions to commercial and public-safety customers throughout Northeastern Illinois and Southeastern Wisconsin.

The importance of interoperability

The project for Mundelein involved installing five positions each of Zetron's MAX Dispatch and MAX Call-Taking. The dispatch system would be integrated with the center's existing computer-aided dispatch (CAD) system and logging recorder, as well as Lake County's EDACS radio network. It would also connect to the State of Illinois P25 radio network, which provides interface capabilities and access to multiple groups and unit IDs. Integration with the EDACS network would ensure interoperability between Mundelein and other county agencies.

Radicom executive vice president and chief operations officer, Bob Lueders, explains why interoperability is so important and how Zetron solutions support it. "Zetron has developed interfaces for all of the major radio manufacturers. As a result, Zetron dispatch systems allow agencies using radio equipment from different manufacturers to interoperate with each other. Without this capability, it can be difficult for different agencies to communicate and coordinate efforts during a major event."

Running in parallel

Lueders says that to install Mundelein's new equipment, Radicom technicians set up several positions at a time and ran the new systems in parallel with the existing equipment as extra insurance during the installation process. They also had to make sure that the software versions being used in the new systems were in sync with each other so the interfaces and functions dispatchers were using would be consistent across all of the equipment.

Radicom also made sure the screens and controls were set up to support the dispatchers' needs and preferences.

"The MAX systems give us great flexibility in how we configure the graphical user interface, says Lueders. "It allows customers to provide input on the design of many of their screen elements, including things like how many icons are displayed and how many screens can be open at a given time. As a result, we're able to customize the screens so they work both functionally and ergonomically for the customer."

Dispatcher training

Radicom provided training on the new systems, working with two to four dispatchers per session to ensure that everyone on each shift was thoroughly introduced to the new equipment.

"When you're training only a few dispatchers at a time," says Lueders, "you're able to provide more personalized attention and bring everyone up to speed more quickly."

Exceeding expectations

Mundelein's MAX solutions went live in March of 2014, and O'Brien is enthusiastic about the benefits they're delivering thus far. "The new equipment has exceeded expectations," he says. "We got everything we were promised, including the integration with our existing systems and the Lake County network. Both Radicom and Zetron made sure that everything was done well and done right, and that the process was as stress free as possible. The project not only met all of our goals, but it's giving us features we'd never guessed would be as important and helpful as they are." ■

The Power of Zetron's MAX Dispatch Portal

3 MAX Dispatch Systems Connect to Share Resources and Backup

With three new MAX Dispatch systems connected through Zetron's MAX Dispatch Portal, the public-safety and law-enforcement agencies at Guilford, Connecticut, are equipped for interoperability, redundancy and easy resource sharing.

There are good reasons why the town of Guilford, Connecticut, recently took steps to ensure that its public-safety agencies are equipped with effective, reliable communications systems. For one thing, the area is visited regularly by hurricanes and storms like Irene, Sandy, and nor'easters that blow in from the North Atlantic. But even when the weather is mild, Guilford's agencies must be able to respond quickly to emergencies and the routine requests for help they get on a daily basis.

This is why in early 2014 Guilford's fire department, police department, and emergency operation center (EOC) each replaced their aging dispatch equipment with Zetron's MAX Dispatch system. Not only are the agencies now equipped with state-of-the-art, IP-based dispatch systems, but the three systems are linked to each other through Zetron's MAX Dispatch Portal. This allows them to monitor, access, and share radio resources and to even take over for each other if operations at any of the three agencies are interrupted.

Guilford, Connecticut

Located on shores of Long Island Sound, Guilford, Connecticut, is a residential and summer community with a population of about 23,000. Named one of the top 100 places to live in the U.S. by *Money* magazine in 2005, it is also one of the more historic towns in the U.S. It is said to have the third-largest collection of historic homes in New England and the oldest stone house in North America. It is also home to one of the few houses remaining of the original signers who settled the area in 1639.

Public safety in Guilford

Guilford's routine public-safety and law-enforcement services are handled by its fire and police departments. As the town's 9-1-1 center and public safety answering point (PSAP), the fire department answers 9-1-1 calls and provides dispatching for fire and emergency medical services (EMS). The police department provides its own dispatching. Guilford's EOC is activated only when the town experiences a major event or disaster that requires a more extensive response.

Why upgrade?

Even though Guilford takes pride in its history, when it comes to protecting the safety and well-being of its citizens, the town is firmly rooted in the present and looking toward the future.

So when its public-safety officials recently decided to upgrade the dispatch systems at its fire department, police department, and EOC, they also decided to install the same system at each site and link the systems over an IP network. "We were looking for a solution that would improve our interoperability and redundancy, allow us to quickly share radio resources, and improve the EOC's ability to respond to larger-scale emergencies when necessary," says Captain Mike Shove of the Guilford Fire Department.

Tactical Communications and Zetron

To get the process underway, Guilford called upon their longtime local equipment and maintenance provider, Tactical Communications. Tactical Communications provides radio communications systems to public-safety and law-enforcement agencies and governmental, industrial, institutional and business customers throughout eastern and southeastern Connecticut. Tactical would help obtain and implement the new equipment and the infrastructure required to support it.

Tactical Communications president, Dave Moffat, says that Guilford's history of positive experiences with Zetron was a key reason why they chose Zetron's MAX Dispatch system for the project. "Guilford's fire department had been using Zetron's Series 4000 for close to 20 years," says Moffat. "The system had run extremely reliably. So upgrading to Zetron's newest solution was a nearly automatic choice and a testament to a very reliable product. In addition, being able to connect the three MAX Dispatch systems through Zetron's MAX Dispatch Portal would provide the redundancy Guilford was seeking."

Implementation and training

The project for Guilford included a two-position MAX Dispatch system for the fire department, a two-position system for the police department, and a one-position system for the EOC.

The first step of the process involved staging the equipment at Tactical Communications office. "We built, programmed, configured, and ran the systems in our office for about a month before installing them onsite," says Moffat. "Early on, we also brought in representatives from each of the agencies in order to customize the screens to suit their different operations, requirements, and preferences. Once all of that was done, we brought the dispatchers in and trained them on the equipment. We were able to simulate dispatch operations as well as the interoperability between the sites."

When the setup, configuration, and training were completed, the systems were installed at their respective sites and brought online one at a time, starting with the fire department and ending with the EOC. The MAX Dispatch Portal was then implemented. It utilizes a "node" installed at each site that connects the systems over IP and enables the flow of information between them.

Moffat says that even though the project involved three systems at three separate sites, the final implementation went perfectly. And because the dispatchers had plenty of time to learn the new equipment while it was being staged, their transition to the new live systems was seamless.

Important new features

Guilford's MAX Dispatch systems are already delivering many of the features and functionality for which they were chosen. But they are also providing additional important benefits that the customer hadn't anticipated. "We're using the systems' auxiliary I/O capability to monitor the health of the microwave system and the integrity of the microwave paths," says Moffat. "If anything goes wrong, an alert will pop up on the dispatch console."

Another major improvement is the plug-and-play mobility of the EOC system. "The EOC console is connected and kept on a cart so it's current with any updates that are propagated throughout the system," says Shove. "When we need to use it, we simply roll it into the EOC or any other space where we need it to operate and hook it up, and it's ready to go.

Yet another feature that's a favorite with the dispatchers is the intercom that is shared among all three sites. "They can communicate without ever having to pick up the phone," says Moffat. "This is very convenient and especially useful when a situation involves more than one agency."

A mouse-click away

The outcome of the project for Guilford has been overwhelmingly positive. They now have updated equipment that allows each agency to work independently or together, as the situation demands. The solution is IP-based, able to support emerging technologies, and gives them great flexibility. But perhaps most important of all, it allows the three agencies to support each other in a way that was not previously possible. "The new solution ensures that, if one site's operations become unavailable," says Shove, "there are two others equipped to take over with just the click of a mouse." ∎

"…if one site's operations become unavailable, there are two others equipped to take over with **just the click of a mouse**."

Capt. Mike Shove, Guilford Fire Department

Firefighter Don Venuti (L) and Capt. James Considine.

Zetron, Inc.
PO Box 97004
Redmond, WA   98073-9704

COME SEE US AT THESE UPCOMING TRADE SHOWS:

CALNENA	February 9 - 12, 2015	San Diego, CA
Georgia ECC	March 10 - 12, 2015	Athens, GA
IWCE	March 18 - 19, 2015	Las Vegas, NV
Western Regional APCO	April 8 - 9, 2015	Sacramento, CA
TX APCO/NENA	April 19 - 22, 2015	Galveston, TX
APCO Australasia	April 29 - 30, 2015	Melbourne, AU
RFUANZ	April 30 - May 1, 2015	Wellington, NZ

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

ZETRON AMERICAS
PO Box 97004,
Redmond, WA 98073-9704, USA
(P) +1 425 820 6363
(F) +1 425 820 7031
(E) zetron@zetron.com

ZETRON EMEA
27-29 Campbell Court,
Bramley TADLEY, Hampshire RG26 5EG, UK
(P) +44 1256 880663
(F) +44 1256 880491
(E) emea@zetron.com

ZETRON AUSTRALASIA
PO Box 3045,
Stafford Mail Centre, Stafford QLD 4053, Australia
(P) +61 7 3856 4888
(F) +61 7 3356 6877
(E) au@zetron.com

The *Advantage* is published by Zetron, Inc.
Direct all comments and suggestions to **advantage@zetron.com**

ISO
9001

ZETRON®
www.zetron.com