



# 2 MAX Solutions, 2 Agencies, Mutual Backup

*Recent installations of Zetron's MAX Dispatch and Call-Taking systems in the PSAPs at Swain and Jackson counties, North Carolina, have updated both centers' dispatch and 9-1-1 call-taking operations. They are also designed so the PSAPs can provide full backup for each other.*

The public safety answering points (PSAPs) at Swain and Jackson counties, North Carolina, have a history of working together. They share personnel and equipment when one or the other needs help responding to an emergency. This tradition of cooperation recently paid off in a big way.

The state of North Carolina passed a law requiring each of its public safety answering points (PSAPs) to develop a backup plan to ensure that all 9-1-1 calls would be answered and processed, even if the primary PSAP goes down. The deadline for having a plan in place is July 2016.

Swain and Jackson counties put their heads together and came up with a mutually beneficial solution that would not only meet the backup requirement cost effectively, but would result in updated equipment for them both.

They each installed Zetron MAX Dispatch and Call-Taking systems that are designed to automatically take over for each other if the need arises. Both PSAPs' systems are identical and can be operated from either location. So if one center becomes unusable, dispatchers can go to the other center and resume operations for their own center without missing a beat. And because the failover is seamless, anyone calling in to either PSAP won't know the difference.

## Swain and Jackson counties

Swain and Jackson counties are located in the Great Smoky Mountains that straddle North Carolina and Tennessee. Named for the smoke-like fog that often hangs over the range, the "Great Smokies" are home to approximately 187,000 acres of old-growth forest and one of the most diverse ecosystems in North America. With over 9 million visitors per year, Great Smoky National Park is the most-visited national park in the United States.

## PSAP responsibilities

The Swain and Jackson communication centers both answer 9-1-1 calls for their respective counties. Swain County also dispatches for three fire departments, two law-enforcement agencies, one rescue squad, and one Emergency Medical Service (EMS) agency. Jackson County provides dispatching for seven volunteer fire departments, two law-enforcement agencies, two rescue agencies, and for Harris Regional EMS, which maintains three stations. Both PSAPs also support a host of other public-service agencies within the region.

## Serendipity intervenes

Over the years, Swain and Jackson counties had discussed the possibility of providing mutual backup for each other—someday.

Then Swain County conceived its own plan and obtained the funding necessary to build and equip a new PSAP. Jackson had not yet initiated such a process, so it appeared that the two counties' timelines for a joint project were not going to align.

But serendipity intervened. Swain's project was delayed. And the state passed the 9-1-1 backup mandate.

This gave the two counties the time and incentive they needed to work together on the project they had thought was only a dream. Instead of each one setting up its own separate backup center, they decided to see whether they could both install new equipment that would allow them to back up both their call-taking and dispatch services.

### Making it work

To help determine the viability of the plan, the two agencies enlisted the help of their long-term service and equipment providers—Western Carolina Communications for radio dispatch equipment, and GeoConex for 9-1-1 call-taking.

“Public-safety consulting firm, Mission Critical Partners, helped with the grant-writing process,” says Western Carolina Communication V.P. and senior technician, Jeremy Ray. “GeoConex worked on the call-taking side. And we started looking at how to design the dispatch solution so it would be redundant for both counties and allow them to dispatch for either center.”

They all decided that the best approach to meet their current and projected needs was to build new centers for both agencies and equip them with identical, IP-based call-taking and dispatch systems.

### MAX Dispatch and Call-Taking fit the bill

Zetron’s MAX Dispatch and Call-Taking emerged as the systems that would best support Swain and Jackson counties’ plan. Both agencies had been using Zetron dispatch systems, and one had been using a Zetron call-taking system as well. “We were very pleased with how our Zetron systems had worked,” says Jackson County Emergency Management Director, Todd Dillard. “Plus when we saw the MAX solutions at a local tradeshow, we were completely impressed with how they looked and operated.”

Another benefit of the MAX systems was their IP-based technology. This would make it possible to create identical solutions that would connect seamlessly through fiber-optic cable and provide complete redundancy. “Other vendors could not do that,” says Dillard.

“It would also be easier for us to move to these systems because we were already familiar with Zetron equipment,” says Swain County Emergency Services Director, David Breedlove. “The ongoing local service and support we’d get from Western Carolina Communications and GeoConex was also critically important to us.”

### The process begins

The project they all agreed upon involved installing four conventional positions and two laptop positions each of MAX Dispatch and MAX Call-Taking at both PSAPs, for a combined total of 12 positions.

“As soon as Jackson County broke ground for its new center, we started building the tower that was required for the new radios,” says Ray. “It was an involved process. The tower had to be verified with the architect. We also had to coordinate closely with the construction company that was building Jackson’s new center.”

### Installing mirrored systems

Western Carolina Communications staged MAX Dispatch at their facility before installing it at their customers’ sites. GeoConex did the same with MAX Call-Taking.

“We did all of the programming ahead of time,” explains Ray. “So when it came time to move the equipment to each site, all we had to do was install and test it.”

Ray says that creating two identical systems was a challenge. “The systems had to mirror each other exactly. So we had to keep them both in mind as we were building and programming each one.”

### Fulfilling the mandate

Although the assumption had been that Swain County would be the first of the two centers to go online, because of weather and other delays, Jackson went live first; Swain followed suit shortly thereafter. The systems have been up and running for about a year, and thus far, everyone involved in the project is happy with their performance.

“The two PSAPs now have the total redundancy they were seeking,” says Patterson. “And their backup is automatic and seamless. They also have IP-based equipment and i3-capable call-taking. Although North Carolina doesn’t yet have i3, they want to be prepared for it. As far as achieving the highest-level goal of the project, which was to fulfill the state backup requirement, the two PSAPs have more than met it.”

“This has been a very successful project,” adds Dillard. “We’ve become the model for other counties looking to do the same thing. It’s possible that we’ll eventually share backup with other PSAPs in the region—which would increase our redundancy even more.” ■



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www.zetron.com

#### Zetron Americas

PO Box 97004, Redmond, WA USA 98073-9704

(P) +1 425 820 6363

(F) +1 425 820 7031

(E) zetron@zetron.com

#### Zetron EMEA

27-29 Campbell Court, Bramley, Hampshire RG26 5EG, United Kingdom

(P) +44 (0)1256 880663

(F) +44 1256 880491

(E) uk@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