

EraMED Flies High with Zetron VoIP Dispatching

VoIP Provides Cost-Effective, Cross-State Connections



Photo courtesy of EraMED Photo Library

A rescue team carries a patient to a waiting helicopter ambulance.

The actions taken in the first hour after a serious injury can dramatically affect a patient's chances of survival. That's why helicopter ambulance services have become such an integral component of community health systems throughout the U.S. in recent years.

Such operations are heavily dependant on their communications systems. Indeed, the effectiveness of communications among their bases, crews, and medical centers is critical to the timeliness and success of their efforts.

In late 2007, EraMED, a company specializing in medical flight equipment and services, was fully aware that their growing operations were exceeding the limits of their communications equipment. So they enlisted the assistance of top Zetron reseller, Metropolitan Communications, to install a new radio dispatch system that would meet their changing needs.

The solution installed in January of 2008 is a VoIP dispatch system based on Zetron's Series 4000.

EraMED

EraMED provides medical institutions with round-the-clock flight services, personnel and equipment. This includes pilots, maintenance and communications support, consulting services, and a diverse fleet of sophisticated twin-engine turbine helicopters.

"We tailor our services to ensure that each customer has the right combination of equipment and services to support their mission profile," says Terry Umfleet, EraMED Director of Operations.

Relocation and expansion

In 2008, EraMED's base was relocated to a new 34,000-square-foot facility at the Chester County Airport in Coatesville, Pennsylvania. The new facility was to serve as the company's administration, maintenance and communications center.

EraMED had been using Zetron's Model 4010 Radio Dispatch Console to dispatch helicopters for Montgomery County and Bucks County, Pennsylvania, as well as Hahnemann University Hospital in Philadelphia. Although the system had served them well, they had outgrown it.

"We decided to implement a new dispatch system that would accommodate our growth and support cost-effective communications with several additional out-of-state sites," says Umfleet.

EraMED called upon their long-time provider, Metropolitan Communications, to help select, design, and install this new system.

Metropolitan Communications

Based in Exton, Pennsylvania, Metropolitan Communications has been providing wireless, two-way radio systems and services to public safety agencies and hospitals throughout Pennsylvania for over 30 years.

When asked how they were chosen for this project, Metropolitan Communications account executive, Ron Simpson, explains that they had been working with EraMED for several years and had supplied them with a previous solution that met their needs in a unique way.

"Some years ago we came up with a solution for EraMED that involved using the Zetron Model 4010 console and a leased T-1 connection back to the main hospital," says Simpson. "To move dispatch operations from one location to another, they just had to have the T-1 line installed from the hospital to the new location. EraMED liked this solution and our work, so we were the logical choice when the time came for them to update their communications."

VoIP vs. leased lines

The scope of the project for EraMED included equipping their new Coatesville headquarters so it could handle their expanding dispatch and paging communications. It also involved finding a cost-effective way to extend their communications to bases at Bristol, Tennessee; Johnstown, Pennsylvania; and Cleveland, Ohio.

"It would have been far too expensive for EraMED to use leased lines for the out-of-state sites as they were doing for their local sites," says Simpson. "So they chose the more cost-effective approach, which was to use Zetron with Voice-over-IP for their dispatching."

The solution

The solution for EraMED included:

- Zetron's Series 4000 Communication Control System
- Zetron's Model 4020 Common Control Unit
- Two positions of Zetron's Integrator RD Workstation
- Intercom lines that are used to talk to hospital emergency rooms and 9-1-1 centers
- Two-way radio circuits that run over telephone lines leased for local connections and VoIP for out-of-state locations
- Enhanced paging capability for flight-team members

"The two Integrator RD consoles provide dispatching and can also talk to intercoms in emergency rooms," says Metropolitan Communications technical engineer, Scott Chandler. "The consoles can also patch a helicopter directly to the ER so the ER staff can be ready when the patient arrives."

Chandler says that the project was challenging, but they had confidence in the Zetron equipment.

"Based on our experience using Zetron equipment with other customers, we knew we could trust its reliability," he says. "We also knew we could interface it to VoIP."

EraMED serves NASCAR

The system installation was completed in three days in January of 2008. According to Simpson, it proved its flexibility shortly thereafter.

"About two weeks before a NASCAR race at the Bristol Motor Speedway in Bristol, Tennessee, they asked if we could find a way for EraMED to dispatch helicopters to Bristol for the event. We came up with a VPN interface that allowed us to put up one IP mux at Coatesville and another at the Bristol Regional Medical Center along with a two-way radio that can talk over a repeater. This was all it took for EraMED to be able to dispatch helicopters to the motor speedway from Coatesville. It was completed well ahead of the race."

Results

When asked his opinion of the project results, Simpson is enthusiastic: "We're extremely happy with it because it has made the customer happy," he says. "We have Zetron equipment in three of the hospitals we maintain, and all of the customers are really happy with it. Zetron's just a work horse." ■

"Based on our experience using Zetron equipment, ...we knew we could trust its reliability. We also knew we could interface it to VoIP."

*Scott Chandler,
Technical Engineer,
Metropolitan Communications*



Photo courtesy of EraMED Photo Library