

EMS

Calling All Counties!

Integrator RD Supports Regional Medical Center's Dual Roles

Since 2006, the University of Tennessee Medical Center's LIFESTAR communications center has been fulfilling two important roles for East Tennessee.

One role is focused on providing communications for LIFESTAR, UT Medical Center's aeromedical transport service. LIFESTAR provides transportation and in-flight emergency medical services (EMS) for patients throughout the region. The UT LIFESTAR communications center dispatches helicopters, tracks the progress of flights, and works with the hospital to ensure that when LIFESTAR patients arrive at the hospital, they are admitted without delay.

Prior to 2006, this was the communications center's only role. But in 2006, the UT LIFESTAR communications center was assigned a second role: it was made the Region 2 Regional Medical Communication Center (RMCC) for Knox County and 15 surrounding counties in East Tennessee. This was part of a broader effort to ensure that emergency medical communications would continue throughout the state, even if a large-scale disaster or emergency were to occur.

"Becoming the RMCC doubled our responsibilities," says Phyllis Walker, UT LIFESTAR Communications Supervisor. "In addition to providing communications for LIFESTAR, we also had to be able to talk to every EMS agency in the region and be able to patch EMS and ambulances through, or link them up with the hospital they were going to. We also had to ensure that communications would continue if our region were to suffer a mass-casualty incident."

New equipment for a new role

Between 2000 and 2006, the communication center had been using Zetron's Series 4000 Communication Control System with a 4024 Common Control Unit, and Model 4118 Dispatch Consoles with Model 4115B Console Expanders.



This equipment had served them well. But before they could go live as the RMCC, they were going to have to add new equipment that would expand their capacity and support their new role.

They called upon Cartwright Communication Technology to help them identify and install the new equipment this would require.

Cartwright Communication Technology

Based in Knoxville, Tennessee, Cartwright Communication Technology specializes in the sales, installation, and service of voice and data communication systems for business, government, and industry. In business for over 35 years, Cartwright Communication is a long-time partner of UT LIFESTAR as well as other EMS and public-safety agencies in the region.

"Louis Cartwright understood what we had and where we were going," says Phyllis Walker, "so he was able to tell us exactly what we needed."

The solution Cartwright recommended and that the communications center accepted included Zetron's Integrator RD Radio Dispatch Console and a new model 4048 Central Control Unit.

"The Integrator RD would integrate with what we had," says Walker. "It would also improve our redundancy and give us the interoperability we required."

The solution for the RMCC

The installation for the UT Medical Center took place from May to September of 2006. It included:

- Two positions of Zetron's Integrator RD.
- On model 4048 CCU to expand channel capacity.
- Four Zetron Model 4115B Console Expander button panels for instant call paging.
- Two Zetron Model 360 Radio Remotes to remotely operate and select channels on a 512-channel VHF and UHF radio on top of the highest part of the hospital.
- 22 Zetron H.E.A.R. Decoders, one for each hospital in the region.

Moving from phone lines to radios

One important aspect of the project involved using radios for communications from ambulances to hospitals instead of relying on phone lines for patches.

"Previously, all of the hospitals were patched through 9-1-1 medical dispatch over telephone lines to the best Med Channel for the ambulance, depending on its location," Louis Cartwright explains. "Med Channels are channels the F.C.C. has allocated for communications between ambulances and hospitals throughout the U.S."

"A connection from the ambulance was patched through Knox County 9-1-1 consoles, then went over phone line to the hospital," Cartwright continues. "When a phone line went down, the hospital lost its ability to communicate with the ambulances. It sometimes took days to get the lines fixed. So we got rid of the phone lines. Now, the connection is made strictly over RF. The ambulance radio talks directly through the repeater to the radio at each hospital. That was a great improvement."

"We also decided to narrowband the existing Med Channels and build out all the new 12.5-KHz Med Channels," says Cartwright. "Properly locating these Med Channels so some of them can be reused provides a repeated channel for each of the hospitals in the region. It also gives the RMCC a communication path to each of the counties in the region."

Keeping LIFESTAR live during the installation

One of the project's challenges was the requirement to keep communications for LIFESTAR going at all times, even during the installation of the new equipment.



"LIFESTAR couldn't have any downtime," says Walker. "So we had to keep both systems going at the same time for a while."

"In addition, we were under a hard deadline," adds Andrew Slemp, UT LIFESTAR Regional Operations Manager. "When it was time, we had to be able to simply turn the new system on and have it work."

A seamless transition

The good news is that, when the time came for UT LIFESTAR's new system to go live, it did so without a hitch.

"Cartwright Communications helped make this a seamless transition," says Andrew Slemp. "Louis and his technicians and engineers did a great job. Now, we're able to do just what we need to. We can listen and transmit on a broad spectrum of frequencies, from VHF and UHF to 800 MHz. If an agency outside the center operates only on a particular frequency, we can accommodate them. The new system gives us true interoperability out in the field."

"The system integrates with our previous equipment, gives us the interoperability and redundancy we need, and was easy for our operators to learn," adds Walker. "We're very happy with it," she says. "I can't think of a downside." ■

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