

Kansas Spine Hospital Goes Digital and Mobile With Toshiba Strata CIX and SpectraLink



L-R: Gary Langdon (account executive) of TelCove, Brent Burdick (president) of NetVision, Daryl Thornton (COO) of the Kansas Spine Hospital, Scott Wilhite (senior technician) of Great Plains Communications (GPC), Michael Knocke (CIO) of the Kansas Spine Hospital, Diana Garey (sales rep) of GPC, JoAnn Cooper (sales rep) of GPC, Rhonda Bevilacqua (treasurer) of GPC and Jim Bevilacqua (president) of GPC.



Jim Bevilacqua (president) and Rhonda Bevilacqua (treasurer) of Great Plains Communications, both standing, show Daryl Thornton (COO) of the Kansas Spine Hospital how to use the Toshiba telephones.

Diagnosis: Digital Hospital Needs Integrated Solution

The Kansas Spine Hospital, located in Wichita, Kan., is one of the nation's only fully digital hospitals. The vision of founder Eustaquio Abay, M.D., the hospital specializes in specialty neurosurgery, spinal surgery, pain management, and radiology. One of the first hospitals to digitize patients' medical records, from prescriptions and clinical records to x-rays and other radiology images, and make them accessible by computer, the hospital opened in December 2003.

In keeping with its goals for an entirely digital system, Kansas Spine Hospital's objectives included having a reliable and durable digital telecommunication system with open standards that would allow integration and convergence with its data network. It also specified a system that would allow growth and migration to new technologies and capabilities. To meet its objectives, Kansas Spine Hospital turned to Great Plains Communications of Wichita, one of the area's preeminent providers of communications solutions for the medical industry and an Authorized Toshiba Dealer.

Prescription: Toshiba Strata CIX670, Strategy Voice Mail and SpectraLink

Chris Winslow and JoAnn Cooper at Great Plains Communications recommended a Toshiba Strata CIX670 business communication system with Unified Messaging. The system was migrated to Toshiba's latest platform, the Strata CIX, which allowed the hospital to add direct DiD fax capabilities and expand its use of Unified Messaging for their email and voice mail communications. Daryl Thornton, the hospital's COO, said, "Toshiba has proven to be the most reliable and capable choice."

The system also includes Toshiba digital desktop telephones plus 24 SpectraLink wireless telephones, which were programmed to extend the features of the users' desktop telephones to anywhere they roam at the 38-bed hospital. Other wireless technologies, such as cellular, could not be used due to the interference with highly sensitive medical equipment.

"Being able to be mobile yet still receive all our telephone calls has greatly improved our productivity," added Thornton. "Toshiba's SpectraLink solution was the only one we found that would extend our desktop telephones to the palms of our hands."

The Toshiba system also accommodates the hospital's remote users. "The Toshiba system is so flexible that we were able to connect our remote users and still have it look like they are located at our corporate offices," Thornton said. "Both incoming and outgoing calls are routed to the remote users' extensions through our main system at the hospital, so it's totally transparent that they aren't here at the hospital."

Photo Credit: Stephens Photography



L-R: Brent Burdick (president) of NetVision with Scott Wilhite (senior technician) of Great Plains Communications (Authorized Toshiba Dealer) and Gary Langdon (account executive) of TelCove in the phone room.



Michael Knocke (CIO) of Kansas Spine Hospital using the integrated Toshiba SpectraLink telephone in the hospital's Pre-OP area.



Good Medicine: Teamwork Between the Hospital and All Vendors

To deliver the hospital's integrated voice and data communications, Great Plains Communications, owned by Jim and Rhonda Bevilacqua, partnered with TelCove, a leading provider of business critical telecommunications services to enterprise customers and carriers, and NetVision Technologies Inc., a leading provider of data networking services and technology consulting, all with offices in Wichita.

TelCove installed a fiber connection at the hospital connecting it to TelCove's SONET fiber optic network to provide both local network services and long distance. Delivering exceptionally high reliability, the SONET network topography design enables all elements on the SONET network ring to continuously communicate with each other, with information being routed both directions, so if an element is inactive for any reason, the network stays active.

At the hospital, the SONET network terminates the voice services on ISDN using a Primary Rate Interface (PRI) that runs through the Toshiba switch via PRI cards. The system also delivers a full T1 of Internet service. TelCove also delivers the hospital's long distance service.

"Reliability was a high priority for the hospital, which is why they chose the TelCove SONET network," said Gary Langdon, TelCove account executive. "In fact, it is so reliable that even when a recent tornado destroyed two miles of the network cabling, the network was still up and running without any downtime."

NetVision installed the hospital's internal voice and data network, including setting up the wireless local area network, a high-capacity fully gigabit infrastructure and multi-tiered security.

Brent Burdick, NetVision founder and president, said, "The key to the success of both the data networking and voice applications is having a wireless network that is free of interference and fully compatible with both applications."

According to Thornton, NetVision played a significant role in the overall design of the network, from placements of cabling and wireless access points to infrastructure issues such as heating and cooling. "NetVision helped us use our space efficiently and avoid potential problems by creating a smart design for our communication system," he added.

The Cure: A Successful Voice and Data Solution With Toshiba at Its Heart

The Kansas Spine Hospital attributes the success of its voice and data network to the team approach of its providers and the integrity of the Toshiba solution. Knocke said, "Our SpectraLink telephones have given us a huge advantage in communicating with patients, families, doctors, other medical facilities, and each other. The ability to be mobile and receive your telephone calls at the same time is one of the biggest benefits I've ever seen in a hospital telephone system."

The system was delivered on time and on budget. JoAnn Cooper of Great Plains Communications said, "We worked very hard to deliver a system on budget that would positively impact their bottom line."

The Kansas Spine Hospital's investment is protected when they want to grow or migrate to new technologies. "Being an open system, the Toshiba Strata CIX670 will let us add voice over IP or other capabilities as our needs change and as we grow," said Knocke.

"We have great confidence in our very competent service teams from Toshiba, Great Plains Communications, TelCove and NetVision, and we are very happy with our decision," Thornton summed up.