Doctors Hospital at Renaissance Eases Growing Pains with ShoreTel

Doctors Hospital at Renaissance implements IP-based Unified Communications (UC) across multiple medical campuses to ensure cost-efficient, quality healthcare services and integrated business communications.

At a time when the healthcare industry faces budget cuts and uncertainty, Doctors Hospital at Renaissance remains an unwavering beacon of hope for the ever-increasing population of Rio Grande Valley in Texas. With a mission to deliver quality, compassionate, and cost-effective patient care through its state-of-the-art facilities, Doctors Hospital has grown nearly ten-fold in the last decade.

Morphing from a single outpatient surgical center in 1997 to a comprehensive network of services, Doctors Hospital provides a wide range of acute care, diagnostic and surgical departments, and progressive medical treatment and imaging centers. The latest expansions include a medical tower that houses pediatrics and an expanded emergency room. It is also the only hospital in the area dedicated solely to women’s care, and capable of delivering more than 8,000 babies each year. With eight centers located across the valley, plus two main campuses divided by a four-lane road, Doctors Hospital at Renaissance chose ShoreTel to handle its growing communications needs.

“With pressure to provide top-notch patient care while controlling costs, the hospital needed to boost the availability, mobility and capabilities of its communications infrastructure,” said Robert Acosta, director of technology services and security at Doctors Hospital at Renaissance. “We needed a vendor who would do more than rip and replace our phones and who truly understands how critical the right voice over IP (VoIP) network is to the way we work.”

Checking the Vital Signs

“We did not want our doctors and staff to be hindered by technology, especially in light of new facilities opening to the public,” Mr. Acosta explained. “Having seamless, easy-to-use IP business communications gives our medical personnel the freedom to focus on their patients—and our IT staff can provide improved service quickly and cost-effectively.”

The existing campus relied on a legacy Nortel PBX system, which could not be expanded to meet the hospital’s long-
term needs. With the pending completion of The Women’s Hospital at Renaissance and other facilities on the east campus, a new telecom infrastructure must connect the separate campuses and ensure transparent failover in the event of a power outage or other failure at one location.

Analog telephones in patient rooms, fax machines at nurses’ stations, and paper lists of telephone extensions for PBX operators were also complicating the previous IT environment. “We wanted to migrate these antiquated procedures into digital formats that could be integrated and shared across facilities to improve productivity and service. We had many goals for a new, modern system, such as deploying four-digit direct inward dialing (DID), interconnecting desk phones and wireless devices, and reducing the costs associated with long-distance calling,” Mr. Acosta added.

Making the Vendor Rounds

The Doctors Hospital at Renaissance considered several VoIP vendors, and eventually teamed with Lava Concepts, a ShoreTel reseller located in Edinburg, Texas, that specializes in IP and wireless networking solutions. Acosta wanted to understand how each vendor proposed to integrate the two campuses and ensure redundancy and reliability.

Lava Concepts performed a pilot with 25 ShoreTel telephones tied into the Nortel PBX system. The pilot successfully demonstrated ShoreTel’s distributed architecture, which integrated with existing PBX systems and other business applications, and incorporated a switch-based platform rather than relying on a server network to run the phones.

“I didn’t want to have our system dependent upon the expertise of a network manager, and the ShoreTel solution seemed extremely easy to use without special knowledge or support,” Mr. Acosta said. “ShoreTel offered a lower total cost of ownership than the other top vendors. To outfit rapid expansion and support 24/7 healthcare, we chose the ShoreTel Unified Communications system for its unique distributed architecture and user-friendly interface. We can have reliability and flexibility across facilities, and can easily deploy, manage and scale as needed. If we need additional support, Lava Concepts is right there to help.”

Resuscitating Legacy Infrastructure

ShoreTel’s UC system comprises more than 900 ShoreTel IP Phones, most of them models 110 and 230g; ShoreTel Voice Switches; ShoreTel Director for single-screen management; and ShoreTel Call Manager integrated with Microsoft Outlook for desktop users.

The ShoreTel Converged Conferencing solution, a 24-port ShoreTel Conference Bridge, was included to provide additional collaboration tools and reduce the need for expensive audio and Web conferencing services. The fully distributed UC system is purpose built for IP communications with no single point of failure, enabling ShoreTel switches and phones to remain operational even if disconnected from network servers.

While much of the West campus remained on the Nortel PBX system, the new East campus implemented the ShoreTel system, and the two campuses were connected via a fiber optic ring—or closed loop—designed to seamlessly integrate and unify communications for the healthcare organization.

Stations or nodes are designated throughout the ring so that in the event of a master failure, any station can assume backup control responsibilities for greater resiliency and availability. Two ShoreTel 120 Voice Switches were installed at separate locations to ensure the failover for IP phones. Another ShoreTel 120 Voice Switch is positioned as a hot swappable voice switch for analog failover.

“This ease of integration between the ShoreTel and existing PBX system allows us to four-digit dial between systems, from the remote WAN locations and to mobile phones,” Mr. Acosta said. “In addition, calls from the old analog phones in patients’ rooms route through

“It’s a tremendous improvement.”

Robert Acosta
Director of Technology Services and Security
Doctors Hospital at Renaissance
the ShoreTel system for additional cost savings. This flexibility helps us improve service and efficiency.”

The hospital’s intention is to eventually convert all users from Nortel to ShoreTel as time and budgets permit, totaling 2600 users on the ShoreTel system.

**Curing Outdated Protocols**

Doctors Hospital has synchronized the ShoreTel directory with its Microsoft Active Directory, eliminating the need to enter new information more than once, and making all contact information available through ShoreTel Call Manager. “Now it’s effortless to stay connected. Users can attach voicemail messages to email, send or receive via mobile devices, and keep or distribute the messages in the ways that work for them. We’ve really been able to improve responsiveness and productivity, and I can even record technical calls with vendors for later reference,” Mr. Acosta explained.

ShoreTel Call Manager also facilitates hunt groups at all nurses’ stations, allowing a cluster of telephone lines to be called in predetermined order until one is answered or available to complete a connection. This “multiple phone calling tree” can be vital to accelerating communication during life or death situations.

ShoreTel Operator Call Manager has streamlined the archaic paper protocols so that PBX operators can type in the first few characters of a name to identify patient rooms or departments and quickly transfer calls correctly in seconds, rather than minutes. And PBX operators can now dial an extension for direct access to the overhead paging or mobile devices carried by medical staff.

When patients place or receive calls in the rooms with Nortel analog phones, those calls now route through the ShoreTel system via trunking and two fiber optic T1 lines. ShoreTel automates load balancing across existing ISDN primary rate interfaces (PRIs)—which are typically used to connect PBX lines with long distance carriers or the local telephone company—to achieve these cost savings.

**Charting Savings and Simplicity**

Doctors Hospital has indeed enjoyed its own renaissance, with a surge of development and programs aimed at providing world-class treatment and service to the community. Thanks to the brilliant simplicity and reliability of the ShoreTel UC system, the hospital has been able to usher in much greater levels of productivity, innovation and value.

The ShoreTel UC system has enabled the hospital to boost its return on investment with an immediate savings of $36,000 per year in long distance telephone charges, plus hundreds of dollars per month by eliminating the need for additional PRI connectivity—even though the hospital has doubled the number of users on the system.

Also helping to lower the total cost of ownership for the hospital is ShoreTel’s simplicity and ease of use. Doctors Hospital IT staff has been able to implement nine in-house installations across its campuses.

“We worked with ShoreTel Professional Services Group for the initial implementation at The Women’s Hospital at Renaissance,” Mr. Acosta said. “Since then, my team has successfully completed installations at the Behavioral Health Center, Wellness Center, several remote sites, and even the medical tower which is a four-story facility. That was a large installation but we were able to deploy it with ShoreTel’s straightforward feature set. And the fact that my team no longer hear about any problems with the new system has freed them up to work on these and other important hospital projects.”

Acosta worked with Lava Concepts to design a proof of concept for piloting and integrating a high-definition telemedicine video application from LifeSize Communications, a ShoreTel Technology Partner. Because Doctors Hospital is open 24 hours a day, staying connected is critical, even when medical staff is off duty or at home.
“The ShoreTel conference bridge enables doctors to tie into the telemedicine application using the camera on their home laptop,” Mr. Acosta explained. “For instance, this technology is useful when law enforcement brings a patient to our Behavioral Health Center to be evaluated late at night. The Center may have a psychiatrist on call who can use the teleconferencing/video process to assess the patient remotely, rather than having both the patient and enforcement officer wait for the doctor to arrive on premises.”

This platform for growth, together with the system’s ease of use and flexibility are key reasons why the ShoreTel UC system has been a big hit with hospital staff. “We’ve gained a thriving, modern and pervasive IP business communications architecture that catapults the hospital to a higher echelon of service and connectedness,” Mr. Acosta said. “ShoreTel allows us to view applications from anywhere on the IP network—a single-image system across all locations with complete transparency and integration. When it comes to curing our communication ills, ShoreTel truly was the best medicine.”

Robert Acosta
Director of Technology Services and Security
Doctors Hospital at Renaissance

About ShoreTel

ShoreTel is a provider of business communication solutions whose brilliantly simple unified communications platforms, applications and mobile UC solutions promise a new rhythm of workforce engagement and collaboration. With costly complexity eliminated by design from its award winning, all-in-one IP phone system, UC and contact center solution, and its industry leading hosted business phone system, workers enjoy a freedom and self-reliance that other providers can’t match. Users have full control to engage and collaborate, no matter the time, place or device, for the lowest cost and demand on IT resources in the industry. ShoreTel is headquartered in Sunnyvale, California, and has regional offices and partners worldwide.

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