

the

IPC Integrator



Winter 2009

Healing Mission, High-Tech Vision

IPC helps Dr. David Lanning and International Hospital for Children extend the reach of care through high-definition telemedicine.

Dr. David Lanning, a pediatric general surgeon practicing at both VCU Medical Center and Bon Secours St. Mary's Hospital in Richmond, shares his time and his skills with the children of the Caribbean island chain of St. Vincent and the Grenadines. For the past three years, Lanning has volunteered for Richmond-based Interna-

tional Hospital for Children (IHC), a nonprofit humanitarian organization linking worldwide pediatric surgical, diagnostic and preventive resources to heal critically ill children in developing countries.

IPC Technologies is helping Lanning carry on his mission through the implementation of a videoconferencing system connecting IHC's headquarters with a hospital in St. Vincent. The system, from LifeSize Communications, allows him to perform patient consultations and screenings remotely, and to guide local physicians in St. Vincent through pediatric procedures and post-operative care.

"I travel to St. Vincent about one week a year to operate on kids. The thing that's been troubling me is what happens to the kids when I leave," Lanning said. "The adult surgeons there are skilled in their practices but don't have the specialized training needed to treat kids with surgical problems.

"So I had the idea that we could use videoconferencing to help guide the local doctors through pediatric surgeries, as well as help them with pre- and post-operative care. There are lots of ways we can use this technology to help care for kids in this impoverished country."



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Healing Mission, High-Tech Vision

Detailed View

Lanning had heard about the LifeSize system and met with IPC's videoconferencing specialists for a demonstration of the technology. Lanning liked what he saw. The LifeSize solution provides the high-definition images needed for effective telemedicine.

"High-quality images are obviously critical," said Lanning, "and with the LifeSize system it's almost as if you're in the operating room assisting with the



David Lanning, M.D.

procedure. The system also allows us to view X-rays, CT scans, ultrasounds and other data in great detail. What's more, we can do the pre-surgical consultations that enable us to schedule operations and bring needed equipment, maximizing our time during our weeklong visit."

LifeSize provides a "telepresence" experience through true high-definition video resolution — 1280 x 720 pixels at 30 frames per second. Yet LifeSize is less expensive than legacy videoconferencing systems and requires a fraction of the bandwidth of comparable solutions.

"The cost was certainly a plus, and we like the idea of being able to utilize lower bandwidths to transmit the audio and video," said Lanning. "Getting reliable Internet service in St. Vincent can be a challenge but in the first couple of months we were able to see kids in a clinical setting. I foresee that this system will have a major impact, and not just for the kids with general pediatric surgical problems. The other medical teams, such as orthopedic surgery, dermatology, ophthalmology and cardiology, will also be able to use the system in helping care for kids."

Looking to the Future

IPC helped to implement the system at IHC's headquarters, then showed Lanning's associate, Dr. Frank Margaron, how to install the second unit in St. Vincent. Margaron is spending a year of his general surgery residency assisting with the program in St. Vincent. He will fly to the island throughout the year to help ICH physicians take full advantage of the equipment.

"IPC showed Frank how to set it up and troubleshoot it, which enabled him to complete the installation by himself," Lanning said.

Lanning plans to make his third trip to St. Vincent in January. But he hopes that the telemedicine program he helped to spearhead will provide needy children throughout the Caribbean with consistent access to pediatric specialists in the U.S.

"IHC has a long history of sponsoring trips for kids, bringing them up to Richmond from various countries for medical care as well as sending teams out to provide care locally. Telemedicine is another tool the organization can use to carry out its mission," he said. "I hope that IHC will install more of these systems throughout their satellite countries. Combined with IHC's other programs, telemedicine has the potential to transform the delivery of pediatric care in these nations."

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BRIEFS

U.S., China Top Sources of Botnets

Botnet-infected computers in the U.S. and China are responsible for the greatest number of global cyber attacks, according to security firm SecureWorks. Some 20.6 million attempted attacks launched against SecureWorks clients thus far in 2008 have originated from computers in the U.S., while 7.7 million attempted attacks emanated from computers within China, the company said.

"We believe these statistics are significant because it clearly shows that the United States and China have a lot of vulnerable computers that have been compromised and are being used as bots to launch cyber attacks," said Hunter King, security researcher for SecureWorks. "This should be a warning to organizations and personal computer users that, not only are they putting their computers and networks at risk by not securing them, but they are actually providing these cyber criminals with a platform from which to compromise other computers."

WiMAX to Drive Wireless Growth

As bandwidth consumption continues to grow, communications revenues over the next few years are expected see a 10 percent annual growth rate in the U.S., reaching \$1.3 trillion by 2011. However, wireless technology will realize up to 34 percent annual growth in that same time period, according to the Telecommunications Industry Association (TIA).

TIA says WiMAX technology is positioned to drive much of the wireless growth now that the FCC has opened up the 3.65GHz spectrum in the U.S. for WiMAX deployments. Currently there are 1.2 million WiMAX subscribers worldwide, but only 11,000 are in the U.S. TIA expects that WiMAX subscriptions will grow to at least 37 million customers by the end of 2011.

Business Intelligence Challenges

Less than one-fifth of businesses are fully mature in their deployment and use of business intelligence systems and data warehouses, according to a new study from Ventana Research. Moreover, these businesses lack reliable information about how their BI and data warehouse systems are performing in order to analyze and tune their performance.

According to the study, "Optimizing BI and Data Warehouse Performance," organizations trying to perform fuller analyses of data about customers, products and other key areas are encountering key challenges — difficulty scaling from complex queries for analytics (58 percent) or to handle more data (55 percent) and more real-time needs (54 percent). The research found that availability requirements are also serious, with almost half of organizations currently making their BI and data warehouse systems available 24 x 7.



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A WINNING TEAM

Verizon Center scores big with a state-of-the-art voice and data infrastructure from Enterasys, Meru, ShoreTel and IPC Technologies.

Washington, D.C.'s Verizon Center — home to the NBA's Washington Wizards, the WNBA's Washington Mystics, the NHL's Washington Capitals, and the Georgetown Hoyas men's basketball team — is sporting a new voice and data infrastructure thanks to team of high-tech experts. Enterasys, Meru Networks, ShoreTel and IPC Technologies recently upgraded the arena's data network and implemented a high-tech IP telephony system uniquely suited to the facility's demanding communications requirements.

Located in the heart of Chinatown off of the Gallery-Place Chinatown Metro stop, Verizon Center hosts more than 220 events and concerts each year. The 11-year-old arena has been a showcase for cutting-edge technology, luxury accommodations, restaurants and other amenities, and needed a network "facelift" to ensure that its IT infrastructure could support the needs of its vendors, visitors and tenants.

"Verizon Center is a point of pride for Washington, D.C., and the city is committed to helping keep it up-to-date," said Eric Bowling, VP of Sales, IPC Technologies. "Three of our key partners — Enterasys, Meru and ShoreTel — provided all-new equipment for a complete network upgrade. The IPC Technologies team then came in to deploy nearly 1,500 endpoints, including both analog and IP phones."



The NHL's Washington Capitals are among the sports teams that call the Verizon Center home.

Game-Day Strategy

As a first step, Enterasys and Meru upgraded the arena's data infrastructure to better support its vast communications requirements. Enterasys implemented a scalable, high-performance network core, while Meru created a seamless wireless network to extend connectivity throughout the facility. ShoreTel then called on IPC Technologies, its major accounts partner in the region, to deploy the ShoreTel Unified Communications System and ShoreGear Voice Switches. The next-generation

ShoreGear-24A Voice Switches were selected because of their ability to manage both IP phones and analog lines, as well as PSTN and ITSP trunks.

"Given the wide range of events hosted there, Verizon Center must maintain a very large analog infrastructure to meet the needs of its vendors," said Kurt Wright, Director of TechFirst Operations, IPC Technologies. "One day you have a hockey game, the next day you have a basketball game, the next day you have a horse show, so the course-level vendors are constantly

changing. We needed to deploy more than 400 analog endpoints to support this part of the facility, and the ShoreTel system handled that very well.”

IP telephony technology was utilized to support Verizon Center operations, the event-level suites, the sports teams and the media. The IP phones had to be logically separated yet still managed within a single system.

“For example, the phones within the tenants’ suites needed to be able to connect with operations, first aid and the food vendors, but not have connectivity with the Washington Wizards locker room or the coach’s office,” said Wright. “The ability to logically separate everything within the ShoreTel

system is an area where we really excel. Everything is dynamically configured. A phone can easily be taken from one location to another, plugged in, turned on, and it will work just fine. No reprogramming is required.”

A League of Their Own

IPC makes it sound easy, but a great deal of upfront planning and legwork is needed to make a deployment of this scope go smoothly. The IPC team leveraged many years of experience and in-depth knowledge of the ShoreTel system to ensure the success of the implementation.

“The deployment schedule was fairly short – we ran the system out

fairly quickly without disrupting operations. We had live cutover right on schedule and were ready to support The Who concert that same day,” said Wright.

Since Verizon Center opened on December 2, 1997, almost 26 million people have spun the turnstiles to enjoy close to 2,200 concerts, family shows and world-class sporting events. The arena has helped revitalize the historic downtown neighborhood it calls home, and has given the city of Washington, D.C., a world-class venue it can be proud of. Now, Verizon Center is once again on the cutting edge with a winning solution from Enterasys, Meru, ShoreTel and IPC Technologies.

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PARTNERS





The Value of Unified Communications

Phone, fax, e-mail, instant messaging, teleconferencing, videoconferencing, Web conferencing — in most organizations these remain separate, discrete functions, hampering effective collaboration. The extended enterprise now requires a unified communications infrastructure to capitalize on the benefits of information mobility and the need to be more flexible. Organizations can utilize existing fixed and wireless data networks to provision a wide range of IP-based communications services, including voice, data, video. Establishing voice and video as network applications fundamentally alters the communications paradigm, enabling the development and integration of many new innovative communications services.

Organizations seeking to implement unified communications should do so to increase business agility, not to reduce costs, according to Gartner, Inc. A recent Gartner survey of 300 organizations showed that early adopters of unified communications cited improvements in employee collaboration, productivity and customer service as the top three benefits after deploying unified communications.

The survey showed that lower total cost of ownership (TCO) remained important but it was the least-mentioned benefit. By contrast, lower TCO and lower equipment costs were the top two expectations of unified communications among companies that have yet to deploy it.

“It is evident that there is a significant difference between the expecta-

tions of unified communications and its actual benefits. We recommend that organizations build a business case based on enabling mobility and agility rather than on reducing IT department costs,” said Gartner Research Vice President Steve Blood.

Focus on Business Benefits

Unified communications is designed to eliminate the barriers that have traditionally separated voice calls, e-mail, instant messaging and conferencing in all forms. Once all these communication media are carried over a common IP network, it is possible to manage them from a single point and use them with common devices. This enables companies to transform key business processes with improved communication flows.

“The value for organizations is to reduce human latency within a process that improves business’s ability to respond and to be agile,” said Blood.

As a first step to creating a successful unified communications implementation, Gartner advises companies to begin with important but not mission-critical tasks and assess their needs based on the individual (e.g. time spent away from desk and office), not purely on job title or role, and identify the consumer technologies that could be implemented. A next-generation voice and communications architecture should include collaboration and social networking and, longer-term, integrate communications with business applications.

Gartner also recommends identifying “killer applications” that focus on productivity benefits for adopting unified communications technologies. Key opportunities are in:

- Contextual presence — including presence information about the individuals and communications channels available to the end user;
- Flexible media and conference switching — allowing a single interaction sequence to change channels (or media) and add or reduce the number

of participants without ending and re-starting the session;

- Intelligent notification services — contacting people with important information, including instructions on the order in which to contact individuals, when someone is unavailable, etc.

Effective management is a key capability in the unified communications environment. End-to-end Quality of Service (QoS) supporting data, voice and video also becomes critical as the emphasis shifts from individual communications solutions to the overarching network environment.

Best Practices Maximize ROI

Gartner predicts organizations that don't follow best practices for involving the networking team with IT projects will pay at least twice as much for their application development pro-

jects and will still deliver poorly performing applications.

“Ideally, networking should be involved from the beginning of the application project, actively proposing functions that can be usefully performed in the network, as well as ensuring that applications are tested,” said Blood.

Blood recommends that organizations looking to implement unified communications create a virtual team of all the stakeholders, from both the business units and IT, and look at which groups of users can benefit most from improved collaboration.

“Those that have already adopted unified communications should now verify that productivity benefits are being realized and that users are taking advantage of the new capabilities. Deploying unified communications is

expensive so companies should ensure those that have it are using it,” he said.

The communications architecture that has evolved over the last 20 years, with its separate, siloed communications infrastructures, no longer meets the requirements of today's organizations. As the reach and range of business processes continues to increase, involving interactions with partners, suppliers, customers and geographically dispersed teams, organizations should re-examine their corporate communication and collaboration strategies in order to better support today's business activities and objectives. Unified communication services and collaboration tools can help organizations significantly improve employee productivity, augment business processes and foster innovation.



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