

Perfecting Practice Communications with Wireless Broadband



Two multi-location Florida based medical practices rely on Motorola PTP wireless broadband solutions for fast, reliable, cost-effective system-wide communications.

Situation: the need for faster, more reliable communications among physicians, staff and patients in multiple practice locations

Specialists in Urology and the Laser Spine Institute are both highly successful medical practices with two things in common. First, they are located in two of Florida's most desirable business and residential areas, Naples and Tampa respectively. Second, they are both fast-growing practices that are rapidly adding physicians, patients and locations. Both organizations have similar communication requirements. To provide high-speed connectivity that unites multiple locations, to continuously expanding physician, staff and patient bases. Additionally, a common communication challenge is the need to provide connectivity that is faster, more reliable, easier to deploy and more cost-efficient than expensive traditional wired networks.

Solution: Motorola PTP wireless broadband solutions that are easier to deploy, provide higher performance and reliability and deliver faster ROI

The two practices have one other thing in common. Both turned to Motorola Point-to-Point wireless broadband solutions provided by Motorola partner Rapid Systems in Tampa Florida. The Laser Spine Institute of Tampa utilizes a Motorola PTP 600 radio to provide connectivity between two buildings that are approximately 820 feet apart. For high-speed connectivity between its main offices and three of its other locations, Specialists in Urology of Naples chose Motorola's Point-to-Point wireless Ethernet bridges.

Result: excellent performance and reliability with exceptional time and dollar savings over wired systems

Both practices report high-quality performance and reliability. The Laser Spine Institute's Motorola PTP 600 solution at 5.4 GHz is providing throughput of about 300 Mbps for applications including VoIP, electronic medical records, image file transmission, e-mail and cloud computing. The Specialists in Urology practice utilizes two Motorola Point-to-Point links at 5.8 GHz — providing 43 Mbps of throughput — the practice sends data from two separate locations to a third. A single Motorola PTP 500 link transmits the aggregated data from the three locations to the main office at approximately 100 Mbps of throughput. Both practices report significant savings in monthly wireline costs and expect to achieve an average ROI between nine and 24 months.

Wireless Communications Help Medical Practices Improve Care and Service While Reducing Costs

CUSTOMER PROFILE

Enterprise

Specialists in Urology

Industry

Medical/surgical practice

Motorola solution

- Point-to-Point Wireless Ethernet Bridges

Solution features

- High-Speed Throughput
- Supports VoIP, thin client computing, video conferencing
- Supports HIPAA compliance

Benefits

- Real-time connectivity for physicians, staff and patients
- Excellent performance in unlicensed 5.4 and 5.8 GHz spectrums
- Fast, easy deployment
- ROI in approximately 24 months

High-speed wireless communications are revolutionizing health care. For evidence, you need only look at the emphasis placed on wireless broadband systems for health care in the American Recovery and Reinvestment Act (ARRA) stimulus package. Electronic Health Records and anytime/anywhere communications are becoming more and more crucial to helping hospitals and medical centers of all sizes improve patient care, reduce medical error and cut costs.

A recent article in the *St. Petersburg Times* speaks to the importance of wireless broadband for the State of Florida's health care organizations. "Wireless broadband technology is giving a nice bump to Florida's economy," says a new study by wireless association CTIA. According the news article and CTIA, "In the state's health care sector alone, cost savings from deployment and use of wireless broadband applications is expected to rise from \$900 million in 2005 to more than \$2.8 billion in 2016."

Practice Connectivity

Wireless broadband connectivity is critical not just in hospitals and medical centers. It is also becoming more and more important in another segment of the health care marketplace: medical practices. A great many practices are expanding by adding not just new physicians and patients, but also new buildings and locations. As medical practices grow, the need for reliable, cost-effective communications that unite the entire organizations has grown, too. Practices want to provide high-quality care and consistent service across every location, ranging

from physician's offices to business offices to stand-alone surgery and specialty centers.

High-Speed Wireless Technology

For growing medical practices, expanding existing wireline networks to new locations is often both time- and cost-prohibitive. As practices grow, they need to deploy connectivity solutions as quickly, and as cost-efficiently, as possible. Fast deployment is not an option with wired systems that can take months or longer for trenching and installation. In addition, T1 or comparable wireline service often have reliability issues and can add hundreds if not thousands of dollars every month in leasing costs. These and other wireline issues are driving medical practices of all sizes to turn to wireless broadband networks.

Wireless broadband technology is fast and simple to deploy, with systems able to be installed in a matter of days or weeks. Wireless networks are also proven to provide exceptional reliability and availability. Equally important, high-speed wireless systems are highly cost-effective, allowing practices to own and control their own networks, eliminate monthly lease expenditures and gain ROI in less time.

Practice #1: Specialists in Urology

Specialists in Urology is a fast-growing urological medical and surgical practice in Naples, Florida. Established in 1997, the practice began a growth spurt in 2004 that saw the organization increase from one to six buildings. Specialists in Urology's locations now include four practice offices — two of which are situated in area hospitals — plus a

CUSTOMER PROFILE

Enterprise

Laser Spine Institute

Industry

Medical/surgical practice

Motorola solution

- PTP 600 fixed outdoor wireless broadband solution

Solution features

- Up to 300 Mbps throughput
- Connects two buildings 250 meters apart
- Supports VoIP, Electronic Medical Records, PACS file transfer, thin client computing
- Supports HIPAA compliance

Benefits

- Real-time connectivity for physicians, staff and patients
- Excellent performance in unlicensed 5.4 GHz spectrum
- Fast, easy deployment
- ROI of 9 months



“As we’re growing, we are looking for the speediest and most cost-effective solutions to keep us all connected. We always look at wireless first because of its low cost. You get the same speed on a much more reliable and less costly basis.”

*- Allen Kyle,
director of IT,
Specialists in Urology*

stand-alone cancer center as well as a separate business office. The practice has eleven physicians on staff and will be adding three more in the near future. Including administration and staff, the total employees number more than 200.

Says Allen Kyle, director of IT at Specialists in Urology, “As we’re growing, we are looking for the speediest and most cost-effective solutions to keep us all connected.” The practice had previously been spending up to \$1,500 per month in leased lines, a figure that would only rise as connectivity needs grew. Wireless solutions offered greatly enhanced cost effectiveness. “We always look at wireless first because of its low cost,” notes Kyle. “It’s all about bang for the buck. You get the same speed on a much more reliable and less costly basis.”

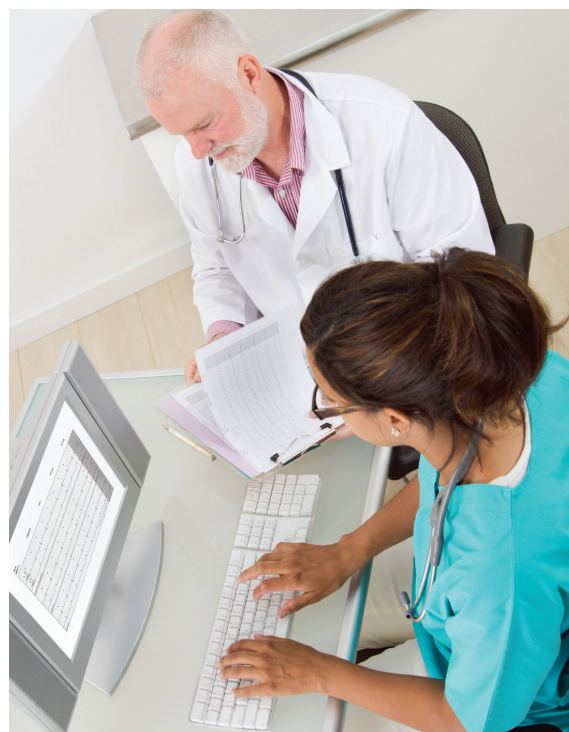
The Optimum Network

To help configure their optimum wireless broadband network, the practice worked with Tampa-based Rapid Systems, which recommended and deployed a Motorola Point-to-Point (PTP) solution that connects four of the six practice locations. The network includes two locations connected via Motorola Point-to-Point links to a practice office at Pine Ridge Hospital. Utilizing the roof of the five-story hospital building for elevation and a direct line-of-sight, the network transmits aggregated data from all three offices to the main Naples office via a Motorola PTP 500 link. Kyle is sold on wireless.

“As long as you have a good elevation and a line of sight path,” he states, “it’s such a smart decision to go with a wireless network.” And cost-effectiveness isn’t the only reason.

Reliability and Security

Kyle notes that the organization initially had questions about how the wireless network would affect reliability and security. Reliability concerns were soon allayed. Since the wireless solution



was implemented, says Kyle, “the connection from Pine Ridge hospital to our main office has been down only once, and that was a power issue, not the equipment’s fault.” There were no security issues either. “Because we are a health care organization, we are obligated to conform to Federal standards, especially HIPAA,” explains Kyle. “The system meets HIPAA standards with difficult-to-intercept high-elevation line-of-sight connectivity and AES encryption to safeguard signals.”

VoIP, e-Mail and Video

The practice uses its wireless network primarily for connectivity between offices, utilizing applications such as e-mail, VoIP and remote desktop computing. The organization is very enthusiastic about the performance its Motorola PTP network delivers. “For most offices, we get about 20 to 30 Mbps, which is fantastic,” says Kyle. In addition, video conferencing is used for partner and physician meetings that occur about three times a week. Although video transmission is bandwidth-intensive, Kyle explains, “We don’t really take a hit while we’re using it. Our video uses about 1.5 Mbps of bandwidth and the quality is excellent, with no shadowing, no crackling and no delays.”

Specialists in Urology is very satisfied with the Motorola/Rapid Systems wireless solution. Says Kyle, “Rapid Systems has been fantastic, they always make recommendations that are right on the money.” The practice is equally pleased with its Motorola wireless PTP networks. “From the first connection we made with wireless,” concludes Kyle, “it’s worked phenomenally for us. I would whole heartedly recommend wireless to anyone who is considering it.”

Providing High-Speed Wireless Service on Land, Sea and in Outer Space

Rapid Systems is a Motorola Service Partner and the owner and operator of a 15,000 square mile network that provides high-speed wireless communications to commercial and residential customers in the Tampa Bay area. A turnkey services provider, Rapid Systems offers microwave design, network infrastructure, Internet Services, wireless integration, and technical support. In addition, the company works with Motorola on a number of high-profile projects including delivering live coverage of NASCAR events and working with agencies such as NASA to provide the first VoIP phone call to the space shuttle from under the ocean.



"Our Motorola wireless network is a one-time capital expense with non-recurring charges compared to paying lease line cost until basically the end of time. We were able to achieve ROI in just nine months."

*- Patrick Foote,
IT director,
Laser Spine Institute*

Practice #2: Laser Spine Institute

Wireless connectivity also offers high performance and cost-effectiveness for smaller practices. The Laser Spine Institute of Tampa is a successful practice offering minimally invasive endoscopic laser procedures as alternatives to traditional open back and neck surgeries, fusions and artificial disc replacements. When growth necessitated the opening of a second facility about 250 meters from the original surgery center location, connectivity became a priority. From the beginning, it was evident that extending a fiber network to the new building would be cost prohibitive.

The optimum solution was wireless, and reduced cost wasn't the only benefit. Since IT had only 30 days to get the new system up and running, deployment speed was crucial. Says Patrick Foote, IT director, Laser Spine Institute, "Our (new) building did not have fiber, so a (wireless solution) provided a much faster turnaround time than a fiber install or MPLS configuration." Installation flexibility was also important. To reduce cost and optimize signal strength, the wireless link on the surgery center wasn't installed on the roof but in an office window.

Motorola PTP Wireless Network

For assistance, the Institute also turned to Rapid Systems, which helped the practice deploy a Motorola PTP wireless network. Although the

Institute considered other manufacturers' solutions, it chose Motorola for its ability to provide ample bandwidth with excellent cost-effectiveness. "We run VoIP, Electronic Medical Records, PACS (digital MRI and xray transmission), e-mail and thin client computing," explains Foote. To handle the many types of communications, Rapid Systems installed a wireless network based on Motorola PTP 600 equipment in the 5.4 GHz spectrum, which supports throughput of about 150 Mbps each way.

In addition to providing necessary bandwidth, the network helped the Laser Spine Institute save on operational costs. "Our Motorola wireless network is a one-time capital expense with non-recurring charges compared to paying lease line cost until basically the end of time," concludes Foote. With wireless, "we were able to achieve ROI in just nine months."

Communications Excellence in Practice

As wireless connectivity helps hospital and medical center communications take a quantum leap in efficiency and cost-effectiveness, wireless is also revolutionizing, on a smaller scale, medical practice communications. With proven performance, security, flexibility and cost efficiency, wireless broadband networks are helping practices of all sizes perfect their communications capabilities for physicians, patients and staff.



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