

St. John's Hospital Enhances Patient Care With an Avaya and Meru Wireless Communications System

According to its mission statement, St. John's Hospital, located in Springfield, Illinois, "provides a ministry of exceptional healthcare services to the people of central Illinois in the Catholic tradition of compassion, justice and reverence for life."

The mission's two facets – business and spiritual – help St. John's redefine its purpose every day. The business facet addresses the realities of how to serve those that need help, while the spiritual side focuses on the people who come to be healed. St. John's core values include respect, hospitality, stewardship, competence, care and joy.

A Business Challenge

Many years ago, St. John's Hospital realized the advantages wireless mobility could provide to caregivers and other hospital staff. An early investment in 802.11b allowed case managers to enter patient information into the electronic medical record system. Using laptops, managers could enter patient information directly, providing immediate updates to the patient record for other medical staff as well as reducing errors that can result from transcribing written records. After seeing the dramatic improvement in just this one area, the IT administrators realized that a more pervasive wireless local area network (WLAN) that could support not just data, but also voice applications, would provide even greater benefits.

After a lengthy and comprehensive evaluation process of multiple vendors, St. John's selected the joint solution offered by Avaya and Meru Networks. Meru is a Platinum-level member in the Avaya DeveloperConnection (DevConnect) program.

Key Capabilities of the Solution

Avaya Communication Manager – An open, scalable, and highly reliable telephony solution, Communication Manager provides centralized call control for a resilient, distributed network of media gateways and a wide range of analog, digital and IP-based communication devices.

Meru's Wireless Networking Product Suite – Purpose-built for the all-wireless hospital, the Suite provides "anywhere, anytime" voice, data and video connectivity for the hospital's mobile workforce – offering life-critical applications and seamless communications paramount to patient safety and care.

Other solution components include:

- SIP-based voice services for WiFi Handset connectivity throughout the hospital for supervisory nurses and staff (provided by Ascom)

- SIP-based voice services for WiFi Handset connectivity throughout the hospital for clinicians (provided by Vocera and Ascom)
- Enhanced data services for Point of Care (POC) applications at the bedside (MDdata, Mobile Carts, etc.)
- Security for electronic medical record (EMR) data protection
- EzRF management for real-time traffic monitoring and asset status

Seamless Transition to a New System

To provide voice mobility inside the hospital, St. John's used an Avaya wireless voice system that operated in the 1.9 GHz band. Newer, more advanced voice systems and the possibility of using a dual-mode cellular/Wi-Fi phone led the team to look at new WLAN solutions, including those that supported 802.11a. Multiple data and voice applications needed to be combined onto a single network without degrading the quality of service for those using the phones. Additional Avaya elements were added to enhance the overall performance of the system and solution.

The team installed the Meru WLAN on floors one through four of St. John's Hospital. 120 access points provide mobile connectivity for voice and data applications with a redundant controller in place to help ensure the highest availability. One of the key attributes that attracted St. John's to the Meru System was the fact that no site survey was required. Meru accomplishes this process with Virtual Cell technology, which eliminates co- and cross-channel interference. With the issue of co-channel interference resolved, Meru access points are simply placed in the best locations to maintain complete coverage. This eliminates the need for complex three-dimensional site plans to ensure that access points on the floor above or below are on different channels – and allows the network to be up and operating, more cleanly and smoothly, in less time.

For voice communications, St. John's selected Vocera Communications and Ascom Wireless. Over 200 Ascom handsets, along with 100-plus Vocera Communication Badges, deliver quick, easy communications among caregivers and other hospital staff. The system has been so well received that St John's Hospital plans to expand to 300 Vocera Badges and 400 Ascom devices. In addition to the voice and case management applications, the hospital has also moved its Surgery Information System (SIS) to the wireless network. Prior to that, operating room nurses would do pre-operative checks on the patient and then move to another area to transcribe the information into the system. Now, carts with laptops can be wheeled right into the O.R.

and the information can be entered directly, saving valuable time and reducing mistakes.

The initial rollout has worked so well, plans to expand the WLAN to cover the entire twelve floors of the hospital have been put in place. A Return on Investment (ROI) analysis was completed and the resulting economic advantages were compelling.

At completion, over 400 access points will be deployed as well as additional applications, including a more extensive electronic medical record system, barcode scanning for accurate inventory control and care delivery, guest and patient Internet access and RFID for asset tracking.

Benefits for the Hospital

The Avaya/Meru solution is easy to install, operate and manage. Additional benefits include:

- Enhanced voice and data communications throughout the facility
- Seamless voice communications for a host of client devices and services
- POC bedside application enhancements with assured application delivery
- Lowest total cost of ownership (TCO) of any wireless vendor in the market today
- Suite of new management tools

“The business advantages afforded to us by the Avaya/ Meru solution are measured daily through the successful treatment and care for hundreds of patients,” says St. John’s IT Manager Gretchen Niehaus. “Bringing true mobility to our clinicians has made a tremendous impact on both our ability to deliver compassionate care where it matters most, the bedside and in the time effectiveness with reporting.”

ABOUT DEVCONNECT

The DeveloperConnection Program (DevConnect) is a comprehensive set of innovative sales, support, marketing and services programs through which Avaya works with members to develop and promote their products and solutions that interoperate with Avaya solutions.

For more information, visit DevConnect at www.devconnectprogram.com

ABOUT MERU

Meru Networks is the global leader in wireless mobility infrastructure solutions that enable the All-Wireless Enterprise for FORTUNE 500® educational, healthcare, enterprise, and government markets. Its industry-leading innovations deliver pervasive, robust wireless service for business-critical applications. Meru’s award-winning Air Traffic Control technology brings the benefits of the cellular world to the WLAN environment, and it offers the only solution on the market that delivers the reliability, scalability, and security necessary for converged voice and data services over a single WLAN infrastructure.

Founded in 2002, Meru is based in Sunnyvale, California.

For more information, visit www.merunetworks.com.

ABOUT AVAYA

Avaya delivers Intelligent Communications solutions that help companies transform their businesses to achieve marketplace advantage. More than 1 million businesses worldwide, including more than 90 percent of the FORTUNE 500®, use Avaya solutions for IP Telephony, Unified Communications, Contact Centers and Communications Enabled Business Processes. Avaya Global Services provides comprehensive service and support for companies, small to large. For more information visit the Avaya Web site: www.avaya.com.

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