



# FAXTON-ST. LUKE'S HEALTHCARE Utica | New York | U.S.A.

**THE HOSPITAL TRANSFORMS ITS ABILITY TO DELIVER CARE AND MANAGE COSTS** using a Meru virtualized wireless LAN.

“The Meru virtualized wireless network simply runs. Now we can stay focused on enriching our healthcare operations and decreasing our overall costs.”

**Don Parlagreco** | Team Lead/Network Analyst for Network Data Systems, Faxton-St. Luke's Healthcare

## Meru Products Used

- ⌘ MC3150 Controllers
- ⌘ Meru System Director
- ⌘ Meru AP300 Series
- ⌘ Meru AP200 Series
- ⌘ E(z)RF Network Manager
- ⌘ E(z)RF Location Manager

## Challenges

- ⌘ Users' wireless connections were frequently dropped throughout the Emergency Department.
- ⌘ Poor voice call quality limited productivity.
- ⌘ Existing wireless network was difficult to administer and configure.
- ⌘ Wireless network could not support new applications across hospitals and campuses.

## Results

- ⌘ Achieved seamless roaming for voice and data users everywhere.
- ⌘ Improved patient satisfaction by increasing nurse efficiency and by providing internet access.
- ⌘ Reduced cost of workstation deployment by approximately 50 percent.
- ⌘ Simplified management by eliminating need for channel planning.

## Challenges

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Faxton-St. Luke's Healthcare has been consistently recognized as one of the nation's top hospitals. Comprised of two campus locations, St. Luke's Home Long Term Care, and eight primary care offices, the hospital provides 614 beds and spans 1.3 million square feet.

Faxton-St. Luke's is committed to using technology to improve patient care and reduce operational costs. In 2003 the hospital's IT organization had deployed a traditional microcell wireless network for bedside patient registration in the Emergency Department. However, users' connections were frequently dropped as they moved about the 10,000-square-foot facility. IT wanted to expand wireless access hospital-wide but knew that its existing wireless solution would not work.

"Poor voice quality and roaming hiccups were limiting what we could achieve with our healthcare information systems," said Don Parlagreco, team lead/network analyst for Network Data Systems for Faxton-St. Luke's. "We required seamless roaming and voice capabilities, as well as the ability to support 802.11a/b/g/n devices. The new network had to have scalability, reliability, and be manageable."

Faxton-St. Luke's decided to test a virtualized wireless LAN solution from Meru Networks. The Meru network surpassed all other offerings and Faxton-St. Luke's chose it to replace the Emergency Department network.

"We did a real-world test in our environment and the Meru network did everything Meru said it would do," said Parlagreco. "We tested the roaming and power levels and the network performed flawlessly. That gave us the comfort to deploy it hospital-wide."

## Solution

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Working with a Meru Networks' reseller partner, CNC Microtech, Faxton-St. Luke's deployed Meru MC 3000 series controllers and AP200 series access points throughout the St. Luke's and Faxton campuses. Wireless Internet access was also deployed across campuses to provide free Internet service for patients and visitors—a first among hospitals in the area.

The Meru virtualized wireless LAN eliminated the need for channel planning, enabling the hospital to deploy all access points on the same channel in a Virtual Cell™. Each access point is deployed at full power, delivering greater coverage with fewer access points—up to 30% fewer access points may be required, which also reduces capital costs. Adding capacity for dense user environments is as simple as adding a channel and performance for bandwidth-intensive devices is significantly improved.

## Benefits

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The Meru virtualized wireless LAN now powers a wide range of mission-critical applications and users enjoy seamless roaming throughout and across the hospitals. The hospital has deployed

wireless McKesson Electronic Medical Records in the Emergency Department for bedside registration. The Eclipsys Clinical Information System supports nursing documentation and surgery scheduling. Integration with Rauland's Responder 4 nurse call system also sends calls directly to nurses using Ascom handheld devices, reducing the wait time from calls delivered through the main nursing station.

"We're consistently measured on the level of efficiency in managing our time and the patient satisfaction that we deliver," said Michelle Polacelli, RN BS OCN nurse manager for Faxton St. Luke's Healthcare. "Our previous overhead paging system was loud and disruptive. Thanks to Meru's wireless solution, our Press Ganey survey results have improved from 'satisfactory' to 'exceeds' in response to the noise level in and around a patient's room."

The network also powers a transport service response application from TeleTracking Technologies. Using Ascom phones, transport personnel have instant communication, which helps them retrieve the correct treatment devices and deliver patients to tests on time.

In 2009, Faxton-St. Luke's implemented RFID asset tracking using Meru's E(z)RF Location Manager, which has reduced maintenance costs by quickly locating assets and identifying items that may require recalibration or have an expired lease. The solution saved the hospital from having to hire another full-time employee. Location Manager and RFID tags also are used to monitor the temperature of stored medications. Previously, nurses manually logged the temperatures of refrigerated medications once or twice a day—now the process is automated and nurses are freed to spend more time on patient care.

"The network is much easier to administer than the previous system," said Parlagreco. "We did not have to add staff, even with multiple controllers and hundreds of devices. Once you set it up, it runs."

The Meru network also saved the hospital significant money when deploying workstations. Installing a workstation in every patient room for nurses would have cost over \$880,000 just for one campus. Instead, wireless access for both hospitals and 100 shared WOWs were deployed for half the cost.

## Next Steps

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The next planned application deployment is a Computerized Physician Order Entry system. Physicians will be able to enter orders electronically using Eclipsys, and the hospital expects that in addition to helping improve patient care, the system will also benefit physician recruiting efforts.

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