

## Southeastern U.S. Hospital Improves Efficiency, Enhances Care

Forrest General Hospital deploys Cisco wireless network and unified communications, allowing clinicians to communicate more easily.

EXECUTIVE SUMMARY
<p><b>FORREST GENERAL HOSPITAL</b></p> <ul style="list-style-type: none"> <li>• Healthcare</li> <li>• Hattiesburg, Mississippi</li> <li>• 3365 employees</li> </ul> <p><b>BUSINESS CHALLENGE</b></p> <ul style="list-style-type: none"> <li>• Upgrade legacy infrastructure approaching capacity</li> <li>• Enhance ability to recover costs through improved communications</li> <li>• Improve workflow efficiency of physicians, floor nurses, and other clinicians</li> </ul>
<p><b>NETWORK SOLUTION</b></p> <ul style="list-style-type: none"> <li>• Wireless telephony featuring Voice over Internet Protocol (VOIP), which allows for the secure integration of voice, data, and video on the same network</li> <li>• Wireless charting and record keeping</li> <li>• Upgraded infrastructure</li> </ul>
<p><b>BUSINESS RESULTS</b></p> <ul style="list-style-type: none"> <li>• Hospital better able to meet payers' timelines in delivering patient care</li> <li>• Employee satisfaction improved</li> </ul>

### Business Challenge

As early as 1999, Forrest General Hospital saw that healthcare charting and record keeping was evolving to a paperless protocol of wireless technologies, and that its current system was not going to be able to deliver on the new demands of the 21st century. It also realized that healthcare reimbursements from insurers were largely based on how long it should take to address a particular condition with very few exceptions allowed for case-by-case nuances. These conditions meant that communications and efficiency would be at a premium, and that to continue to serve its community well, the hospital would need an infrastructure and telecommunications system that would maximize the efficiency of its staff-member-to-staff-member communications and allow for paperless record keeping at the bedside.

“We saw the need to evolve from paper to an electronic medical network, and our incumbent system was not up to that task,” says Vance Green, the assistant director of information technology at Forrest General Hospital, and the person with chief responsibility for designing the hospital’s new system and selecting a vendor. “We needed to upgrade our switches, upgrade our access points, and provide central management points with internal controls.”

**“Healthcare is about timeliness, and our Cisco solution has been a win-win for our patients and our hospital.”**

—Vance Green, Assistant Director of Information Technology, Forrest General Hospital

### Network Solution

The Cisco Medical-Grade Network foundation supports mobility, data, voice, and video. It connects all stakeholders in the healthcare system to a single wireless information and communications infrastructure. This industry-based architecture provides the resilience, protection, responsiveness, and interaction that improve organizational workflow for increased productivity and cost-effectiveness. It enables more effective, more secure, more personal communications and brings

people together by providing a new way of communicating—where your business moves with you, security is everywhere, and information is always at hand.

“Physicians making rounds now have portable laptops that they can roll into a patient’s room and perform all their charting and dictation in real time,” says Green. “This makes record keeping more immediate, accurate, and efficient.”

**“Our physicians should expect our infrastructure to support the state-of-the-art equipment that our patients deserve. Our relationship with Cisco has allowed us to meet those expectations.”**

—Dr. John Fitzpatrick, Chief Medical Information Officer, Forrest General Hospital

But the communications solution at Forrest General involves more than just physicians using wireless communications. “Dieticians, nurses, and respiratory therapists are using wireless tablet PCs to check orders, keep track of meals, and look back at test results,” Green says. “Every piece of information is where it needs to be, secured and online, and the days of searching all over the place for a paper-based chart are over.”

Another breakthrough for Forrest General has been the success of the pilot project for nurses that featured Cisco wireless phones and its Medical-Grade Network infrastructure. “We used to have issues regarding beepers, finding phones, dead spots, and call-backs,” says Sam Woods, a network server administrator who works with Green. “Now, in this pilot, our coverage has been nearly 100 percent on every floor throughout the campus.”

The Cisco wireless phone system is also used to modernize and improve the patient call system. Traditionally, in a non-wireless environment, a patient would press the call button in his or her room, leading to a buzzer at the nurses’ station, and then a page over an intercom to get the right nurse to the right room in a timely manner. Now, under this pilot program, when a nurse is summoned, he or she is notified directly on their wireless phone, regardless of where they are on the floor. This saves time and eliminates the constant pages that many Forrest General patients and visitors found annoying. “One of our most consistent complaints was the unrelenting noise that we had calling nurses and others into patients’ rooms,” says Green. “The Cisco wireless phones have just about eliminated that problem.” Green also added that the third party nurse call system that incorporates Cisco technology is organized by nurse, shift, and patient, helping ensure that coverage is complete and accurate. Forrest General has deployed about 200 Cisco wireless phones for this trial through summer of 2007.

Forrest General is also using its Cisco Medical-Grade Network as the infrastructure to provide wireless access to the Picture Archive Communication System (PACS), to allow radiologists to evaluate x-rays electronically, without using film. The Cisco Medical-Grade Network also supports portable Electrocardiogram units that allow physicians to see test results as soon as they are available and a Go-MD dictation system that increases immediacy, accuracy, and efficiency in charting and record keeping.

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## Business Results

Forrest General's Green reports that the new Cisco Medical-Grade Network and the Unified Communications and Unified Wireless Network products that it supports have made staff members more efficient and helped the hospital eliminate redundant work. As a result, the improved telecommunications system and infrastructure allow the hospital to more easily meet and sometimes even exceed time standards for reimbursement. This allows Forrest General to be adequately reimbursed for services rendered and increase patient satisfaction by addressing their cases in a more timely manner.

### PRODUCT LIST

- Cisco Unified Communications
- Cisco Unified Wireless Network
- Cisco Unified Wireless IP Telephones
- Cisco Virtual Private Network
- Cisco 2700 Wireless Location Appliance
- Cisco Adaptive Security Appliance

## Next Steps

Forrest General has begun implementation of Cisco Location-Aware Healthcare. This location solution allows hospital employees to log in from any nearby PC to track assets and equipment. From that PC, a customized floor map will display the physical location of every piece of equipment with a Wi-Fi tag. "We do not have our tags yet, but the infrastructure is in place," says Green. "We expect this to save us a lot of the time and effort that we spend searching for equipment or people and will improve security. Soon, our people will know where everything (and everyone) is all the time and will be better able to plan ahead and coordinate efforts." Green expects that the system will be in place by the end of calendar year 2007.

## For More Information

To learn more about how infrastructure upgrades and the solutions they support can help your business achieve its goals, contact your Cisco representative or reseller today, or visit us on the Web at: <http://www.cisco.com/go/healthcare>.



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