

Case study

Daou Systems Inc.

Daou Improves
Healthcare IT with
Intermec Technology
Implementation
Services



At a glance

Industry: Healthcare

Application: Wireless local
area network (WLAN)

Imagine a cardiologist dictating instructions to colleagues in the O.R., over a wireless device, while walking to another surgery across the hospital. Certainly not the time for gaps in the transmission, or for the transmission itself to interfere with any patient monitoring systems. Successful wireless transmissions occur every day in healthcare facilities in which wireless networks have been properly designed and installed.

Daou Systems Inc., headquartered in Exton, Penn., understands healthcare IT. For 16 years, Daou has provided IT consulting and management services to more than 1,600 healthcare organizations. Daou helps these organizations design, deploy, integrate and support network infrastructure and applications.

Improved Information Circulation

“Hospitals are implementing wireless infrastructures that allow clinicians to perform tasks like real-time bedside charting on wireless handheld devices,” said Chris Kent, director of the Infrastructure Services Group at Daou Systems. “Previously, hospital staff wrote on a paper chart, then went to a central station to key in the information later. Sometimes handwritten entries had to wait until the end of a shift or were passed off to someone else to enter. Oftentimes reading someone else’s writing can be difficult; perhaps the information gets misinterpreted or just mis-keyed.”

Another boon to healthcare practitioners is wireless voice. “Clinicians, aestheticians, nurses, doctors – they all love wireless voice,” Kent said. “With an 802.11-enabled badge hanging around their neck, healthcare workers can talk with co-workers hands-free, enabling a surgeon in the operating room to call an emergency page to cardiology and receive a response in real time. That’s a real improvement in patient care.”

Site Surveys Diagnose Wireless Needs

Before Daou can deliver the wireless equipment necessary to outfit a healthcare facility, a detailed WLAN site survey must be performed to determine the best wireless equipment for the job – and the best placement for that equipment.

“Site surveys are key because they establish a foundation by which Daou designs and deploys entire wireless infrastructures,” Kent said. “Daou does not order site surveys for just one area within a healthcare facility; they must be done to ensure coverage throughout the whole enterprise. In a multi-site deployment, this can mean multimillions of square feet. In fact, one of our multi-facility jobs covers more than 4.5 million square feet.

Prescription: Intermec Technology Implementation Services

“We do business with Intermec because of the skill set and level of knowledge



within its Technology Services Group," Kent said. "The company offers a well-defined wireless site survey process that is extremely efficient, and therefore repeatable. In other words, we know what we are getting from Intermec every time. The Intermec teams all follow the same processes. This predictability allows Daou to complete installs in a shorter amount of time, and that saves our customers and us money.

"Daou is a Cisco Premier Certified Partner, and we've achieved Cisco Wireless LAN Specialization status as well," Kent said. "By and large, our customers request Cisco wireless infrastructure products, and this trend has really picked up in the last 18 months – Cisco's done a great job getting market share, especially in the healthcare industry. For these reasons, we search for partners that share our enthusiasm for Cisco technology. Intermec certainly fills the bill there."

In fact, Intermec was named Cisco's first-ever Solutions Technology Integrator in January of 2004, recognition by Cisco of Intermec's capabilities in implementing wireless infrastructure. A pioneer in wireless network technology, Intermec has been performing site surveys for nearly 20 years and warranties the results for eighteen months.

"Intermec is not the first company we've used for site surveys," Kent continued. "But our previous providers could not scale to the level we needed. They had no national presence, but Intermec does. They have dozens of certified Technology Implementation Services radio frequency engineers all over the country, so Intermec has the people we need, where we need them.

"Cost is an issue too, and Intermec charges reasonable rates." Kent continued. "Within the healthcare industry, we must be cognizant of that. We've worked with other vendors that were just too costly, and as a result of their prices, we were going to lose business."

Strength in Cisco APs, Complex Environments

"Our status as a Cisco Solutions Technology Integrator means that we know Cisco's access points inside and out, and that's primarily what Daou installs in hospital environments," said Mike McNamara, manager of Intermec's Strategic Account Service. "The Intermec staff is constantly training on Cisco APs' technology so we can make the most of it for our customers.

"We also know large, complex environments. And hospitals certainly qualify as large and complex. For these reasons, plus Intermec's years of success performing wireless network site surveys and installing APs, make us a clear choice for customers like Daou."

Healthy Networks, Healthy Communications

The site survey allows us to analyze what equipment is already onsite so that we can plan it into the new network," Kent said. "Infant monitoring systems, cardiac monitoring systems – really, any kind of telemetry system that monitors patient care – can affect the final network configuration. We don't want to do anything that might interfere with them. And these systems are in the majority of hospitals."

Ignoring such details can have potentially disastrous effects, both to patients and the healthcare facility, he noted.

"We had a customer who, despite our recommendation, decided to forgo a site survey and placed their own access points," Kent continued. "Long story short: interference from a poorly placed access point radio tripped the child abduction system within the facility's neonatal area. The system closed and locked the doors, stopped the elevators and called the police. What a mess.

A Positive Prognosis: Adventist Health Systems

Barret Hand, director of communications for the Information Services division of Adventist Health Systems, is responsible for the network and communications infrastructure for the dozens of hospitals that Adventist serves. During the second half of 2004, Hand's division was charged with completing network and wireless assessments in just an eight-week period for 25 Adventist hospitals in preparation for upcoming clinical system upgrades and implementations.

Daou and Intermec worked together to meet Adventist's timetable, spending considerable time understanding and designing to the company's complex technical environment. The end result was a win-win-win.

"We have worked with Daou on several projects, including an evaluation and assessment of our ability to support IP Telephony, evaluation of wireless management products and tools, and wireless assessment and budget development," Hand said. "Our experience with the company on all projects has been excellent."

"The working relationship between Daou and Intermec has been top-notch and professional, and I hope to strengthen this partnership in the future," Kent concluded.

North America

Corporate Headquarters

6001 36th Avenue West
Everett, Washington 98203
Phone: (425) 348-2600
Fax: (425) 355-9551

South America & Mexico Headquarters Office

Newport Beach, California
Phone: (949) 955-0785
Fax: (949) 756-8782

Europe/Middle East &

Africa Headquarters Office

Reading, United Kingdom
Phone: +44 118 923 0800
Fax: +44 118 923 0801

Asia Pacific

Headquarters Office
Singapore
Phone: +65 6303 2100
Fax: +65 6303 2199

Internet

www.intermec.com
Worldwide Locations:
www.intermec.com/locations

Sales

Toll Free NA: (800) 934-3163
Toll in NA: (425) 348-2726
Freephone ROW: 00 800 4488 8844
Toll ROW: +44 134 435 0296

OEM Sales

Phone: (425) 348-2762

Media Sales

Phone: (513) 874-5882

Customer Service and Support

Toll Free NA: (800) 755-5505
Toll in NA: (425) 356-1799

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