

## Real Estate Firm Assists Mobile Agents with WLAN

John L. Scott deploys a unified wireless network across several offices and three states to attract and retain top real estate agents.

EXECUTIVE SUMMARY
<p><b>JOHN L. SCOTT</b></p> <ul style="list-style-type: none"> <li>• Real Estate</li> <li>• Bellevue, Washington</li> <li>• 500 full-time office employees and 4700 agents</li> </ul> <p><b>BUSINESS CHALLENGE</b></p> <ul style="list-style-type: none"> <li>• Attract and retain the most qualified real estate agents</li> <li>• Provide the company's dispersed branch offices with secure, easy-to-manage wireless LAN access, replacing consumer-level WLAN equipment</li> <li>• Prevent security breaches to help ensure that the network meets legal privacy requirements</li> </ul>
<p><b>SOLUTION</b></p> <ul style="list-style-type: none"> <li>• Cisco Unified Wireless Network, composed of access points, can be centrally managed by a wireless LAN controller, which offers valuable security features.</li> <li>• Cisco Wireless Control System (WCS) software provides advanced management, security, and network diagnostic features.</li> <li>• Cisco SMARTnet network support contract provides access to technical assistance, next-business-day hardware replacement, and ongoing software updates.</li> </ul>
<p><b>BUSINESS RESULTS</b></p> <ul style="list-style-type: none"> <li>• Promise of ubiquitous wireless network access helps firm recruit and retain real estate agents</li> <li>• Cisco SMARTnet contract eliminates unbudgeted network maintenance fees</li> <li>• Centralized management saves time for network administrators</li> </ul>

### Business Challenge

Founded in 1931, John L. Scott Real Estate is one of the largest and most successful real estate companies in the United States. In 2006 alone, it closed 52,000 transactions and grossed more than US\$18 billion in sales. The company works with 4700 sales agents in branch offices throughout Oregon, Washington, and Idaho, and it strives to recruit the best.

“Our business model is specifically designed to attract and retain real estate agents,” says Jason Herrick, infrastructure architect at John L. Scott. “Real estate agents will often select agencies not only for the business aspects but for the amenities that they offer.”

A few years ago the company decided to equip some of its offices with wireless networking equipment. “Real estate agents are very mobile, traveling among our offices, and mobile Internet access was important to them,” Herrick says, explaining that the agents must have ubiquitous access to real estate listings, current home loan rates, and other variable information.

In fact, he adds, some agents had already set up their own special wireless access points (APs) in a few branch offices, which posed security risks.

Initially, the company provided individual offices with wireless LANs composed of inexpensive, consumer-grade access points. But the company's small, five-person IT team quickly realized that this decision was actually cost prohibitive, resulting in unexpected, unbudgeted maintenance costs. If anyone reported a problem, a member of the company's small IT staff would have to drive to a remote office to fix or upgrade the access point manually.

“We had no central management, no centralized monitoring, and a lack of common configuration elements,” Herrick says. “There was no way to solve problems remotely. We would have to rely on end users to notify us about any problems. Management of the wireless LANs was relegated to office administrators and individual employees.”

And although the consumer-grade equipment provided better security than the equipment that agents had deployed secretly, it still was not sufficient.

### Network Solution

Under the direction of CIO, Peter Theeuwen, with security and central management needs a top focus, John L. Scott decided to install a Cisco® Unified Wireless Network. The solution is composed of Cisco Aironet® 1100 and 1200 Series lightweight access points deployed across 42 offices, managed centrally at company headquarters by a Cisco 4400 Series wireless LAN controller and Cisco Wireless Control System (WCS) management software. WCS includes site survey tools, in addition to advanced management, security, and network diagnostic features.

“We picked Cisco for several reasons,” Herrick says. “First of all, our wired network was primarily made up of Cisco products, so our staff would not have to learn all new interfaces and command sets.”

The company also liked the security features inherent in a centrally-managed WLAN, in which all the authentication mechanisms are stored in the controller rather than in the APs. “The controller-based architecture was compelling,” he says. “It meant that if an access point were ever stolen, the thief would not be able to retrieve the security configuration or hop on the network at will.”

**“The new Cisco network is a lot easier to manage and to deploy. Access point configuration is done in less than five minutes, remotely.”**

—Jason Herrick, infrastructure architect at John L. Scott

The Cisco Unified Wireless Network also offered the ability to detect rogue access points remotely, using WCS. John L. Scott valued this feature, because the IT team had found a rogue access point in the past, and that was only because someone in a remote office happened to see it.

“Previously, we had no real rogue AP detection,” Herrick says. “Finding a rogue AP is critical; in order to maintain privacy compliance rules, we obviously need to make sure nobody has unauthorized access to company data.”

Cisco also offered superior sales and service support, together with reseller partner Incentra Solutions, Herrick says.

“Our reseller showed up for every meeting with Cisco, and they worked hand in hand,” Herrick says. “Cisco provided a lot of validation for what our reseller was guiding us on. That let our management know that each decision that we were making was being evaluated not only by our team, but by both our vendor and our reseller.” The local Cisco Commercial account team supporting John L. Scott includes Joe Dagonese (Account Manager) and Ryan Miles (Systems Engineer).

The team deployed an average of 2.7 access points in each of 42 branch offices. Because many were deployed hundreds of miles from the controller, the access points were deployed in hybrid remote edge access point (H-REAP) mode. Available exclusively on Cisco 1100 and 1200 Series access points, H-REAP mode enables customers to configure and control up to three access points in a branch or remote office from headquarters, without deploying a controller in each office.

If the connection to the controller is lost, the H-REAP access points can perform client authentication locally.

The team also took advantage of the Cisco network's ability to support multiple service set identifiers (SSIDs) on a single network, enabling different levels of access for different groups. Real estate agents, who are hired contractors rather than official employees, have wireless access to the company extranet and e-mail servers. They can keep up to date on necessary information and keep in constant touch with their customers. Full-time corporate employees of John L. Scott have access to additional information, such as financial data and trade secrets.

John L. Scott protects its investment with a Cisco SMARTnet service contract, which includes 24-hour access to the Cisco Technical Assistance Center, next-business-day hardware replacement, and ongoing software updates.

"Every single device that we have has this support contract attached to it," Herrick says.

### **Business Results**

While the Cisco Unified Wireless Network deployment at John L. Scott is still in progress, the financial benefits of an enterprise-level wireless network were clear from the beginning, starting at the top of the company.

"There has been a tremendous improvement in performance and reliability," Herrick says. "Our president used to lose network connectivity in his own office constantly, and as soon as we installed a Cisco access point, he no longer lost connectivity."

"Repairing the consumer-level access points was costing us a great deal in unexpected expenses," Herrick says. "With the Cisco implementation and SMARTnet, there will be no unbudgeted expenses because everything is covered by the SMARTnet contract."

Now the company can attract new agents with the promise of reliable wireless network access, which adheres to state and federal privacy requirements. The network gives the agents ubiquitous access to key information such as current loan rates and new listings, letting them know whether they need to revise an offer. In the real estate industry, wireless access is not a luxury, it is a mission-critical application.

With the old network, in addition to the cost of installing and physically repairing the old equipment, responding to any problem would take up a significant part of the day.

"It would require several hours just to drive to a remote site and back," Herrick says. "The new Cisco wireless network is a lot easier to manage and it is a lot easier to deploy. Access point configuration is done centrally in less than five minutes, remotely."

As the deployment continues, John L. Scott is taking advantage of the intelligent Cisco management software to add wireless coverage to additional sites.

"WCS is a big lifesaver because it helps us to perform site surveys," Herrick says. "Since the IT staff is small, I do not have time to go out and physically measure every site. We are using WCS to facilitate that. That is saving me a tremendous amount of time and travel."

## Next Steps

Herrick and his team are currently focused on providing superior wireless data access to all of John L. Scott's branch offices. But the company is already considering more advanced applications, such as secure Internet access for guests of the company. "They have been discussing the idea of offering guest services with a patented Web portal, and our network lets them do that," Miles says.

### PRODUCT LIST

#### Routing and Switching

- Cisco 4400 Series Wireless LAN Controller
- Cisco Wireless Control System
- Cisco Aironet 1100 Series Access Points
- Cisco Aironet 1200 Series Access Points

#### Mobility Services

- Cisco Advanced Wireless Security Service
- Cisco Wireless Guest Access Service

The Cisco Unified Wireless Network will allow the company to provide a separate SSID for company guests, in addition to other security features.

"One reason that we chose Cisco was that the network supports the ability to grant guest access for a limited time per session, to prevent theft of service," Herrick says.

The company also is considering deploying voice applications like wireless telephony on the WLAN.

"Management has expressed an interest in wireless voice over IP," Herrick says. "We know that Cisco is primed to handle that better than any other wireless provider."

## For More Information

- For more information on Cisco wireless solutions, visit: <http://www.cisco.com/go/wireless>
- For more information on Cisco Unified Wireless Network Solution, visit: <http://www.cisco.com/go/unifiedwireless>
- For more information on Cisco SMARTnet, visit: <http://www.cisco.com/go/smartnet>
- For more information on John L. Scott, visit: <http://www.johnlscott.com>



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