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WIRELESS GENERATION

A \$17,000-plus investment in wireless networking and back-office software puts a South Carolina builder a step ahead.

BY STEVE ZURIER

THE IMAGE OF THE SMALL BUILDER AS a rough-and-tumble guy in his 50s or 60s who can do anything with his hands except handle a computer is fading fast. The tech-savvy Gen-Xers are starting to run building companies—and you can bet many view a small-office network as an essential tool.

Take Steven Kendrick, 36, president of Structures Building Co. in Mt. Pleasant, S.C., which builds about 20 custom and spec homes annually that sell for \$350,000 to \$850,000. Kendrick was an impressionable 16-year-old when the first Macintosh computer was released in 1984, so it makes perfect sense that as an adult 20 years later he'd be willing to spend \$17,425 on a wireless network and Master Builder back-office setup. Structures installed the new technology late last year. Consultant Software Solutions and Designs of Charleston, S.C., set up the new system.

"I've always been a nerdy kind of guy," says

Kendrick. "We're a young company—most of us are in our 30s—and so having everyone comfortable with computers gives us an edge over our competitors. Our Web site, for example, is much more than a marketing tool. Customers who are on the road and out of town can log in and monitor the progress of their job."

Structures has five employees: a project manager, an assistant project manager, an estimator, a field supervisor, and Kendrick, who acts as jack-of-all-trades. All but the field super have laptops with built-in wireless cards that free them up to work anywhere in the office. Now, instead of having to write down the minutes of a meeting and re-enter the results into a personal computer back at the desk, Kendrick and his employees can hold meetings in the conference room and enter notes right into their wireless laptops. The wireless network also lets them print from anywhere in the office and use PDAs locally.

FLEXIBILITY FACTOR

Kendrick says the wireless laptops also give his staff the flexibility to work from *(see page 178)*



PHOTO COURTESY OF STRUCTURES BUILDING CO.



TECH SAVVY: Steven Kendrick, president of Structures Building Co. in Mt. Pleasant, S.C., says staying on the cutting edge of technology keeps his custom building company competitive.

home. Staffers use GoToMyPC remote access software to connect to the company's server via a local wireless router installed at home. Kendrick plans to add a virtual private network (VPN) capability, which will allow him and his employees to access the company's network with the enhanced security VPNs offer.

"We don't have a formal process," says Kendrick. "But as a perk for our employees, every once in a while when an employee needs a day away from the office, the wireless laptops give them the ability to work from home. It's great, but you need responsible employees to make it work."

Structures is using a Linksys 802.11g wireless router for Internet connectivity and wireless networking. For the uninitiated, there are two basic standards for wireless routers. At 11 megabits per second, an 802.11b router is the slower but more established standard. It offers coverage of up to 300 feet. The 802.11g routers, which have been on the market for the past year or so, offer 54-megabits-per-second bandwidth, but are a less mature technology and cover only about 100 feet.

Another important component of the technology Structures deploys—and part of the \$17,000 pur-

PONY UP

Here's what Structures Building Co. paid for its small-office wireless network:

1 computer server, running Microsoft Small Business Server and Microsoft Exchange	\$2,500
4 wireless laptops, Gateway 450s, running Microsoft Windows XP and Office	\$6,800
1 wireless router, Linksys	\$125
1 back-office program, Intuit Master Builder, including estimating module	\$8,000
TOTAL	\$17,425

chase—is the Windows 2003 Server. The networking software lets Structures' employees share files, plus it acts as an e-mail server and file manager. All backup is stored in the Windows 2003 Server. The laptops have a built-in 802.11b wireless card, which works fine with the 802.11g router and runs the Windows XP operating system, plus Microsoft Outlook for e-mail and the standard Microsoft Office business applications.

NETWORKING BASICS

Here are some tips for setting up a small-office wireless network from James Mellis, president of Software Solutions and Design in Charleston, S.C., the consulting company that set up a wireless network for Structures Building Co.

1. DECIDE WHY YOU NEED WIRELESS. The main reason for deploying a wireless network is achieving convenience and flexibility within the office. Short of spending several thousand dollars for wireless towers, don't expect a wireless network to help you out in the field. Of course, wireless laptops and PDAs will work at many airports where wireless hot spots are available.

2. BE HONEST ABOUT THE AREA YOU WANT TO COVER. Keep in mind that there are two basic flavors of wireless routers. The 802.11b routers offer slower bandwidth at 11 megabits per second, but can cover up to 300 feet. The 802.11g routers deliver 54-megabits-per-second bandwidth, but generally cover less than 100 feet. If you want the faster bandwidth, you might need to spend the money on at least one extra access point so your entire office is covered.

3. THINK ABOUT SECURITY. A wireless network offers advantages in terms of flexibility, but it also opens your business to potential security breaches. The latest Linksys routers and wireless cards come with a new generation of security called Wi-Fi Protected Access (WPA) built in. Ask your information technology (IT) consultant if your wireless products come with WPA. Also, be sure your IT person does MAC (Media Access Control) address filtering. The idea is to tell the system the MAC addresses of only the network cards you want to have access to the network. Computers with network cards that have other addresses will be denied access.

4. BE REALISTIC ABOUT WHAT WIRELESS CAN ACCOMPLISH. Remember that even if you deploy an 802.11g router, it's shared bandwidth. So if you have five people using the system, that's five people sharing 54 megabits per second of bandwidth. Power users and offices with more than 10 computers should use wireless only as a supplement to a wired network.

MASTER THE POSSIBILITIES

The technology infrastructure lets Structures really maximize the features of Master Builder. For example, through the network, Structures employees can send schedule updates to one another and to the company's subcontractors. The company also e-mails and faxes out purchase orders through the network to subs and suppliers. And, thanks to Microsoft's SharePoint, a collaboration tool, the Structures staff can share and annotate documents over internal Web pages.

Kendrick is realistic about technology. Some products work, others don't. For instance, he says his company had mixed results with handhelds. "The handhelds would be great if we could get some better wireless coverage," he says. "You still can't hook up through a cell phone. The speed is too slow."

Next up for the builder? Kendrick is considering running a Palm application like Punchlist over a Treo, a cell phone that can also run Palm applications. One thing's certain, though: He won't stop deploying new technology any time soon. He's determined to keep that edge.

"Because technology is ever-evolving, our business strategy is to keep looking for the next thing," Kendrick says. "New technology requires an investment, but if it's done correctly, it pays for itself." ■

TO LEARN MORE ABOUT WIRELESS NETWORKS, VISIT OUR WEB SITE AT WWW.BUILDERONLINE.COM. CLICK ON "THE MAGAZINES" TAB AND THEN CLICK ON "BUILDER ARTICLE LINKS."