

# Working without Wires

**The bravest aerial artists  
work without nets.  
The boldest brokers are  
working without wires.  
When Miguel Berger,  
CRB, launched his  
brokerage, he set up  
a wireless local area  
network. Here's how.**

**By Angela L. Allen**

**M**iguel Berger, CRB, ePro, GRI, has always recognized a natural kinship between his 2 passions: technology and real estate. In 2001, after 16 years of combined real estate and technology consulting experience, he launched TechValley Homes Real Estate in Albany, N.Y., to do for himself what he had been teaching others to do for nearly 2 decades.

Berger's small but technologically advanced brokerage is a full-service, independent real estate company, handling a range of properties priced from \$7,500 to \$750,000 in a 4-county area located about 150 miles north of New York City. Use of technology has helped the brokerage increase both sales volume and productivity. In 2002, TechValley Homes closed about 85 transactions with 14 agents. The brokerage was building that year, so not all agents had been with the firm for the entire year. As of Sept. 1, 2003, 16 agents had closed 184 transactions, and Berger expects to hit 250 by year's end. The average home-sale price is about \$170,000.

Berger attributes his success to quality customer service provided by his team of career agents and to the use of top technology tools. "Used properly, technology frees agents to spend more one-on-one time with clients," says Berger. "Anyone who allows technology to distance them from a client is missing the point and

failing to take advantage of a magnificent opportunity to improve both business and client relationships."

## Maximizing Technology's Benefits

Berger and his staff rely on the Internet, e-mail, their office network (intranet) and standard PC software to maintain their high-tech edge and increase volume. Ensuring that all e-mail leads generated from the company Web site ([www.techvalleyhomes.com](http://www.techvalleyhomes.com)) are captured has been a big part of improved productivity.

"E-mail is our primary communication tool," Berger says, "and it has really improved our efficiency. Our company policy is simple: An e-mail should be treated the same way as a phone call. It should be answered promptly—within hours, not days. While agents have the freedom to communicate and follow up with their clients, we have also created a safety net for e-mail inquiries. If the e-mail is not directed to a particular agent, it goes to the office administrative assistant with a copy to me so we can make sure things get followed up."

All of Berger's agents also use Palm PDAs and have notebook computers. "The PDA is a unique tool that allows agents to have their whole book of business on a small device," Berger says. "And their laptops make them mobile, so they can work from anywhere and still have everything they need."

The primary software used in the office, at present, is Microsoft Office Professional but Berger is developing his own proprietary software that will be a one-point program enabling agents to access the MLS online or off, as well as keep contacts and get forms. In the meantime, Berger has encouraged his agents to use ZipForms Online ([www.zipform.com](http://www.zipform.com)) and the full version of Adobe Acrobat, which allows agents to convert any document created on their computers to an e-mailable PDF file. "PDF format is really underutilized," Berger says. "The complete version of the software used to be about \$500, but now the price is under \$200. Many people don't realize that if they just have the free Acrobat Reader portion of the program, they

are missing out on an opportunity to easily convert documents to something that can be e-mailed and downloaded easily by the recipient.”

### What He Bought

Just as Berger has coached his agents to use the latest technology, he has implemented it in the office. His computer-savvy sales associates enjoy high-performance connectivity with no strings—and no wires—attached. When planning for the company’s opening, Berger investigated the best

options in high-tech business solutions to serve clients and to make life easier for his agents. After extensive research, he decided a wireless local area network (LAN) was the smartest way to go. “A wireless LAN keeps my agents portable, keeps them working in comfort from anywhere in the office and increases the flexibility of individual work styles,” Berger says.

Berger says his primary considerations for using a wireless LAN were security, ease of use, reliability, ease of implementation and cost.

While a wireless network may seem exotic and mysterious, it’s really not much different from a wired system. Just as with a wired LAN, a server or central computer is required that is hardwired to a transmission line. Berger has a T-1 line coming into the office, half of which is devoted to data transmission and the other half to voice. Each agent’s and staff member’s computer—most are laptops—is connected to the network with a wireless card. Traffic on the network is routed through a hub.



**A wireless local area network gives agents greater flexibility and was less expensive to install.**

## Cost Comparison: Wireless vs. Traditional

### Wireless

AirPlus Xtreme G DI-624 4-port wireless router	\$109.00
Wireless PCI adapter (desktop)	69.00
Card Bus adapter (laptop) (\$65x5)	325.00
Hard wire to connect the hub	20.00
Convenience	priceless
<b>Total for wireless connection</b>	<b>\$523.00</b>

### Hardwire/Traditional

9-port switch	\$149.00
Hardwire connection (can be up to \$120 per machine if distance is great) (\$75x6)	450.00
Network card for desktop	30.00
<b>Total for wired connection (assuming minimum distance)</b>	<b>\$629.00</b>

*Note: The comparison is based on a 6-system network consisting of one desktop file server and 5 desktop-replacement laptops for agents in an office of less than 1,500 square feet. If the distance is greater, the cost on the hardwire connection can increase to nearly double. Wireless cost doesn't increase until the space exceeds about 4,000 square feet; the added cost is for a single repeater box. With a hardwired network, it increases per machine when an office is more than 1,500 square feet. Depending on the wiring plan for the office, the cost can increase from \$75 per machine up to \$120 per machine. Also, if the laptops are not equipped with a network card, the additional cost of \$42 will be required for a USB Adapter for each laptop for the hardwired system (which is an additional cost of \$210.00).*

Originally Berger bought a D-Link Hub/Router (Model DI-713P). It worked at a rate of 10 MPS (megabytes per second), had 64- or 128-bit Web encryption and a range of up to 300 feet. Agents' laptops were equipped with 10-megabyte D-Link cards (model DWL-650). Two years after the initial purchase, in April 2003, Berger upgraded the hub/router to a D-Link dual band (Model DI-774) which is more than twice as fast, running at 22 MPS, and is backward-compatible, meaning it works with the existing wireless cards and software.

### Installation and Security

It is easier to install a wireless local area network than the traditional wired variety. In Berger's case, the only wire that had to be installed was the T-1 line. There were no wires to feed to each computer, holes to drill or walls to rip up to get agents connected. In addition, with a wireless network, a manager has the flexibility to rearrange furniture and office space

without thinking about where the computers plug in.

Berger's office is rented space on a strip mall, chosen for the high foot traffic outside the front door: There's a gym on one side and a supermarket on the other. So even though a wired network would have been easy to install, the wireless network was easier. Berger and a friend set it up themselves. A wireless LAN would be even more beneficial in an office setting where laying wires within walls is difficult. Historic buildings are a good example of this.

However, there are a few issues unique to wireless solutions. "Whenever you use microwave technology, you can experience some conflict issues," says Berger. "Cell phones and wireless telephones may conflict with wireless networks if you are not conscious of these issues. Be sure your network administrator—onsite or a hired gun—is capable of handling these issues."

"Also, if you have a large office of

4,000 square feet or more," he says, "you may need a repeater to get sufficient coverage. That's about it. Then you can rest easy, because once a wireless network is up and running, it usually stays up and running."

The big issue for Berger and for most wireless LAN users is security. Craig J. Mathias, a principal with Farpoint Group, Ashland, Mass., writing for [www.wireless.itworld.com](http://www.wireless.itworld.com), says, "After all, wireless purposely puts valuable enterprise information out on the airwaves, and anyone within range [remember, for Berger that's 300 feet, so in theory you could be on the treadmill at the gym next door hacking his data] and equipped with an appropriate receiver should be able to grab this data and put it to all kinds of nefarious use." But Berger believes that a wireless network actually raises awareness about security issues: "People think that a hardwired system is more secure than a wireless, but they are very wrong. Most people don't adequately protect the data on their hardwired networks, but because the risks of wireless seem greater, they take greater steps to protect the system." Berger uses McAfee firewall software, plus the hub comes with a firewall setup.

With a wireless system, encryption is the key. Encryption is a method of modifying data so that only authorized recipients can read it. Each of Berger's agents' computers is programmed, or "keyed," to receive data through the wireless LAN. When an agent joins or leaves the brokerage, securing the network is simply a matter of changing the key sets. "Basically, encryption is like your PIN number at the bank," says Berger. "It is a unique identifier between your laptop and the hub, and it is secure. If you use encryption, you are ahead of the game. When set correctly, wireless networks are more secure than the majority of the hardwired systems, because you are more aware of leaks and you are taking steps to prevent a security breach."

Industry expert Mathias agrees: "A casual hacker with a Pringles' can antenna (Yes, there is such a thing, and it works quite well. See

<http://www.seattlewireless.net/index.cgi/PringlesCantenna>) might probe your network for weakness and try to capture data off the air, but professionals know this is a waste of time. They can't sit around all day hoping you'll send revisions to the top-secret strategic plan to a server over a wireless connection. Rather, they'll try to hack your service over whatever connection (wired or wireless) suits them best, or steal your notebook or PDA in an airport or hotel. It's quicker and easier. And who encrypts data on their mobile device? Well, you should. Wireless security, as we've seen here, is just one piece of the security puzzle."

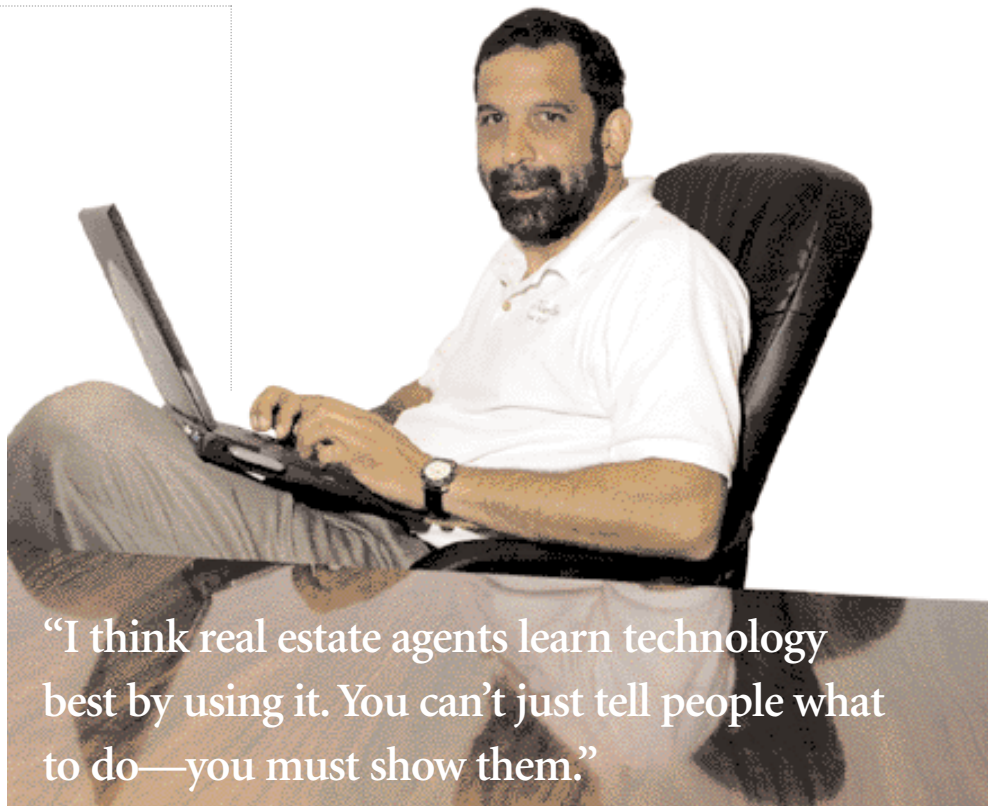
### Convincing and Training Staff

Training real estate agents on technology can be tricky due to the differences in computer literacy. Many agents resist going from tried-and-true paper formats to unknown digital formats.

Berger personally works one-on-one with his agents to introduce new technology, with great success. "I think real estate agents learn technology best by using it," Berger says. "You can't just tell people what to do—you must show them. Many modern trainers and managers preach, but don't practice. I've never agreed with that. When it comes to new technology, I conquer it myself before introducing it in the office."

Berger tells the story of one agent who was originally very resistant to technology. Now she has thrown out her calendars and MLS sheets, and she carries a PDA and a notebook computer wherever she goes. Berger believes the transition was achieved because he took the time to show her how quickly and easily information can be accessed digitally compared to chasing a paper trail.

With the wireless network, agents can work easily from anywhere in the office. "There was really not that much training involved," says Berger. "My agents do the same thing they have always done; they just do it without the wire. Wireless is an easy sell for anyone already familiar with the network concept. After all, people like the idea of working by the pool—even if they don't actually do it."



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"Most importantly I used it myself as the demonstration model," Berger says. "My agents and staff saw me cruising around the office without a wire and they were immediately hooked and wanted it for their own systems. That made it an easy transition."

As if to prove the point, when Berger was being interviewed for this article, an agent walked into his office carrying her notebook. She wanted him to approve her e-mail response to a potential client. She sent the reply with a single push of a button while walking back to her desk.

Berger and several of his agents also have set up a wireless system at home, compatible with the office. "This makes things so easy," Berger says. "You just throw the laptop in its case, pull it out when you get home and turn it on anywhere. Access is there." To encourage agents to stay up to date on technology, Berger budgets \$500 annually per agent to subsidize technology purchases.

### Managing the Costs

For Berger, the cost of installing the wireless network was less than installing a traditional one. Berger says, "I have no desire to pay more than necessary to stay on the crest of the technology wave." The actual cost

depends on the number of agents, the number of computers and the type of computer, but a wireless LAN could be 10% to 20% less (see Cost Comparison, left).

According to Berger, reinvestment will be required—and soon: "I like to be on the cutting edge, so the current system will only last me a year because I don't wait for technology to become old before I replace it. For most offices, a wireless LAN investment should probably last about 3 years."

Technology, especially e-mail and online listings, has transformed the practice of real estate in the last 5 years. While many brokers and managers are skeptical about how much more can be done, Miguel Berger remains excited about the potential: "The real estate industry tends to be slow to change and slow to advance in the area of technology," he explains. "Quite often, people in this industry say, 'we've done it this way for 10 years; why fix it if it's not broken?' I take a different approach," says Berger. "I say why settle for the status quo when we can stay ahead of the curve? Simply put, I prefer to do it better." ■

*Angela L. Allen is a freelance writer who is pretty tech-savvy herself. She is president of the International Virtual Assistants Association.*