



Your city is going wireless: 7 rules for safe computing

By [Christopher Elliott](#)

Don't look now, but your city is going wireless.

Austin, Texas; Baton Rouge, La.; Orlando, Fla., and San Francisco are among the metropolitan areas with extensive public wireless high-speed Internet coverage. And Philadelphia is slated to become the largest hotspot in 2006 when it flips the switch on a network covering a 135-square-mile area.

But that's only the beginning. In 2007, when WiMax becomes widely available, making a city wireless will take almost no effort. WiMax (Worldwide Interoperability for Microwave Access) is wireless broadband access technology built on the 802.16 standard, and is considered the next revolution in wireless. A single 802.16 hotspot can deliver capacity of up to 40 megabits per second (Mbps) per channel, or enough bandwidth to support hundreds of businesses with T-1 speed connectivity.

Your city could be next. (Check out [MuniWireless.com](#)'s list of networked cities at www.muniwireless.com/archives/cat_hot_cities.html.)

This is a very significant opportunity for small-business users to dramatically increase their productivity," says Lee Tsao, a director for **Pronto Networks**, a Pleasanton, Calif., wireless networking company. He says that if a typical user spends even one or two hours per day away from the office, the downtime waiting at different offices or outdoors can now be transformed back into productive time.

"The access to a citywide wireless network can result in double-digit percentages in productivity gains," Tsao says.

So, how do you — and your business — prosper in a wireless metropolis?

1. **First and foremost, make sure it works.** Municipal wireless networks — particularly the newest ones — may need to get some of the kinks worked out before they're ready for business use. "Making sure that the city or municipality offering network access can efficiently and effectively maintain the network reducing any downtime is something that a small-business user should verify before committing to a long term service contract," advises Rick Rotondo, a director for Motorola Mesh Networks Product Group in Maitland, Fla. But don't settle for having enough up-time; make sure it has all the features you need, including support for high-bandwidth applications such as real-time video and security features, Rotondo says.
2. **Don't surf and sleep.** It is mighty tempting to turn on a computer and leave it connected to an always-on hotspot. But you shouldn't. "Big mistake," says Bert Williams, vice

president for Tropos Networks, a broadband wireless network systems supplier. Indeed, security is a massive issue for municipal wireless networks. Many of the hotspots have little or no security (they are considered "open" networks), which makes anyone connected to them vulnerable to a virus or wireless attack. Williams advises taking the typical security precautions and not leaving a laptop or desktop connected to a municipal network — just in case.

3. **Quality? Remember that it's a public network.** That's the advice of Dave Mock, an author and analyst specializing in wireless communications. "Keep your expectations reasonable. A low-cost or free public wireless network will not match the quality of a business network," he says. Not only do you deal with the variability of wireless connections in public place, he adds, but you also share the bandwidth with all other wireless users around you. "You may be attempting to download a critical slideshow while three kids next to you clog the airwaves downloading the latest music video." If you can't share, stick with a dedicated wireless network.
4. **Know when to stay off the network.** "With a wireless network like a Wi-Fi hotspot, the only absolute in security is a virtual private network connection," says Kevin Jaskolka, senior marketing manager for Nomadix, a Newbury Park, Calif., public-access networks company. In other words, if you are dealing in sensitive information or have clients who value security, then you should either get a VPN or stay off the public network entirely. ([Windows Small Business Server 2003](#) lets you create a VPN in a snap.)
5. **Expect the unexpected.** It goes without saying that a Wi-Fi network is not the same thing as having a traditional wired network. But it must be said anyway. "One thing to keep in mind is that Wi-Fi can easily be jammed by accidental or intentional interference," says Robert Smallback Jr., senior information systems manager for the Southwest Florida International Airport in Fort Myers, Fla. His airport provides mobility and covers areas where the cost of providing a wired infrastructure is very high and service demands are low. But Smallback knows the network's limits. "We never place mission-critical applications on our wireless network as the primary network," he adds.
6. **Oh, and don't forget the surge protector.** Take it from D. Kent Pingel, a blogger who goes by the name of the "The Wi-Fi Guy" (www.wifi-guy.com). You want to issue surge protectors to all of your employees if you're sending them out of the office with their laptops. "If you are plugging in into a light pole at the park in Philadelphia, or whatever, it could be trouble," Pingel says. (Pingel himself has lost two motherboards while on the road, presumably when he was plugged in at a coffee shop and someone switched on a 200-horsepower coffee-bean grinder.)
7. **Ask yourself: Are you ready to go all the way with a public network?** It is one thing to use a municipal network for your business every now and then, but quite another to rely on it completely for your communication needs. "The real challenge," says Steve Andriole, a professor at Villanova University's College of Commerce & Finance, "is to manage the migration of business models and processes directly onto the networks as

the small-business owners' primary communications platform." That takes some insight and planning. If the network is secure and reliable enough (and that's a call you have to make with your IT professional) and if your business is a good candidate, then you might go for it.

Ready for that big jump to a public network? Don't forget to bring your manners and a little common sense, advises Richard MacKinnon, president of the Austin Wireless City Project (www.austinwirelesscity.org), the world's largest cooperatively owned community wireless network with more than 100 hotspots. By common sense, he means to remember the spare battery and the power adapter.

Beyond that, keep in mind that if you're accessing a hotspot in a public place, that it is . . . well, a public place.

"Don't contribute to background noise with loud, obnoxious phone conversations," MacKinnon says. "Be considerate of your shared workspace. Don't hog a table during a food establishment's busy hours. Buy at least a drink every hour and tip well."

Welcome to the wireless city.