The wireless office?

by Brad Latta

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I t's a wireless jungle out there. Everywhere you look, Wi-Fi is all the rage – in coffee shops, airports, hamburger joints, hotels. Name a locale, any place where people congregate to work or enjoy leisure time, and chances are somebody has a plan for it that includes wireless networking.

Since 1997, the Institute of Electrical and Electronics Engineers has published specifications for wireless technology under the 802.11 designation. Wi-Fi or wireless fidelity is a generic term for 802.11 networks.

But what about in the office building – *your* office building? Will a wireless network replace your LAN in the near future?

Not likely, according to the experts. It seems that there are issues – serious issues. But equally important, in most office situations, there simply isn't a compelling case to be made for going wireless at this time. After all, most of today's modern office buildings are already well wired, and new buildings are even better equipped. Moreover, wired LANs are familiar territory, they're fast no matter what the use, they're secure and they're meeting the needs of users.

So does that mean that wireless technology has little or no immediate future in the office? In a word – no. In fact, offices everywhere are already benefiting from wireless technologies, but not at the expense of LANs.

"It's important to understand that wired and wireless systems are more complementary than competitive," says Joël Comeau, director, IM/IT Architecture and Planning for Transport Canada.

And therein may lie the future of wireless in the office: to enhance existing systems. It allows organizations to add network and Internet access like never before. At Transport Canada's Ottawa headquarters, for example, a wireless LAN pilot will shortly be underway to assess the technical and business viability of wireless solutions in its environment. Wireless connections in a boardroom will soon allow select Transport Canada employees to easily and simultaneously connect their wireless mobile devices (laptops, Tablets, PDAs) to the Transport Canada network.

"Wireless is very desirable in a 'hotelling environment' where there are lots of people in and out," says Comeau.

The operators of Ottawa's McKellar Park Apartment Hotel would certainly agree. The three-building, 33-room complex offers short-term apartment rentals, primarily to high-tech personnel and government executives. These are people who want – in fact, expect – to be connected to the Internet.

In the past, both DSL and cable had proven unsatisfactory – too slow and too much down time. But today, thanks to a wireless solution created by Ottawa's Nova Networks, McKellar Park is able to provide free high-speed wireless Internet to all its rooms, wireless that connects the buildings to the administration desk and, ultimately, with the assistance of Storm Internet, to wireless PTP (point-to-point) and wireless LANs. Guests, upon checking in, are given the required software and network adaptor for their laptops or desktop computers and simple installation instructions. "The system is very fast and trouble-free," says property manager Allen Kerwin. "And it's freed up a phone line to every room."

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Michel Lalonde, in charge of wireless technical support at Nova Networks, sees the McKellar Park project as a good example of using technology appropriately.

"Our approach is to find out what the client is really trying to accomplish before we make any suggestions," says Lalonde. "Our recommendations for a wireless solution normally involve boardrooms and other situations where the solution is for people to simply connect their laptops. In many cases, all they really need is an Internet connection with its ability to send e-mails. It's rare that we find a client who wants a wireless LAN."

In some situations, Nova has found wireless to be the best and only good solution. For example, when Canada's Parliament Buildings needed more connectivity without intrusion into walls that contain asbestos, wireless technology came to the rescue. When Ottawa's St. Peter's High School needed its outdoor portable classrooms connected to the school's network, files, printers and the Internet, wireless did the trick without any loss of functionality. "There is no real downside in this sort of application, says Lalonde. "It's an 11-megabit solution. Everything runs quickly, including the Internet."

But what about the downside of Wi-Fi, 802.11 technology in other situations? Well for one thing, it isn't appropriate for handling huge files, for example those associated with AutoCAD, or for transporting information over distances beyond 100 metres. And while the speed runs in the 11-54Mbits range, performance degrades as more users jump on. And, of course, there's the security issue.

"Wireless is simply not as secure as wires and making it secure involves more

thought in terms of addressing both internal and external threats," says Transport's Comeau.

In contrast, Comeau describes the wired environment as both very robust *and* secure, from both a technology and service support standpoint. "We know when someone is connected to it and we know where all the live connections are located," he says, alluding to the challenge of "bootleg wireless" situations in which an employee with honourable intentions sets up an unauthorized wireless connection between two or more computers, thereby creating a security vulnerability for the whole network.

Not surprisingly, most organizations, even those that rely upon technological mobility, are being very careful in adopting Wi-Fi and other wireless technologies. The Ottawa Carleton Community Care Access Centre (CCAC) is a case in point. With 300 direct employees, 2,100 employees on contract (primarily VON nurses) and 10,000-11,000 clients at any given time, the operation is currently planning to decentralize from one office to five. An increasingly high percentage of the staff (up to 70 percent) will be on the road. Ability to connect remotely to patient files and records has tremendous appeal but according to Jean Taillefer, manager of Network Services, Ontario's CCACs are "getting many cautions around security issues" from the Ministry of Health and Long-Term Care, which is responsible for setting the wireless standards for all CCACs in Ontario.

Given security and other concerns, including the potential high cost of sup-

porting an unstructured proliferation of wireless devices, organizations are moving cautiously, but not without hope of better days ahead.

"At Transport Canada we are taking our time in establishing a wireless strategy to ensure that we properly address all issues," says Comeau. "Organizations that can link wireless technology investments to job functions, performance indicators, such as internal operational goals or increased client satisfaction, as well as organizational strategic direction, will be successful in defining a wireless return on investment." ⋀⋀

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