

Project bridges Ontario town's digital divide

Wireless mesh provides access to community

By James Bow
Business Edge

Since November, the Northern Ontario community of Chapleau has been accessing the Internet wirelessly.

And while that may not be a big deal to urban Ontarians with high-speed Internet connections – it is in a community where it was faster for the local newspaper to make the two-hour drive to the printer in Timmins with its files than it was to send them electronically by dial-up. Other businesses and residents in the remote community of 2,800 were similarly affected.

“Chapleau residents could not access video-conferencing services,” says Sylvie Albert, economic development officer for the Township of Chapleau. “This limited the availability of tele-health services. The system was drawing industrial jobs to larger centres with better communication access.

“Chapleau is two hours from Timmins and four hours from Sudbury. We are a small community, so specialty services are accessed either by driving to the nearest regional service centre or through the Internet,” she says.

But all that has changed with Project Chapleau, a partnership between the township, Bell Canada and Nortel Networks, that has established a high-speed Wi-Fi system that is accessible to everyone. “Until our partnership with Bell and Nortel,

Chapleau was only able to access dial-up Internet service, and the backbone was already backlogged,” Albert says.

“The roads connecting Chapleau are Level 4 or Level 5 highways,” says Natalie Tessier, project manager for the Chapleau Innovation Centre. “This means that they are kept centre-bare or simply cleared of snow. There are days when it is not wise to travel. In major centres, there are big stores, but in many cases, particular items are not available here. The Internet helped, but shopping via dial-up was painful at best.”

To solve the problem, Chapleau proposed upgrading the fibreoptic backbone to Sudbury and Timmins. The infrastructure was already available as “dark fibre,” which is unused fibreoptic cable.

But a better backbone was only half the solution. Chapleau still faced the gap between the backbone and the various homes and businesses. Building this expensive “last-mile infrastructure” was simply not cost-effective for telecommunication providers.

“The rugged terrain and dense foliage of rural areas like Chapleau can prohibit service from being delivered using buried cable,” says Nortel spokeswoman Christie Blake. The solution, Nortel believes, is a wireless mesh network.

“Wireless mesh technology links together small Wi-Fi access points hung on street lamps or the sides of buildings,” Blake says. “They use a self-discovery method to create a hot-zone or local network, to deliver secure, seamless mobile communications. Wireless mesh networks can cover hundreds of acres of service area.”

It's a new idea and Nortel is

QUOTE . . .

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– Natalie Tessier, project manager for the Chapleau Innovation Centre

working with Chapleau and its partners to try it out. Bell and Nortel donated the wireless mesh, optical, computing, multimedia and enterprise solutions, Blake says. “The two companies jointly upgraded Bell Canada's optical backhaul into Chapleau and have provided technology consulting and professional services for the whole project.”

The goal of Project Chapleau, which was launched Nov. 9, is to make Chapleau a demonstration community in rural Wi-Fi initiatives. The partners also established the Chapleau Innovation Centre in a formerly vacant downtown bank where residents are taught how to access their network.

“People come to attend a session where they are given a wireless USB adaptor and their wireless mesh network account information,” Tessier says. “We've activated over 530 households, so far. People also come to the Innovation Centre for technical help and students come by to use one of five desktop computers for research and to do their homework.”

For Nortel, Project Chapleau is just one of its initiatives to help rural communities throughout North America bridge what is known as the digital divide.

“Nortel has a long history in the rural market,” Blake says.

“We've been providing solutions tailored to rural communities, enabling them to provide the same high-quality, high-speed Internet services available in urban centres. In addition to Chapleau, our wireless mesh solutions are being used in Marshalltown, Iowa.

“A key objective of this project is to study the transformation of Chapleau resulting from the introduction of this technology,” Blake says. Throughout the year, Bell and Nortel will work with researchers from Laurentian University, the University of Toronto, the University of Guelph, Nipissing University and the University Health Network (UHN) to study the project's impact.

“The results will be of considerable value to both private industry and public institutions, as the country continues to work on the expansion of broadband networks and applications into remote and rural communities worldwide,” she says.

Chapleau, however, is already reaping the benefits while the study is ongoing.

“Everything's easier with broadband,” Tessier says. “The Chapleau Express now spends just minutes on an upload to its printer that used to take hours. Students can access post-secondary studies without leaving

this community. Community colleges such as Collège Boréal are now developing diploma programs that can be completed online.”

The Township of Chapleau also is looking at ways of using broadband to promote tourism.

The local Rotary Club will stage its 14th annual sport and trade show at the recreation complex this month. “The community hall has been equipped with state-of-the-art equipment, making it an interesting site for conferences. Local and out-of-town businesses will be able to connect to the Internet and process sales onsite,” Tessier says.

Deputy Mayor Bud Swanson is cautious about quantifying the effects of Project Chapleau so soon, but he looks forward to the end result.

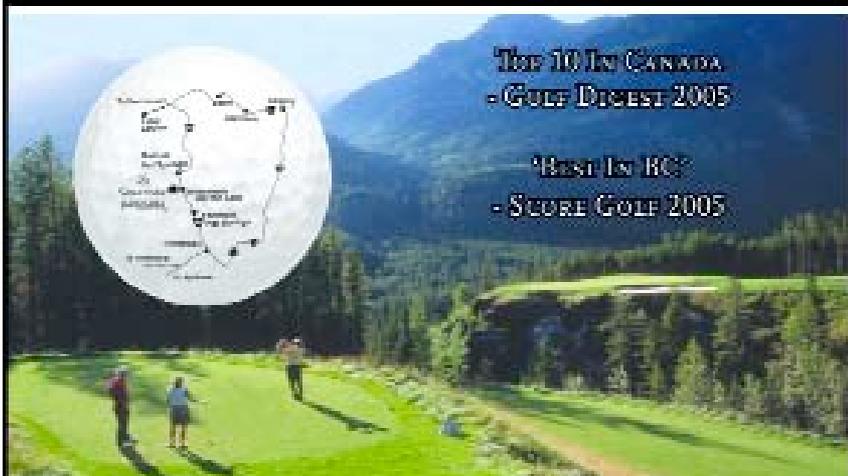
“We are still in the early stages of Project Chapleau's rollout, so it is difficult to measure the economic impact. We are entering a phase of engaging businesses in this project, and we will soon know how much the infrastructure improvements have helped our existing businesses and what potential exists for new business development.”

Best of all, Chapleau retains all the charms of a community its size.

“There has been no change to the small-town feel here,” Swanson says, “but there has been a substantial knowledge transfer to local organizations and citizens by this project already.”

“It's still early days yet,” Tessier adds, “but I can say that travellers appreciate being able to connect wirelessly to a high-speed network while in town while they conduct business. I know local businesses appreciate having broadband because they are able to order inventory so much more quickly. It is just so much more efficient.”

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