



The Naskapi Nation's Long Journey to Reliable and Affordable High-Speed Internet is Powered by OmniGlobe Networks

The Naskapi Nation of Kawawachikamach (originally known as the Naskapis of Schefferville Indian Band and later as the Naskapi Band of Quebec) is a First Nation community with a population of approximately 850 registered Indians. The majority of the residents live in the village of Kawawachikamach, Québec, located 16 kilometres northeast of Schefferville, which in turn is 1,600 kilometres north of Montreal near the Labrador border in the sub-arctic region of northern Quebec.

Like most isolated northern communities, the Kawawachikamach - Schefferville region has few of the educational, commercial and governmental services found in larger urban centres. It also faces significant student drop-out rates and an above-average unemployment rate, which is partly attributed to seasonal employment.

The region also lags far behind southern Canada in terms of the quality and availability of cost-effective telecommunications services. The changing nature of business and government, however, demands that communities have access to reliable and efficient telecommunications services if they hope to foster an environment that is conducive to socio-economic development. For the Naskapi Nation, access to reliable and cost-effective high-speed Internet continues to be essential to place the remote northern community on a more even footing with Canadians located in the south.

Hence began the Nation's decade-long journey to the Information Highway, which ultimately led them to OmniGlobe Networks, the global provider of satellite and WiMAX broadband Internet and VoIP services who are specialized in delivering end-to-end network solutions to remote communities where terrestrial telecommunications are unavailable, unreliable, or simply too expensive.

Making the Journey to the Internet

When the Naskapi Nation began this journey in 1997, the sole provider of local and long-distance services in the region was a national incumbent telecom operator. The village of Kawawachikamach was linked to Schefferville through fiber-optic cable owned by

Télébec. However, the only link to or from the region was via satellite, which is still the case today. There are no land lines connecting the region to the outside world.

In 1997, the Nation applied for, and was granted funding from Industry Canada to set up a Community Access Program (CAP) site at the Nation's Office with 10 computers and Internet access for the community's use. What the Nation did not realize at the time was that the existing infrastructure could not provide sufficient bandwidth to adequately support dial-up Internet, let alone high-speed services. Voice and data services were equally unreliable, with users experiencing frequent breakdowns, but talks with the local operator to upgrade the infrastructure and bring broadband to the region were unfruitful. With no viable solution in sight, the Naskapi Nation had to abandon their plans, and reluctantly returned the funding it had received back to the government. It was apparent from this experience that the Nation needed a solution that would not rely on the existing infrastructure.

Introducing Internet Services over Satellite

It wasn't until 2001 that the Nation retained an outside consulting company providing Internet services over satellite. "We hadn't looked at a satellite solution in any great detail before because in the '90s, it was still quite expensive," explains John Mameamskum, Director General of the Naskapi Nation. In January of 2002, with temperatures close to - 67 degrees Celsius, the Nation installed its first bi-directional satellite system to finally connect the Nation Office to the Internet.

"It didn't take long before we began receiving requests from organizations and individuals to be connected to the Nation's satellite Internet system." added Mr. Mameamskum. The Nation again turned to their selected consultants to set up a last-mile distribution network using a 5.8 GHz wireless system (pre- WiMAX), and dial-up modems were installed to provide connectivity to a limited number of residential users. Once again, problems ensued. While the 2.4 GHz wireless system provided sufficient bandwidth, it was unreliable in terms of signal and packet loss. In addition, offering dial-up services to residential customers proved to be a fatal mistake as it again relied on the local infrastructure. As a result, not a single customer was able to connect to the Nation's system.

In 2003, The Nation applied for financial assistance from Industry Canada under its Broadband for Rural and Northern Development Pilot Program in order to purchase and install the infrastructure required to bring broadband connectivity to the region. The funding was granted, and in January 2005, the Nation officially launched its broadband network offering wireless, bi-directional satellite high-speed Internet service to the regions of Kawawachikamach, Schefferville, Matimekush, Lac John, and Squaw Lake. This was the first such network in Quebec and the second nationally under the Industry Canada program.

Unable to engage in commercial activity under the Nation's self-government legislation, the Nation transferred all responsibility for the provision of Internet services to Naskapi Imuun Inc., a for-profit, wholly owned subsidiary of the Naskapi Nation.

Paying the Price for Satellite Bandwidth

Requests for Internet services continued to grow. "It wasn't long before we realized that the network was limited in its speed by the cost of satellite bandwidth," recalls Balgovind Pande, Advisor, Naskapi Imuun. "To accommodate a growing customer base, we needed more bandwidth. Purchasing additional satellite capacity was extremely expensive and would have put the whole venture at risk because we wouldn't be able to generate enough revenue to pay for it."

The answer came in 2006. First, Naskapi Imuun submitted an application for funding under Round 2 of Industry Canada's National Satellite Initiative (NSI) - a joint effort between Infrastructure Canada, Industry Canada and the Canadian Space Agency. The objective of the program was to offset some of the bandwidth costs of satellite capacity for remote communities so that Internet access could become more affordable.

Naskapi Imuun also retained Montreal-based OmniGlobe Networks—a global provider of satellite and WiMAX broadband Internet and VoIP services—to upgrade the network and provide more affordable satellite bandwidth and a last-mile wireless distribution system.

Bringing Broadband Home

OmniGlobe's WiMAX-satellite system proved to be the answer. The company's solutions are specifically targeted at geographic regions around the world where terrestrial telecommunications are unavailable, costly, or unreliable. Combining the most advanced satellite and wireless technologies with its own proprietary network management and bandwidth optimization techniques, OmniGlobe Networks enabled Naskapi Imuun to finally offer fast, reliable and affordable broadband Internet services to its growing base of consumers and business customers. "We looked at four or five other suppliers including all the major players," explains Mr. Pande. "None gave us the same value for money that OmniGlobe was providing."

In June 2006, Naskapi Imuun's existing network was completely redesigned with new satellite terminals and a new wireless network for last-mile distribution using selected first-in class wireless equipment, CPE and base stations. The upgrades performed by OmniGlobe enabled Naskapi Imuun to more than double its connections speeds, improve the reliability of its network and significantly reduce operating costs—savings which were passed down to subscribers. "Naskapi Imuun's primary objective is not to make big profits," explained Mr. Pande. "It simply wants to generate sufficient surplus to re-invest in the business, create high technology employment, and provide people in the region with reliable services."

OmniGlobe also provided Naskapi Imuun with invaluable support, on-the-job training and knowledge transfer to enable the service provider to sustain, maintain and grow its business.

Reaping the Rewards

Naskapi Imuun now provides Internet services to over 80 residential and 12 commercial customers, and plans to further improve its services and increase its subscriber base under the National Satellite Initiative. Three full-time jobs in the community have also been created to manage the various administrative and technical issues related to operating the network.

In addition, the success of Naskapi Imuun as a service provider led to a contract for the installation of a satellite-based communication system at the Menihek Power Dam, located in a remote location 35 km south of Schefferville. Working in partnership with OmniGlobe, the team provided the facility with broadband Internet connectivity supporting VPN networks and 15 VoIP telephone lines which are now being used as the primary means of communications.

“The benefits of Internet connectivity for the Naskapi Nation and surrounding districts are immeasurable,” said Mr. Pande. “For instance, there are no banks in the region, so being able to conduct financial transactions online greatly simplifies day-to-day business for many institutions like local governments, the Nation Office, the Development Corporation, the Police and the School”. The Naskapi Nation is also now in a position to strengthen its economy by leveraging the web as an outlet for local artisans and outfitters to promote and sell their unique products and services.

Long distance education is another huge advantage. “It can be challenging for students from smaller communities to study in larger urban centers,” explained Mr. Pande. “Their educational success is higher if they can do course work from home. The Internet will help them do this.” In addition, the Internet is making new learning opportunities available such as on-line video forums linking Aboriginal students and other secondary school students from the different regions of Canada to discuss key issues of Canadian history and the current public agenda.

Providing affordable, reliable access to the Internet not only opens new lines of communication for northern and Aboriginal communities; it also enables other Canadians to communicate more easily with the North. Improved Internet access will bring new technologies and business opportunities to northern Canada, which will enhance the quality of life for all.

Update – The Journey Continues

In 2007, Naskapi Imuun was granted its funding under Industry Canada’s National Satellite Initiative Round 2 (NSI) program. With this funding, the service provider will extend OmniGlobe’s mandate to offer additional services to its subscribers including

VoIP telephone services (which will help reduce the North's typically exorbitant long distance costs), videoconferencing, and VPN services.

Naskapi Imuun later signed a 10-year contract to increase the satellite bandwidth and provide an even better user experience for its subscribers. "More than anything, we want to offer these people options where none existed before," said Mr. Balgovind Pande. "Government initiatives like NSI, and partners like OmniGlobe that are standing by us every step of the way are making this journey much easier."

"The engineering expertise and support from OmniGlobe over the past year and a half have been exceptional," said John Mameamskum, Director General of Naskapi Nation. "Our plans for further developing our Internet services are to meet the needs of our local community and expand our capabilities in delivering enhanced services to our business and residential customers. We believe that we have the right technology partner in OmniGlobe to make our vision become a reality."