

Northern Lights School Division

Education Solution



People from urban areas take the simplicity of connecting to the Internet for granted, as their phone lines and cable television wiring presents options when choosing an ISP. In rural areas, the process of surfing the web can be much more difficult. Many places do not have the necessary lines in place due to rough terrain or cost prohibitions, and digging into rugged terrain or heavily forested areas to lay cable is not practical.

So when the idea of connecting schools in a 9,523 square kilometer section of rural Alberta was brought up, many people dismissed it as impossible. Yet, in less than a year, EION equipment was able to connect each school within that area, twice the size of the Grand Canyon, to the Internet, using their advanced wireless Ethernet bridges.

The Northern Light School Division entered the world of connectivity to comply with a mandate set by the Canadian government, which stated that every school must have access to the Internet. For the Northern Lights School Division; this was easier said than done. A single 56K line was installed into each school in the mid-nineties, providing one machine per school with Internet access; this met the immediate needs of Alberta Education, but failed to meet the needs of students and educators.

The main problem was that one 10 or 12 computers per 56k line could be connected to the Internet at any point in time, making downloading information painfully slow. With EION wireless technology, linking 2,200 computers has not caused any problems and the schools get the bonus of increased speed.

The Northern Lights School Division, located in northern Alberta, Canada, approximately 240 kilometers (144 miles) north east of Edmonton, covers a 14,798 square kilometer area (5,714 square miles), twice the size of the Grand Canyon. The system comprises over 60 advanced wireless Ethernet bridges at more than 40 sites. In total, 6700 students from kindergarten to grade 12, as well as 800 dedicated teachers, support staff and contractors, are benefiting from the system.

"The speed of the system we have now is so dramatically improved that there's just no comparison to the previous system," says Ron Young, Computer Coordinator, Athabasca River School in Gold Lake. On the new system, a two-megabyte file can be transmitted from Bonnyville to Lac La Biche, over 140 kilometers apart, in less than 45 seconds.

One of the deciding factors in using EION's technology was cost. Using a traditional 56K system was projected to cost \$1.2 million over five years – more than double what the new EION system cost. A major benefit to the EION system is that, once installed, there are no other charges or monthly fees, since advanced wireless Ethernet bridges transmit over the license – exempt OSM band. Schools are able to return these savings back into their communications budget; instead of having just one computer per school, most schools in the Northern Lights Division now have one computer for every five students.

"Advanced wireless Ethernet bridges are a cost-effective solution to providing high-speed Internet access. The Northern Lights wide area network has proven that remote rural school districts can provide fast, reliable Internet access putting students on par with their counterparts in major cities"
Gary Krawchuk.