

*Low-cost computing for education*

# Medicine Hat schools handle tight spaces and tight budgets

## **Challenge**

*Upgrade aging computers while finding a way to fit more computers into a classroom.*

## **Solution**

*Install 740 NComputing X-series kits, creating 3,000 new seats throughout the district.*

## **Impact**

*Made more room for PCs in each classroom by using the space-saving NComputing X-series. Reduced maintenance costs and, with fewer cables, made computers easier to shut down during summer months.*

Schools often have to find creative ways to squeeze more out of less. Medicine Hat, a school district in Alberta, Canada that includes 18 schools and 6,600 students, needed to do two things: upgrade its aging fleet of computers and increase computer access in the classroom. But it was running aground on both budget and physical desk space.



*NComputing's solution increases access in classrooms.*

## **Old computers**

Typical of many schools, Medicine Hat had to work within the constraints of a limited IT budget. As a result, it was holding onto many of its computers past the typical five-year replacement period. Some of the district's computers were seriously outdated.

"They were massively slow beyond the point of being effective," says Richard Potter, administrator of information technology at Medicine Hat.

Old age caused other problems as well. The legacy systems needed extra maintenance and support to keep them ticking, and new software didn't always run properly on them. But an even bigger problem for teachers was that students tended to get distracted and start talking in class while the older computers took their time processing commands.

Space was another issue for the growing Medicine Hat district. In order to make room for more students, the district was dismantling many of its old computer labs and turning them into classrooms. The labs originally housed 30 computers each. Additional computer access needed to go into classrooms, but where? PCs took up too much desk space. The district needed a solution that was cost-effective and space-efficient.

“Once you find something that works, you simply stick with it. And we’re sticking with NComputing.”

RICHARD POTTER  
ADMINISTRATOR OF  
INFORMATION TECHNOLOGY  
AT MEDICINE HAT

## New solution

NComputing answered Medicine Hat’s budget and space woes. Using the NComputing X-series virtual desktop solution, Medicine Hat extended the power of a single PC to four users.

Each X-series kit includes a PCI card and three access devices. The devices—which are about half the size of a small book—include hookups for standard peripherals, such as keyboard, mouse, monitor, speakers, and headphone. The devices connect to the shared PC via a standard network cable, which also supplies power, resulting in fewer cables and less mess.

Three students work on the virtual workstations, and a fourth sits at the shared PC. Like all NComputing products, the X-series works with standard PC applications and the added users have simultaneous access to the same programs.

Before installing the X-series in its schools, Medicine Hat ran extensive tests using Intel Core Duo computers with 1.5 GB of RAM. Results showed that a single user only consumed 3-12% of the computer’s processing power. Even with four users, the computer was still running at a mere 32-48% of its capabilities.

“The tests demonstrated that our main computers had plenty of additional processing power to support the extra users,” says Sai Wong, network technician at Medicine Hat. “We immediately went ahead and started implementing NComputing into our schools.”

Medicine Hat began in two of its high school computer labs. Feedback from the staff was excellent, and technicians—who normally had to support 30 or more individual computers in a lab—now only had to support 4 or 5. It was a win-win situation. Then Medicine Hat installed the NComputing solution in classrooms.

Medicine Hat used flat-screen displays and built innovative custom desks to minimize the space needed. Teachers were offered shelf configuration options for single, double, or quad stations. Each configuration included a wiring molding and a box to hide computer wires and cables.

## Spreading the benefits

Medicine Hat sees several advantages. “The new system consumes only a fraction of the energy of having four computers,” says Wong. “And when we upgrade one computer, four students benefit.”

The small footprint of the X-series access devices enables the NComputing solution to fit neatly into classrooms. “In previous configurations, we could only put three to four computers in a classroom. With NComputing, we fit eight computer access devices in K-3, four in K-6, and twelve in Grades 4-6,” says Potter. “And we have money left over, so we can easily afford to return to a four- to five-year replacement cycle on all of our computers.”

The access devices also require less maintenance and less support staff to keep them up and running. And the reduction in the number of power cables means that custodians don’t need to unplug as many when they close the schools down during the summer. NComputing also produces less electronic waste by reducing the number of computers the school has to replace each year.

Medicine Hat has made NComputing standard equipment throughout its district. The school system will deploy 3,000 seats in total, consisting of 740 PCs and 740 X-series kits.

“Once you find something that works, you simply stick with it,” says Potter. “And we’re sticking with NComputing.”

