

Healthcare CANADIAN Technology

Networks

UHN network supplied by Toronto Hydro Telecom

TORONTO – Toronto Hydro Telecom is providing the vital connection between the University Health Network (UHN) and its outsourced data centre. Data, such as electronic patient records, digital medical images and files, must travel securely and reliably back and forth between UHN's facilities in downtown Toronto and its data centre in Mississauga, Ontario.

UHN comprises Toronto General, Toronto Western and Princess Margaret Hospitals.

The massive movement of data on a regular basis requires access to extensive network capacity and high bandwidth when needed. In addition, given the mission-critical nature of the healthcare applications, highly reliable network service and secure transport of data are paramount. UHN operates on an electronic patient record system with no paper backup, so diversity in transport and data redundancy was also a requirement.

Toronto Hydro Telecom was able to both meet and exceed UHN's requirements, providing more than one solution to the healthcare facility's needs. Ken Lawrence, acting director of IT at UHN, said, "Toronto Hydro Telecom was the only firm contacted who said, 'Don't tell us what you want, tell us what you are trying to accomplish.' In just over a week, they responded with two options and corresponding budgets to choose from. The solutions Toronto Hydro Telecom recommended provided better service, greater reliability through built-in redundancy and enhanced

capacity for about the same cost as lesser proposals from their competitors."

Ian Miles, president of Toronto Hydro Telecom, said, "We spend considerable effort making sure we understand the business's objectives for both today and in the future, providing a range of options so that they can make a fully informed decision. In the case of UHN, we were able to use our experience in the healthcare sector and our understanding of the latest network solutions to develop two options. Our recommendations provided flexibility in terms of capacity and data services, and security through diversity and data redundancy in line with the services we provide to Canada's major banks."

UHN's data will travel to its remote data centre over a fully redundant private network customized to the healthcare facility's specifications. Capacity is set at a full gigabyte but can be upgraded as needs change. The network can handle both voice and data transmissions and all activity is fully monitored and managed 24/7 by Toronto Hydro Telecom's carrier-class Network Operations Centre.

Toronto Hydro Telecom also presented a solution using Wave Division Multiplexing (WDM) technology, which, through multiple wavelength options, provides an economical route to increased bandwidth as network demands grow. "Because of our network architecture – 100 percent fibre-optic cable with gigabyte Ethernet and SONET core networks – we have the platform to migrate to next-generation applications with only a simple adjustment to the electronics. As bandwidth needs escalate, UHN can count on us to meet its requirements in the future," says Miles.

Proven reliability was a key contributor to UHN's decision to choose Toronto Hydro Telecom for such a critical connection. "UHN has had a long-standing relationship with Toronto Hydro Telecom, leasing dark fibre to connect our various facilities since the mid-90s, so we are well aware of their track record of reliability," says Lawrence. Toronto Hydro Telecom meets the top industry standards for network availability at 99.999% and has a mean time to repair of 4 hours.

Toronto Hydro Telecom was able to demonstrate impressive provisioning time as circuit construction was completed in approximately eight weeks – a full month before UHN was ready to start moving servers. "Everything was done exactly to specification," says Lawrence. "The whole process from discussions and initial design to implementation and operation has proceeded flawlessly." UHN will continue the process of transferring servers and plans to complete the move to the offsite data centre over the summer.

The UHN organization includes more than 11,000 employees, 3,100 students, 1,200 physicians and 600 volunteers. In 2002-2003, UHN had more than 800 beds, 29,000 inpatient cases, 950,000 clinical visits, 867,000 ambulatory visits and 73,000 emergency visits.

Established in 2000 as a subsidiary of Toronto Hydro Corporation, Toronto Hydro Telecom Inc. has quickly grown to become a highly specialized and innovative provider of telecom services to businesses in Toronto. The company is the sole owner of its fibre optic network, which spans 450 kilometres and connects 400 commercial buildings in Toronto. Today, Toronto Hydro Telecom counts many of Canada's leading businesses and institutions among its clients, including financial institutions, mutual fund companies, broadcasters, hospitals, colleges and universities.
