Bell Canada Utilizes Cisco Systems Technology to Help Deliver Surgical Grade Network to Power Historic Telerobotics Assisted Surgery

HAMILTON, Canada - March 4, 2003 - A three-armed robot directly translates a surgeon's natural hand, wrist and finger movements, allowing the surgeon to operate on a patient hundreds of miles away. This may sound like science fiction, but it's now reality following the completion of the world's first hospital-to-hospital telerobotics assisted surgery.

On February 28, 2003, Dr. Mehran Anvari, an internationally recognized specialist in minimal access surgery, performed the world's first hospital-to-hospital telerobotics assisted operation from St. Joseph's Healthcare, Hamilton, Ontario to a patient in North Bay, Ontario. Using a specially designed robot operating over Bell Canada's state-of-the-art national IP backbone, Dr. Anvari assisted Dr. Craig McKinley, a North Bay-based surgeon, in performing a laparoscopic Nissen fundoplication (acid-reflux) surgery over a distance of approximately 250 miles.

The operation took place over Bell Canada's commercial networking service known as VPNe, or Virtual Private Network Enterprise. Regarded as one of the most advanced networks of its kind, Bell VPNe uses Cisco Multiprotocol Label Switching (MPLS) technology to enable private IP networks (or VPNs) to be carved out of Bell's national IP backbone infrastructure.

"The telerobotics assisted surgery initiated by St. Joseph's Healthcare opens new frontiers in the delivery of healthcare service to rural or remote parts of Canada, and effectively expands access to important medical resources, regardless of geography," said Charles Salameh, vice-president, Enterprise Data and Managed Services, Bell Canada. "Telerobotics assisted surgery takes IP-based applications to a new level and demonstrates the security, reliability and flexibility of Bell's network, and our expertise in delivering mission-critical applications."

"We see the network as a dynamic enabler for the Canadian healthcare industry," said Pierre-Paul Allard, president of Cisco Systems Canada. "In this case, innovation in MPLS VPN networking technology is helping provide critically needed surgical health care services and expertise to remote locations by enabling telerobotics assisted surgery. This application demonstrates that MPLS VPNs can provide a scalable, reliable and secure infrastructure for business and mission-critical needs."

Surgical grade network drives innovation

Bell Canada was responsible for maintaining the high level of network performance and reliability necessary for real-time remote manipulation of the surgical robot. Combining the latest advances in laparoscopic surgical techniques, robotics, video compression and IP internetworking, Bell designed, built and managed all aspects of the service delivery, including the integration of all connectivity software, cabling, end-to-end network management and engineering expertise.

Bell, working with Cisco, conducted extensive testing to deliver the high levels of stability, reliability and quality of service demanded by a telerobotics assisted surgery application under various network conditions. Using 10-12 megabits per second (Mbps) of bandwidth, Bell worked to ensure that any manipulation of the remote robotic 'hand' corresponded with a virtually simultaneous movement of the surgeon's hand controlling the robot.

MPLS powers Bell VPNe network

Bell VPNe is one of the most advanced MPLS VPN networks in the world. MPLS is a label-based method for forwarding IP traffic that brings a new level of intelligence to IP networks. By combining the intelligence of routing with the performance of switching, it dramatically simplifies deployment, management, scalability and flexibility of VPNs.

Bell's MPLS VPN network provides a number of significant benefits over traditional solutions employed in most commercial networks. As a carrier-class network service with "turn the tap" functionality, this solution delivers bandwidth-on-demand and the ability to prioritize the delivery of voice, video and data traffic with end-to-end Quality of Service (QoS). For health networks, VPNe is a highly secure and flexible service that allows diverse communities of interest to effectively interconnect and communicate.

This network provides the capacity and the service protection capabilities required to ensure the greatest level of reliability currently possible. This infrastructure dependability is achieved with physically diverse fibre routes, backup points of presence, redundant transport and switching equipment, as well as optical and electrical protection switching capabilities, all maintained by sophisticated operational support systems. The transport network has been designed to protect against both fibre cuts and laser failures. As a result, the VPNe network self-heals against failure within 50 milliseconds, rendering such failures transparent to even the most demanding enterprise application.

The Bell VPNe network is built over an installed base of Cisco Gigabit Switching Routers (GSR) 12000 series routers, Cisco 7500 Series routers running Cisco IOS® Software.

Cisco continues to contribute to standardizing future MPLS capabilities and drives multivendor interoperability through established and independent

testing forums. More information on MPLS technology can be found at http://www.cisco.com/go/mpls/

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Access the News@Cisco video on the St. Joseph's Healthcare telerobotics initiative with Cisco and Bell Canada at http://cisco.feedroom.com/index.jsp?auto_band=nb&fr_story=afe2ca43f600fd1b31ca9c956143fe7aa79577cc

About Bell Canada

Bell Canada, Canada's national leader for communications in the Internet world, provides connectivity to residential and business customers through wired and wireless voice and data communications, high speed and wireless Internet access, IP-broadband services, e-business solutions, and local and long distance phone services. Bell Canada is owned by BCE Inc. For more information please visit http://www.bell.ca

About Cisco Systems

Cisco Systems, Inc. (NASDAQ: CSCO) is the worldwide leader in networking for the Internet. News and information are available at www.cisco.com.

About Cisco Systems Canada

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