



# Two networks, one solution

by Richard Bray

## Voice over Internet Protocol seamlessly supports varying user requirements

**T**HIS IS A TALE of two networks. One belongs to the Government of Canada and has 300,000 telephone lines, links to 315,000 computers and serves 35,000,000 customers. It is permanent, and its owners have a cautious approach to the introduction of new technology.

The other network belongs to VANOC, the Vancouver Organizing Committee for the 2010 Olympic and Paralympic Winter Games. It will eventually operate 15,000 telephone lines in 80 venues; serve users in two cities, 135 kilometres apart; support 5,000 Olympic athletes and officials and 10,000 journalists, and a week and a half later after they leave, 1,700 Paralympic athletes and officials. The network is anything but permanent. March 21, 2010, it will begin to disappear.

The people behind each network are relying on Voice over Internet Protocol (VoIP), the telephone technology that combines data and voice in a single network, to support their users, one now and one in the future. As well as its obvious advantage of collapsing two or more networks into one, VoIP offers what some call the '21<sup>st</sup> century dial tone' or 'presence'. That means address information like a telephone number follows a person, not a device, so communications goes wherever the Internet goes. These days, that is just about everywhere.

Proponents of VoIP initially sold the technology on cost reduction: fewer networks, lower long-distance charges and easier maintenance. Today, new capabilities like pres-

ence, videoconferencing and other collaboration tools have been added to the list.

The federal government has about half a dozen trial VoIP projects underway, and it will inevitably move towards the technology, to replace existing installations and build new ones. VANOC, on the other hand, is building from scratch and it is totally committed to VoIP for a very good reason. Bell Canada, VANOC's telecommunications provider and a major sponsor, wants to showcase its VoIP technology and expand into western Canada. That means the 2010 Games will be known as the 'IT Olympics'.

Speaking at an Infonex seminar in Ottawa, Andrew Platten, VANOC's vice-president for technical infrastructure said, "You go with the sponsor's decision," but VoIP is not a decision he regrets. In fact, so far, it has made his life much simpler. "We've had very few technical problems throughout," he said. Moves, adds and changes (MACs) are the bane of any telecom administrator's existence, because they tie skilled people to low-value tasks. MACs are greatly simplified under VoIP.

In VANOC offices, employees on the move simply disconnect their laptops, reconnect at their new locations, plug their laptops into their telephones and log on. They then have full telephone service with their same number at the new location, and they can move as many times as necessary, to any other VANOC location. The new employee orientation package is three hours long, and 45 minutes are devoted to the telephone system.

"It works today on construction sites," Platten said. "People go out, plug in and log on." VANOC IT staff can watch and monitor the entire voice network in real time. Platten's staff doesn't have to chase people around various locations, setting up and taking down telephones, which he calls a "huge payback" because VANOC is growing at the rate of one new employee a day and will eventually total 1,500 people.

The federal government is also looking for a payback from VoIP. A recent costing exercise for Service Canada showed that VoIP solutions are a better buy than the status quo, even before additional capabilities like presence are taken into account. Getting to VoIP will be a huge undertaking, but the federal government is not yet under great pressure to change because the present telephone network functions well and is relatively easy to manage.

In many ways, the federal government telephone system, large as it is, is managed as a single entity. "Legacy voice, analog voice is very mature so we have been able to get to a fairly consolidated voice picture across the country," said Chuck Henry, the chief technology officer at Treasury Board Secretariat, but data networks are a different story. At government buildings across the country, departments typically share one telephone system but often maintain separate data networks.

"Because of ministerial accountability we've grown up with separate networks," he

explained. "We will probably always have a separate secure network but we are working towards having a single government wide network."

Service Canada will probably play a leading role in getting the government to that single network for voice and data. The agency was established to be a one-stop service information provider to Canadians on behalf of other departments and is a heavy user of telephone technology. Henry said about half a dozen Service Canada network contracts will all end next year and, "We are going to consolidate those into one."

With hundreds of points of presence across Canada, making VoIP work at Service Canada should smooth the way for further growth. "If we can serve Service Canada, we can serve most people, although maybe not all the RCMP outposts and maybe not all the border services places but we can serve a lot of places. We can start to build this backbone network across the country and we can invite other departments to take advantage of the service because it will be very effective," Henry said.

A VoIP implementation across the entire federal government may take a long time, especially if it operates interdepartmentally, because many senior officials still need more confidence in shared networks. "There is increasing goodwill to allow the centre to do things successfully," he noted.

Success will bring a substantial reward. Today the government spends about \$1.3 billion a year on networking. "We think that if we dotted all the i's, crossed all the t's, built one big consolidated network for everything that we could possibly do, we could get that number down to \$800 million, so we could save \$400 million a year for the taxpayers."

The benefits to the citizen should be faster, better service from government. As Chuck Henry explained, "The telephone is perceived to be a fast channel. People call because they want an answer right now, so therefore that timeliness question becomes very compelling." The government is committed to a 'no wrong door' policy, which means that no matter how or when citizens ask questions, they get answers. In theory, one call to the main government informa-

tion number, 1-800-O-Canada should be enough. In practice, of course, government is so large and questions so complex that it can take a great deal of time and effort to reach the right person. VoIP can help to make better connections. "We could do a lot more intelligent call routing with VoIP to maybe help us get to that knowledge base across the country in the language of choice," Henry said. "So there is a significant possibility that if we do this right, VOIP could help."

VANOC and the Government of Canada may have little else in common but both must provide reliable communications networks that meet or exceed user expectations. One group is only in the spotlight for a moment, while the other is under constant scrutiny. Both look to VoIP for success. *MM*

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