

TENOR CONNECTS NORTEL-BASED VoIP NETWORK WITH LEGACY/ANALOG DEVICES IN 150 MUNICIPAL BUILDINGS

Seamless Integration of IP PBX With IP Phones, Non-IP Phones, Fax, Pagers, Intercoms and 911 Access

The Challenge

VoIP networks and IP phones can offer tremendous benefits to organizations with multiple locations and intensive communications needs. That's why the St. Hyacinthe, Quebec school board, health care system and city government decided to take advantage of their newly built fiber network to create a robust VoIP environment. With a couple of Nortel Succession 1000s (IP PBX) and a variety of Nortel i2004, i2050 and i2002 IP phones, these three groups were ready to substantially reduce their recurring communications costs while gaining a wide range of new, valuable telephony capabilities.

The challenge faced by Telus National Systems, the contractor on the project, was that all these organizations had older phones, faxes, intercoms and paging systems that still needed to function in the new environment. There were apparently minor requirements (like the ability to perform hook-switch flash call transfers from cordless phones) that meant a lot to the individuals who had become accustomed to them. And there was the very significant issue of 911 alerting, which required use of analog lines for automatic identification of the originating location.

In other words, like many other organizations, St. Hyacinthe had a lot of smoothly functioning equipment that it was not about to replace – even as it underwent a total overhaul of its telephony environment to utilize internet telephony.

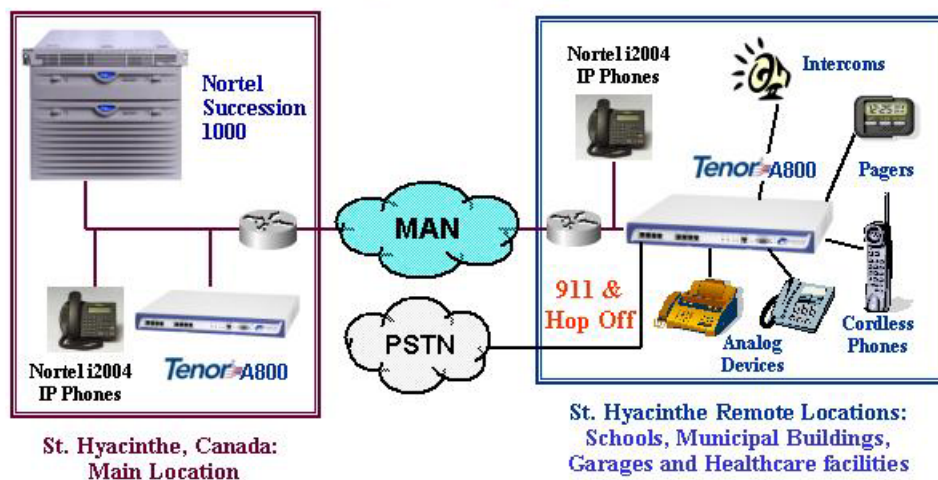
The VoIP Solution

Fortunately for St. Hyacinthe and Telus, Quintum's Tenor MultiPath Gateways and Switches offered an ideal solution for integrating these legacy and analog communications resources into the new Nortel-based VoIP network. The Tenor switches interoperate seamlessly with the Succession 1000s, providing a perfect interface between analog equipment and the IP network that could be installed in each of the city's 70-odd schools, municipal buildings, and healthcare facilities. Each location could then use all of its existing equipment for internet telephony without requiring any connectivity to the outside world other than its IP fiber link.

"Quintum's Tenor switches gave us precisely what we needed in a remote premises solution for St. Hyacinthe's VoIP network," said Jean-Claude Chenier, Telus National's technical lead on the project. "The Tenors enabled us to support all of the city's non-IP needs in a way that integrated seamlessly with the larger network."

Most valuable to Telus was the Tenor's ability to allow non-IP devices to initiate and receive calls from the VoIP network. This was particularly important for the city's fax machines and for locations such as the city's garages where it was decided not to install IP phones. There were several other systems that required the use of this capability. Existing paging systems in the schools, for example, were not designed to interface with IP. So the Tenor switches allowed school administrators to place calls from their IP phones through their in-building Tenor switches to their paging devices. In other locations, intercoms had allowed visitors to buzz the phone on the security guard's desk. Again, using the Tenor switch, these calls could be routed from the gate intercom through the switch to the IP phone.

St. Hyacinthe, Quebec



Quintum's Tenor switches allowed St. Hyacinthe to seamlessly integrate its non-IP Communications into its new IP-based telephony environment

Chenier cites another example of how the Tenor's analog interface came in handy. "Many nurses walk around the hospital floors with cordless phones, and they need to be able to do a hook-switch flash when they want to transfer a call," he explains. "But the Succession 1000 IP PBX would not be able to register the flash as a command." With a few lines of code, the Tenor was programmed to translate those flashes into the appropriate command to the Succession 1000. So the nurses could work as they always had.

Another issue was 911. Rather than using ANI, Canadian emergency services identify incoming calls using a database that associates each incoming line with a specific location. That database would obviously not work if the city's 911 calls were routed through the Nortel switches to a single, common line. The Tenor switches provided the "hop-off" functionality necessary to enable the use of location-specific analog lines.

Kudos For Quintum

In addition to appreciating the Tenor's features, Chenier praises its ease-of-use. "The interface is very intuitive," he says. "And the online help uses plain language that's simple to understand – instead of the incomprehensible acronyms you often encounter with telephony software."

Chenier also gives kudos to Quintum's technical support team for making the St. Hyacinthe internet telephony project such a success. "They were very, very responsive throughout the assessment, design, bench-testing and installation processes," he recalls. "Once, they even turned around a piece of code for me in fifteen minutes. That's pretty incredible."

With the help of Quintum and Tenor switches, Telus has delivered a state-of-the-art VoIP environment without disrupting the legacy technologies that St. Hyacinthe still depends on. Interoperability with the Nortel switches has been trouble-free. And the city is realizing significant savings every month.

"As organizations move forward with VoIP, they also need to preserve the investments they've made in ancillary systems and interface with traditional analog technologies such as fax and 911," says Chuck Rutledge, Quintum's VP of marketing. "St. Hyacinthe is a prime example of how Tenor switches are helping customers meet this critical technology migration challenge in a way that's flexible, cost-effective and well integrated with the Nortel Succession platform."

