



Synopsis: New Jersey town consolidates its voice and Internet services and produces savings of more than \$1,000 a week.

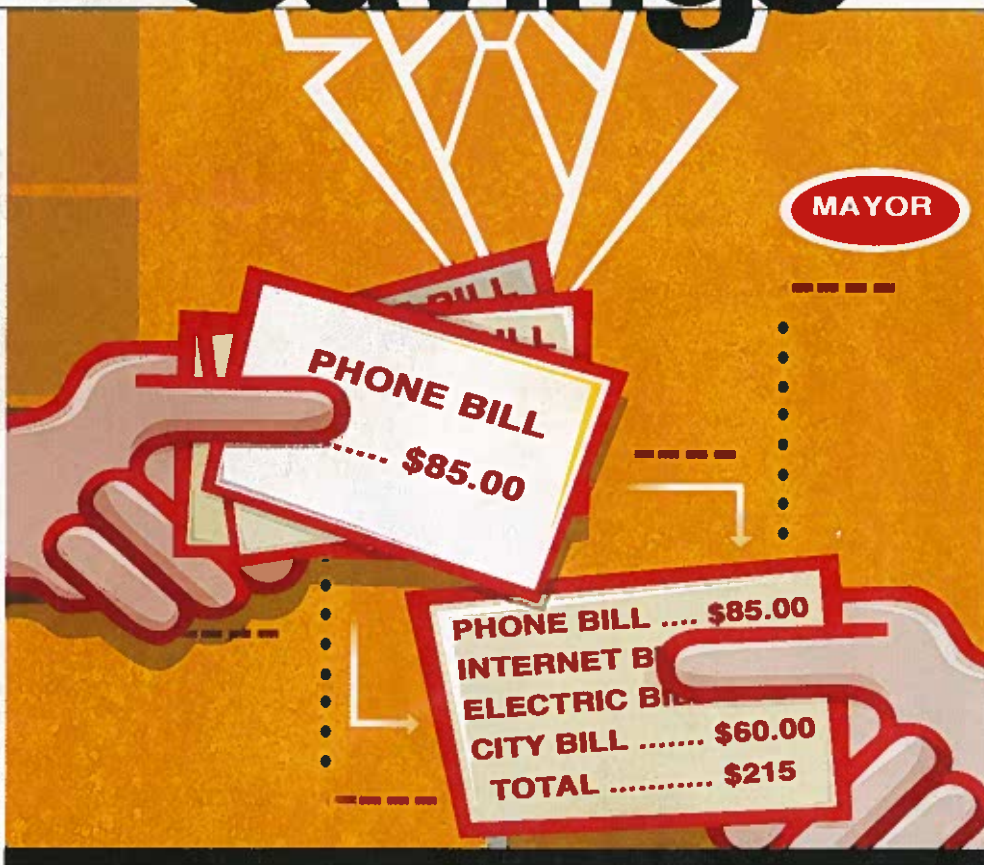
Jurisdiction: Wayne Township, N.J.

Technologies: Metro Ethernet, IP trunking and primary rate interface.

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Phoning in the Savings

Wayne Township, N.J., saved more than \$52,000 annually by consolidating its phone and Internet services.



Internet service, which eased the transition. “When we did our consolidation, we first tried to evaluate our existing vendors to minimize our financial impact by reutilizing our infrastructure,” Pasternak said. “Optimum Lightpath did make some hardware changes, but there was no financial cash outlay to Wayne Township.”

Connecting the Township

The new service provides Internet and telephone communications over a single connection. Although this sounds like voice over Internet protocol (VoIP), it’s different from an infrastructure standpoint. In a typical VoIP deployment, voice communications are sent and received via the Internet, replacing an analog phone line. Standard VoIP requires a broadband connection, specialized phones (or land line phones connected to a VoIP adapter), and in-house network infrastructure optimized to ensure that data packets are delivered efficiently.

Pasternak said Wayne Township’s voice and Internet communications run through a metropolitan Ethernet line, which allowed the internal infrastructure to remain the same, while still providing a data link for the communications to share. Using the Ethernet line allowed the township to keep its existing technology and avoid the network overhaul that VoIP typically requires. All calls are directed through a single hub.

Pasternak said the township is moving toward using VoIP telephone sets and evolving the system slowly instead of doing an enterprisewide upgrade all at once. “In this manner, we are easing into VoIP as we capitalize on past investments to ensure our ROI,” he said.

The consolidation began in the second quarter of 2008. Pasternak estimated that it

Wayne Township, N.J., turned the benefits its mayor found in a consolidation of his home Internet and phone services into a money-saving solution for the municipality.

“My theory was that if I could cut my bill in half at my house, perhaps we could utilize the same type of technology here at Town Hall and save money,” said Mayor Chris Vergano.

He presented the idea at a township meeting and said he received skeptical looks from others in the room, but the Division of Information Technologies took the concept

seriously. The division studied the idea and told Vergano that the township could save a bundle of money by consolidating its Internet and phone services. It turned out to be more than \$52,000 annually.

“Anytime we can find new and creative ways to save money, we’re willing to take a look at it,” Vergano said, “and that’s exactly what we did here.”

The project began with an ordinary RFP, said Scott Pasternak, technology director of the township. He chose Optimum Lightpath to provide the consolidated service. The company already provided the township’s

took the township six weeks to complete the project, from the initial investigation to being up-and-running.

Getting Technical

The IT division used 3 megabits of the 10-megabit metro Ethernet line for the primary rate interface (PRI), which is a telecommunication standard used for integrated services on a digital network in order to carry multiple voice and data transmissions. The township has two PRI's — both of them have 23 channels, which means each PRI can handle 23 phone calls at a time.

The township's telephone sets are wired into three private branch exchanges (PBX). First, the IT division enabled IP-based trunking — using an IP network to carry voice data — between the PBXs so that all phone calls are directed to a single hub before they are sent or received. "Basically each phone system has an IP address," Pasternak said. "When we dial

an internal extension or an external phone number, each phone system on our network sends the call to another PBX's appropriate IP address, and the calls are routed inside and out of our network."

phone calls are being routed out the PRI's that we carved out of the metro Ethernet account."

Seamless Transition

One of the biggest advantages of the consolidation was the flawless changeover. Pasternak said the consolidation happened during business hours and went live without any trouble for users. "They know that when they pick up the phone and dial a feature access code to get an external extension, they get that external extension and that's all they really care about," he said. "We had no downtime whatsoever."

The township employs approximately 650 people, although the number escalates in the summer months, especially in the parks and recreation department. "Most of our employees had no idea that we even made the switch," Vergano said.

Wayne Township officials are pleased with the benefits. "The IT department took the mayor's initiative and we essentially focused on trying to find an enterprise-class solution that can give the township the same level of quality of service — especially when it comes to public safety — as well as our other business and operation needs," Pasternak said. "We wanted to come up with a solution that maintained that enterprise-grade solution, yet reduced and consolidated our expenses — consolidated our technologies to try to address the mayor's goals." **GT**

Finding More Savings

After the consolidation was finished, officials realized the township could save more money by migrating its stand-alone fax lines to the metro Ethernet account. "We're going to be able to realize an additional \$500 savings a month when it comes to all of our fax lines, long-distance charges on those fax lines, etc.," Pasternak said. "By the time we get done, we're going to be pushing close to \$60,000 [per year], if not more."

Pasternak said the addition of the fax machines was completed in February 2009.

The consolidation also aided township employees who don't work at Town Hall. For example, the township's Department of Public Works — located several miles from Town Hall — took advantage of the consolidation: Pasternak used trunking from the main phone system located at Town Hall to send phone calls via the metro Ethernet account.

The PRI's are located at Town Hall and the two PBXs on the wide-area network communicate via the IP trunks. "We're consolidating all of our routing through our wide-area network to Town Hall," he said. "So all of our outgoing

Wayne Township consolidated its voice and Internet services over a 10-megabit metro Ethernet line provided by **Optimum Lightpath** that allows voice and data to be transmitted. The user-to-network interface (UNI) is a basic element in an Ethernet connection because it provides the customer with service. The Ethernet virtual connection is also a basic element that creates communications between the UNIs.

