

management and troubleshooting the network difficult.

Limited IT resources. Smaller companies just don't have the staff to devote to broadband development and maintenance.

Reliability issues. Broadband options in many areas were not reliable and the setups needed protection from outside hacking.

Cost. Prices for options such as frame relay were prohibitive in the past, as were device and management costs.

Today, many of these challenges have eased. McTaggart says the price for his network solution was "very aggressive" against frame relay competitors, and the service includes system management. Dave Gould, vice president of Forward Corp., recalls a time when the network notified corporate that a store was down even before the store manager had time to report it. "That's telling when you get an e-mail from your network even before your manager has time to call," Gould says.

Cost Justification

Right off the bat, Forward Corp. calculated a savings of \$100 per store per month in switching from Shell's satellite option to CoolBand. The option also replaced the satellite dish on the roof of the store with a device the size of a pack of cigarettes.

Though Forward Corp. officials did not reveal their monthly fees for CoolBand, another retailer, Vincent Herrera, IT director for Houston-based Petroleum Wholesale LP, who uses a couple of network providers (presently not on the CoolBand program), says the broadband cost savings for his company were very apparent.

"We used to have as many as 12 lines

Digital Cameras: Not Quite There

One of the largest growth areas for digital traffic has been with security. But Internet protocol (IP) or digital cameras are considerably more expensive today, and retailers may have to settle for digital video recorders that turn regular videotape into digital packets.

Some of the pluses of spending the extra cash are better remote access and the ability



BROADBAND BENEFIT: Broadband may usher in an era of IP cameras.

going into our stores," says Herrera, who has hooked up 30 of the company's travel centers and gasoline-diesel sites with the help of integrator Abierto Networks (a reseller for network supplier New Edge Networks, Vancouver, Wash., and Herrera's second provider, a satellite option from EchoSat Communications Group out of Lexington, Ky.). "So if you figure that cost is gone and now we pay \$90-\$120 a month per site, then that's almost a [\$250 per month per store] savings."

But cost reduction from phone-line replacement is just the beginning. "The saving of \$50 or \$100 or \$1,000 a month is meaningful," says Gregory Davis, senior vice president of marketing and product management for Netiforce Communications Inc., Costa Mesa, Calif. "But it pales in comparison to productivity enhancements—better customer service, better inventory management. However you manage your

business, you'll find ways [that need broadband] to improve your top line and bottom line."

to reconfigure the cameras (for brightness, iris level, backlight) when not on site, as well as having the option of viewing the stores real-time via a Web site.

In terms of price, a 16-camera setup can run a retailer \$16,000 installed. A digital camera setup can cost \$20,000 to \$25,000. Brandon Ring, national sales manager for Image Vault, FireKing Security Group, New Albany, Ind., says the company has been getting requests for digital cameras, primarily because the devices traverse the broadband system. He says IT staff is typically interested in working specifically with IP-enabled devices.

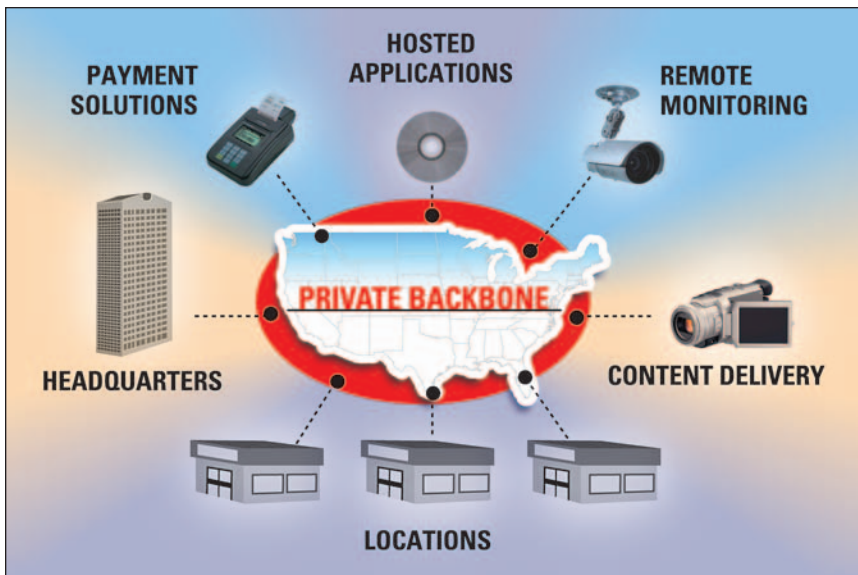
"The trouble is that the digital recorder is hard to cost-justify right now, but that's a changing

thing," Ring says, noting how technology costs have a way of dropping over time. "We've seen a lot of interest in our [network video recorder] in the last year."

McTaggart and his team at Forward Corp. agree, noting how their return on investment came from the compound effect of having broadband. Gould says the company was ready to roll out an electronic loyalty program from Norfolk, Va.-based Outsite Networks Inc. While the loyalty option alone (and the basic credit-card application) did not cost-justify the transition, loyalty along with the potential of other programs using the Internet did.

"You need to have a plan past the credit-card application if you're going to make this pay for you," McTaggart says. "You have to have a strong idea of where you want to take yourself in terms of technology and, in our case, we have enough applications that this will be a good deal down the road."

In addition to loyalty and credit



NETWORK MANAGEMENT: Managed network providers tie stores together via a number of broadband options and technologies.

cards, Bob Pierce, IS manager for Forward Corp., says IP-compatible ATMs (upgraded legacy systems using new, affordable interfaces), remote POS diagnostics, tank gauge and environmental electronics options were all opportunities to leverage broadband.

The CoolBand Option

Shell's CoolBand program is an alternative to its current satellite network and is open to its roughly 10,000 branded operators. The program set standards for broadband suppliers and has negotiated special rates for Shell-branded operators. "This is a progressive strategy from Shell," says Cybera CEO and president Cliff Duffey. "The company eliminated so many challenges for retailers in the process [of installing broadband]."

Shell also set standards, emphasizing the use of private networks vs. ones that use the public Internet. "[Shell] is making sure they're getting a quality, consistent connection out to its distributors and franchisees," Duffey says. "[Shell] sees it as a competitive advantage, bringing more value to the Shell-branded store than other brands; [company executives]

feel the program will help in the retention of jobbers and will be a strategic marketing tool to entice others to switch brands."

Cybera and Netifice, both CoolBand-certified networks, as well as additional network-management firms or broadband services that achieve Shell certification in the future, support all of the enterprise applications linked to Shell. CoolBand, named after Hugh Cooley, a broadband advocate within Shell, would not only allow operators to hook up their stores with high-speed access, but will also allow for additional applications such as video surveillance, inventory management and digital communications options such as voice-over IP. The CoolBand network also can include both Shell and non-Shell-branded locations.

Part of the certification process that Cybera and Netifice went through and that future network providers would have to follow is what Shell officials say are "high security and reliability" standards.

"Petroleum companies are migrating from satellite to broadband to have more bandwidth and better performance," says Davis of Netifice. "For

instance, Shell requires that their sites be linked through a private network. With private DSL [and other technologies, our company] creates a private network because Shell doesn't want the security risk of just Internet access."

Easy Choices

One of the biggest movements in this area deals with complete solution providers. Suppliers hooked up to CoolBand (such as New Edge) and integrators such as Abierto have linked with others to provide "end-to-end" solutions.

For instance, Sales of Abierto says that part of the solution his company provides involves linking legacy systems up to IP networks. This service requires having the proper interfaces that will allow the translations to occur. Other cost savings are beginning to emerge because of IP. For instance, network suppliers say that transaction processors are even providing discounts for sending IP-enabled transactions.

Turnkey solutions, of course, are always appealing. But retailers who turn to managed network providers are not totally off the hook. Sales says, "You are responsible for the [electronic] environment in your c-stores. But in many cases, [network providers] are responsible for proactively detecting a problem and resolving it."

Still, what services like these provide, especially for the smaller retailer unable to afford a fulltime IT staff, is freedom. "There was so much technology out there that we've seen for years but couldn't use because we couldn't afford broadband," says Gould of Forward Corp. "Now we have an opportunity to unleash those capabilities for the good of the organization." ■