



Owners and managers enjoy a host of technology offerings that aim to attract and retain tenants

by William and Patti Feldman

Exciting new technologies that broaden communications options, improve productivity and comfort, heighten safety and security and provide innovative conveniences are powerful incentives building owners and managers can offer to attract tenants and improve retention.

Foremost among the emerging technologies are those that enhance communications opportunities and provide state-of-the-art means to monitor and control building operation systems. Companies looking for new space or considering extending a lease are starting to actively search out availability of such technologies, which in some cases may prove a definitive plus or even a dealmaker rather than just a nice perk.

Win at Wireless

Tenants want wireless access inside their offices as well as on the street, without interruption or dropped calls. However, cell phones and other wireless devices typically do not work in large structures or function poorly or only intermittently. Steel, concrete and other building materials are hostile to wireless signals—distorting, attenuating or misdirecting them—making it difficult for tenants, building staff and first responders to use not only cell phones, but messaging and paging systems and personal digital assistants (PDAs) as well. Building materials also inhibit wi-fi signals used to access data networks, radio-based location services designed to find people or keep track of inventory and two-way radios operated by maintenance personnel, police and first responders.

“A wireless system that overcomes the interference and enables the full breadth of wireless communications is, in essence, the newest utility,” said Ed Jungerman, senior vice president of product management and marketing, InnerWireless Inc., a Richardson, Texas-based provider of an in-building wireless system that distributes any radio frequency-based technology a service provider brings into the building, including cellular phones, two-way radio and other “back-of-house” applications. “It makes a building habitable for people who are dependent upon wireless services.”

A single passive-wired antenna system, such as ID designed by InnerWireless, can act as a spine that accommodates the spectrum of wireless devices. According to Jungerman, this type of backbone is,

in effect, an integrated broadband wireless distribution system providing uniform coverage throughout the structure for a full range of applications on each floor and does not leak beyond the building.

During the last two years, InnerWireless has installed more than 20 million square feet of wireless backbone in 44 facilities around the country, including the new Time Warner building in New York City. The company expects to double that figure in 2005.

“This rapid growth in wireless connectivity is analogous to early deployment of HVAC systems to uniformly distribute conditioned air throughout a building in the beginning of the twentieth century,” Jungerman said. In the early 1900s, a building came to be considered substandard if it didn’t have an HVAC system designed into it. So too, people accustomed to cell phone service (and all its user conveniences) everywhere but in an office building will, soon enough, find it unacceptable to lack that service within the building, Jungerman said.

Coming Soon to a Property Near You

Shopping mall owners are also among early adopters of these types of new technologies, said John R. Summers, director, Commercial Real Estate/Americas, Johnson Controls. Interested in keeping shoppers inside as long as possible, mall owners are installing wireless capabilities that facilitate use of cell phones and other devices.

Mall owners are also providing digital LCD screens that can be easily updated with current advertising

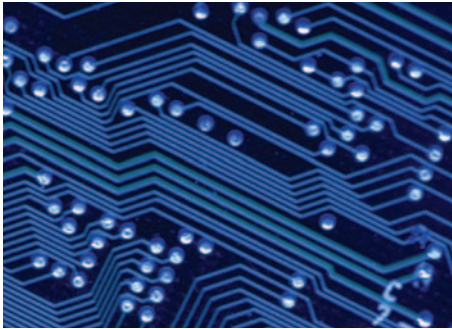


messages, which are more effective than billboards and other signage in terms of accommodating updates. “We are also seeing more use of identification signals that flash individual store advertising onto shoppers’ PDAs upon recognition that the shopper has entered the structure,” Summers added.

Office owners and managers, as well, are gravitating to hosted wireless systems that allow individual tenants to tap in to accommodate specific needs. Summers said: “Wireless buildings are on the way to becoming the norm in new construction, with landlords providing this infrastructure to the entire building because it makes the building more attractive to potential tenants. In fact, for some prospective tenants, inability to use wireless communication devices anywhere throughout the building would be a huge obstacle to taking the space.”

From a cost perspective, installing a single wireless antenna backbone can yield savings over alternatives in new construction because a single cable, rather than multiple cables, is pulled through the building. Wiring in multiple access points on each floor completes the system.

John Passanante, associate partner, Syska Hennessy Group, a



national consulting, engineering, technology and construction firm headquartered in New York City, has seen markedly increased interest in immediate implementation of building-wide wireless networks. "While as recently as a couple of years ago, the infrastructures were installed for tenants to utilize sometime in the future, now access points are going in at the same time as the backbone antenna," he said.

The infrastructure dedicates a certain amount of bandwidth to each system. With each service provider installing its own equipment in the basement and hooking it up to the allocated Federal Communications Commission channel on the antenna, the signals will be available throughout the building, he explained. For instance, as long as the fire department installs the requisite devices in the basement, fire department personnel can use their walkie-talkies anywhere in the structure.

Smartest Building on the Block

In addition to better communications, which just about all tenants want, companies are often wooed or won over by integrated "building intelligence" that can improve ten-

ant facing. With the proper infrastructure in place to facilitate wireless communications, these functions can range from remote control of the heating or cooling in individual spaces and other energy-consuming applications to "smart" wireless access control.

Taking advantage of existing Internet technologies, it is possible for building managers to wirelessly monitor and control individual thermostats and other devices—in some cases remotely from an off-site location. Internet accessibility also allows a tenant to log on to a building's Web site and submit various types of requests for maintenance or emergency repair. While some requests, such as changing a lamp or repairing a water fountain, will naturally require on-site intervention, others, such as adjusting a thermostat, can be handled remotely.

Hot Enough For You?

Johnson Controls, a Milwaukee-based facility management and control company has introduced a wireless control system featuring thermostats that can be placed on a wall wherever needed, without any cost for hard-wiring. The units are easy to add or move as tenant needs evolve. The company also offers building owners a digital surveillance network that incorporates wireless cameras. The equipment not only provides monitoring and surveillance but also can store the gathered data for review.

Not too far down the pike, in a majority of larger multi-tenant commercial properties, building systems will be able to detect cer-

tain activity and initiate changes automatically, according to Mike Potter, founding partner, Building Technology Advisors in Los Angeles. For example, a tenant with an access badge entering the lobby could trigger the lights and activate the HVAC system serving the tenant-occupied space. Air flow could start even before the tenant steps into the elevator.

If HVAC details are available online for viewing by the building engineer, it is already possible to see how much air is being delivered to a particular tenant space and the position of the valves, dampers and other mechanical equipment. According to Paul Ehrlich, principal, Building Intelligence Group in White Bear Lake, Minn., having the ability to change the configuration of the set points in that space and resolve the problem, in a matter of minutes, online, is more gratifying to the tenant (and cost effective to the owner) than having to wait for a maintenance employee or a service contractor to perform the task on-site.

Shine a Light

Geoffrey Kasselmann, president, Op2mize, a tech-centric commercial real estate advisor and developer in Northbrook, Ill., said, "With remote Internet-enabled control of the lighting system, monitoring of lighting at each electrical fixture can be so precise that management would be able to not only know in real time when a fixture is experiencing trouble but also predict the end of useful lamp life, in both cases probably even before the user has filed a work order ticket."

They'll Be Watching

The same types of remote monitoring and control are being integrated with video security cameras, electrical distribution, digital signage, fire protection and proximate security systems. For example, if an employee reports a lost or stolen access card, the system can be set up to videotape anyone who presents that card, with the image sent to the building manager, Ehrlich explained.

The Writing on the Wall

Intelligent integration that links digital signage throughout a building, from garage to rooftop, can also be a strong selling point to prospective tenants, not least because of the advantages such integration can provide in response to fire or other evacuation needs. Flat plasma displays that ordinarily feature advertising or the building directory can turn red and provide highly visible real-time directional evacuation instructions. This type of clear, visual cue is bound to command much more attention than a static sign people walk by every day and largely ignore, Ehrlich said.

Open Wide

All this intelligent networked integration is possible because of the use of open standards for system components and wireless connectivity, which is a new development. Not too long ago, systems were proprietary, dedicated and separately wired. (For example, hard-wired video security cameras were connected only to other equipment on the same installa-

tion.) Now, increasingly, building systems are composed of wireless, standardized open components using chips of the same type utilized in cell phones, computers, DVD players, lighting fixtures, thermostats and other building control devices. This opens the door to the scenario of devices talking to one another for heightened efficiency.

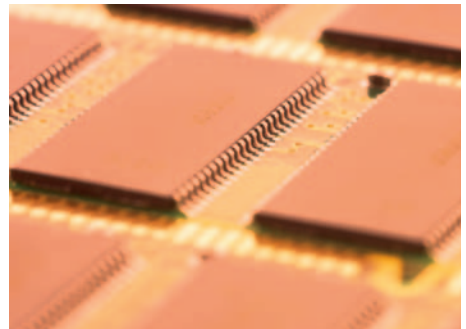
Tying the building systems together with Internet connectivity also facilitates real-time monitoring and control of energy use. With the proper data and set-up, it is possible to save energy in several ways. For instance, if a utility company offers variable rates based on demand, tenants can schedule some of their higher usage at low-rate, off-peak times.

Overall, according to Ehrlich, all this connectivity enhances the tenant's experience by putting them in a space that is more comfortable and safer, keeping them delighted so they don't want to leave. "The aim is to keep tenants at market rate or above market rate for as long as possible, keeping the building filled and, over time, significantly increasing the value of the property."

Smart Time for a Move?

SBC, a communications company that provides a full range of voice and data services in 13 states, offers Business SmartMoves, a joint marketing program for real estate developers, builders, property managers and owners of multi-tenant commercial properties.

Through the program, SBC becomes a property's preferred sin-



gle-point provider of a full range of telecommunications services, including local and long-distance phone and fiber-based data services such as Web hosting, video conferencing, local area network connectivity and Internet provider services. SBC brings the lines into the basement of the building, guaranteeing the necessary services will be available to the property and setting the stage for tenant-opted connection.

"The concept of being able to work with a single point for all sorts of communications services in a preferred relationship, while still allowing for competitive choice, can be a selling point for prospective small tenants," said SmartMoves program director Dianne Giacomelli.

Whatever the mix of incentives a building owner elects to offer, the very technologies incorporated into the infrastructure to attract potential tenants often are the same factors that contribute to retaining them. Assuming the building owner knows the local market well, an investment in carefully selected state-of-the-art infrastructure likely will pay off both short and long term. □

William and Patti Feldman (wfeldman@att.net) are New York-based freelancers and frequent contributors to the *Journal*.