Rethinking Internet Usage

Owners are finding that connectivity benefits their operations when they install networks that support smart home applications that promise reductions in utility costs and personnel hours.

By Lynn Peisner

Robust bandwidth speeds used to be an amenity to stream movies, gaming and television for students' recreational and, perhaps, educational purposes. Today, a property's internet is also being harnessed to tighten up balance sheets and operations.

Smart home or Internet of Things (IoT) technology uses a wireless network to enable renters to control lighting, door locks, thermostats and a steadily growing list of other household items and systems. It also places that same control into property managers' hands, allowing them to set heating and air conditioning temperatures, access door locks, receive system alerts and send messages about property events or packages waiting in the office. All these capabilities hold the potential to impress residents while also providing opportunities to streamline a wireless network and control maintenance, utility and labor costs and prolong the lifespan of some building systems.

Detailed cost-benefit analyses on a thorough IoT deployment in student housing aren't readily available, but some companies are beginning to turn toward these types of solutions with their networks at new or value-added properties where owners need to upgrade internet offerings and amenities to compete for residents.

"While the student demographic originally drew the need for tech-savvy communities, the security, efficiency and elimination of man hours that smart technology can provide turns this resident want into an owner/operator need," says Dave Anderson, president of Homestead America. "This technology enables you to stay competitive in the market financially, by remodeling how payroll hours are used on both the maintenance and leasing fronts."

The 3,402-bed Park West developed by Servitas is billed as the largest single-phase P3 delivery in student housing. It consists of 15 buildings on 47 acres of Texas A&M University land. Its single-vendor internet deployment is expected to save 33 percent on utility costs.

Smart technology is all about harnessing a wireless network to enable things to speak to one other. Most new devices are being engineered to run on wifi and communicate like this.

"Many properties continue to rely on wired Ethernet jacks as a way to augment wifi to provide acceptable performance for high-speed applications, such as media streaming," says Adam Szymkowiak, president and CEO of IQ Machines. "This approach no longer satisfies students who expect to use high-speed internet applications wirelessly from any location. The issue is becoming more critical since wired Ethernet jacks are not an option for many of the devices that students use most often, including phones, tablets as well as many notebook computers and smart TVs."

Several vendors and owners are working toward accommodating the need for strong and efficient wifi, anticipating a future where everything in an apartment will be using the wireless network and communicating at more intelligent levels.

"The day when we plan a project with a completely wireless [low voltage] design is fast approaching, but at least five years off," says Morgan Thomas, development manager for Servitas.

"Until then, we still have to buy coaxial cable and data drops. I see things like building systems — utilities, HVAC, lighting, irrigation, even appliances — all becoming 'smart' by having the ability to report issues or send routine maintenance reminders automatically through property management software."

While homeowners have the luxury of slowly onboarding new wireless components — such as adding a smart thermostat one year or

UNIVERSITIES MOVE TO EASY-ACCESS TV SOLUTIONS TO ATTRACT STUDENTS TO LIVE ON CAMPUS

In August, XFinity On Campus (XOC) announced that more than 100 colleges and universities are now enrolled for the TV-streaming service. Universities such as Florida State University, the University of Minnesota and Wesleyan University joined the ranks of higher education institutions that are offering their students an easier way to watch all the shows they want, on any IPTV-ready device.

The service is typically included in room and board fees paid by on-campus residents. It is a service that allows students to watch live TV, on-demand and recorded content on their IP-enabled devices, including laptops, tablets and smartphones. Internet and/or WiFi service by Comcast may also be included, depending on the school's choice of an internet provider.

According to Adrian Adriano, vice president of strategic initiatives for XFinity Communities, universities use this service to increase the appeal of on-campus living. He adds that it is also intended to lessen IT burdens on schools.

"Xfinity On Campus is a full IPTV option that requires little to no equipment and there is reduced maintenance and time costs," he says. "This is ideal for schools wanting to move away from traditional coaxial networks."

Xfinity On Campus was introduced in 2014. According to a blog post published in August by Mike Gatzke, vice president of video subscription services, the most-watched programs on campus were The NBA Playoffs, "Sports Center," "Grey's Anatomy," and "This Is Us," among others.

"Students want the same or better entertainment experience they receive at home," Adriano says.

a smart refrigerator the next — multifamily and student housing companies tend to need a more all-inclusive approach, which some contend is best delivered by a managed end-to-end network implemented by a specialist in multifamily housing, as opposed to the vendors that serve individual homeowners. To this end, companies that service the student housing industry with managed networks are integrating unique IoT offerings that not only impress prospective renters, and their parents, they also offer money-saving opportunities to owners.

A.I. Sets the Scene

Airwave Networks debuted an integrated IoT networking platform in January, a service it is offering to clients who are already engaging Airwave Networks for a managed network. The product enables a single-user interface that can "talk" to many systems inside an apartment such as locks, thermostats and lights. Students and property managers can download an app called AI, short for Airwave Illumination. The Tradition in College Station, Texas, owned by Haven Campus Communities was the first to roll out the technology this fall.

AI is also being offered at The Bloc in Lubbock, Texas. An Amazon Echo is supplied in each apartment that enables tenants to control multiple systems in the unit as well as to communicate effortlessly with management by requesting a maintenance call with a voice command. It also enables property managers to send general or specific messages back to each unit, such as events taking place on property, rent reminders or package pick-up notifications.

The Tradition is a value-add project that used the Airwave Networks technology as a new perk in the renovated community to stand out among competitors. Prospective residents can look at floor plans, which include the Echo on the dining room table. The demo of the technology during leasing tours was customized to show its capabilities.

"When entering the unit, leasing agents use their smartphone to open the entry lock, peer into a dark unit, then tell Alexa to say hello to the guests," says Scott Buehrle, Airwave Networks' national sales director and product manager for IoT and mobile apps. "Alexa welcomes the guests to their new home by setting the scene to their desired lighting and temperature comfort levels and even preference for background music."

Airwave also used scripted questions and answers tailored to the specific communities, where students could ask the model unit about events, nearby attractions and how fast the internet is at the property, while parents could ask about security.

"As you can imagine, hearing Alexa say, 'Gig 'em Aggies!' as students left the model unit at The Tradition produces lots of smiles for the Texas A&M students," Buehrle says.

This product is typically bundled as an add-on if Airwave Networks is already building the network for a new or renovated community.

"The Internet of Things is a natural extension to what we're already building," says Bill Rinard, Airwave Networks founder and CEO. "We're bringing all this under one very simple, interface so the management doesn't have to be hugely technical to run their property."

A P3 Focuses on Speed and Efficiency

Managed network providers are touting operational savings by eliminating multiple vendors, which they maintain could tighten up utility costs as well as provide other potential cost reductions. Synergy Fiber, for example, served as the single vendor at a project Servitas delivered in College Station in August.

Park West is billed as the largest single-phase P3 delivery in student housing. The project consists of 3,402 beds in 15 buildings on 47 acres of

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*Synergy Fiber is the total technology integrator for Park West - the largest single phase student housing project in the United States.This project, a private/public partnership with Texas A&M University developed by Servitas, includes 1320 units and 3406 beds and was delivered mid-August 2017. This project was completed with internet and television service, wireless, voice, security, access control, and low voltage cabling, all installed by Synergy. To learn more about energy saving IT solutions, potential cost savings up to 33%, and single vendor integration of IT services, call our sales department at 734.222.6061 or visit pr.synergyfiber.com.

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Texas A&M University land. As such a major, high-profile project and close affiliate to the university, the developers needed to deliver a top-notch internet amenity.

Synergy Fiber installed and manages Park West's network, including internet and television service, wireless, voice, security, access control and low voltage cabling. Synergy's network is anticipated to be a "green" internet initiative because of switch port reduction, electrical capital expense reduction and an energy-metering pilot that uses censors to monitor electrical consumption. Figures for Park West are not yet available, but it's expected to deliver an approximately 33 percent reduction in utility costs because of the single vendor selection.

"Submetering is just the beginning of what we think is going to be a revolution in how people look at buildings," says Norm Roe, CEO of Synergy Fiber. Roe hopes to push a set of standards for user acceptance testing, green building initiatives and verification of network performance.

Synergy Fiber says its type of single-vendor network can greatly reduce non-revenue-generating space by consolidating intermediate distribution frames and reducing meter-room space, which could potentially add more bedrooms to rent as well as eliminate some AC units necessary to cool the hardware essential for traditional multi-vendor deployments.

According to Roe, other capex savings from a network such as that at Park West come from a reduction of vendor visits, such as access control, security, fiber contractors and others, which also reduces legal costs.

"Single vendor integration means the developer is in effect outsourcing project management," Roe says. "The developer has only one call to make if something goes wrong. And from our side, it is so much easier not to have to wait on other IT vendors to finish a project. The fact that we do all the installation work saves a ton of hassle for both parties."

This isn't the first time Servitas introduced unique internet amenities to College Station. In 2013, Servitas and Synergy delivered The Stack. Matt Myllykangas, Servitas' senior vice president of pre-construction and development, says that project convinced his team that a single-vendor solution was preferable.

"At that time, our project had the fastest internet in College Station," he says. "Marketing our property as the fastest internet absolutely made our leasing very easy. The rest of the marketplace has caught up since then, but the year we had the fastest internet, we saw a difference."

The property in 2013 was deliv-

ering 100 megabits per second. In 2017, the property delivers up to 1 gigabit and Park West boasts user experiences up to 10 gigabits, Roe says.

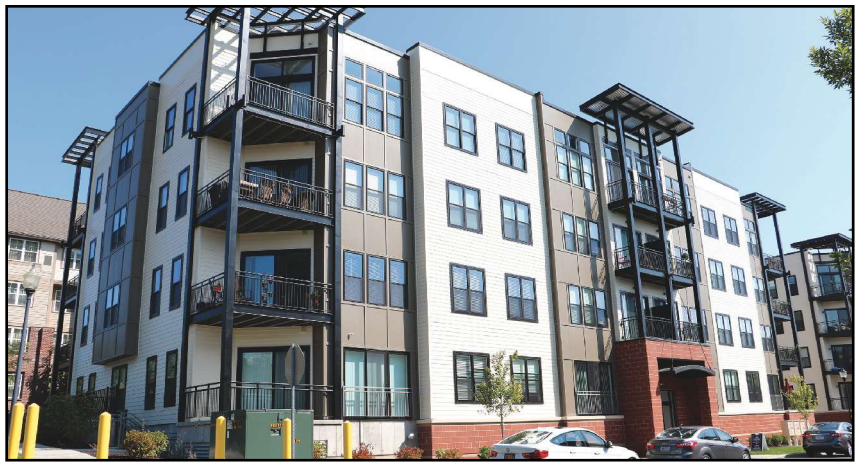
Smart Apartment Revenue

Epproach Communications has just introduced Epproach Smart Home for MDUs that is currently deployed in market-rate apartments but is also being marketed for student housing communities.

The first property to opt in for the service is Excelsior Park in Saratoga Springs, New York. The management team offers the Smart Home application bundled with high-speed internet service as an "opt-in" amenity. Residents can pay an extra fee each month for the service. The unit is already preconfigured with the technology, which controls the door lock, lights and thermostat. Tenants download an app, which can be branded with the property name, and after being assigned secure credentials, residents are then given complete access to all the smart technology in their unit and can add their own customizations.

"An incredible 97 percent of residents chose to opt in," says Marty Hollingsworth, president and CEO of Epproach. "This provides an enormous ancillary income stream to the owner. Other owners might want to include it in rent or provide other packages."

When residents move out, they are removed from the system and their credentials are stripped so they no longer have any access. Property management has management-level controls of the smart technology throughout the process.



Excelsior Park in Saratoga Springs, New York, is a conventional multifamily property where Epproach Communications debuted its Smart Home application that the company expects to introduce to the student housing market.

REIT Ensures Solid ROI

As one of the industry's leading owners and operators, EdR is exploring smart technologies at a measured pace. Proven returns on investment are essential before any large-scale rollout into its 66 communities in 40 markets might occur. EdR will complete approximately $145 million in acquisitions in 2017 and will deliver $1.1 billion in new development from 2017 to 2020.

EdR has been attuned to building networks at its properties, due in large part to a 14 percent ownership in Elauwit Networks, which installs and manages all of EdR's internet, cable and surveillance.

"I've been asked many times why we aren't employing more smart home technology," says Scott Casey, senior vice president of strategic business development and chief technology officer for EdR. "My answer is always that if there is no return on investment for the owner, and if we didn't feel our residents would take advantage of it or that it wouldn't help us reduce costs, we won't do it."

But Casey says EdR's research into smart thermostats, which have improved their commercial-grade performance in recent years, revealed a significant potential cost savings the REIT couldn't refuse.

EdR selected Echobee thermostats and has begun a gradual introduction of this smart home feature. The thermostats are currently installed at two properties and will be installed in all 2018 developments.

"Thermostats aren't going away," Casey says. "It's a long-term solution at our properties, and for all intents and purposes, we can reap that savings in perpetuity."

Those savings, after an approximate 36 month ROI, are a 10 to 15 percent decrease in utility costs compared with properties of the same size that don't have smart thermostats. The Echobees can be programmed remotely to set minimum and maximum temperatures, which is particularly effective at properties in extremely hot or cold climates and during periods where most residents are not on-property, such as holidays or summers. The thermostats send maintenance alerts for various issues, such as a filter that needs to be replaced or a unit that is running for extended periods.

"We will reduce the wear and tear on the units, reduce the number of times we replace the filter and reduce the maintenance and labor tied to repairing units that go bad due to too much wear and tear," Casey says.

Along with the Echobees, EdR is also evaluating smoke detectors that will send an alert through a property's wireless network when a battery has gone down or when it has been disabled. Casey says although the smart smoke detectors don't yield operational cost reductions per se, they are tied to the company's safety objectives.

"These investments will further secure us as being true green properties," Casey says of the Echobees. "We will be hiring a director of sustainability who will oversee all this, as well as lead several other initiatives. The times are changing for us, and this smart technology is the first piece of that." **SHB**