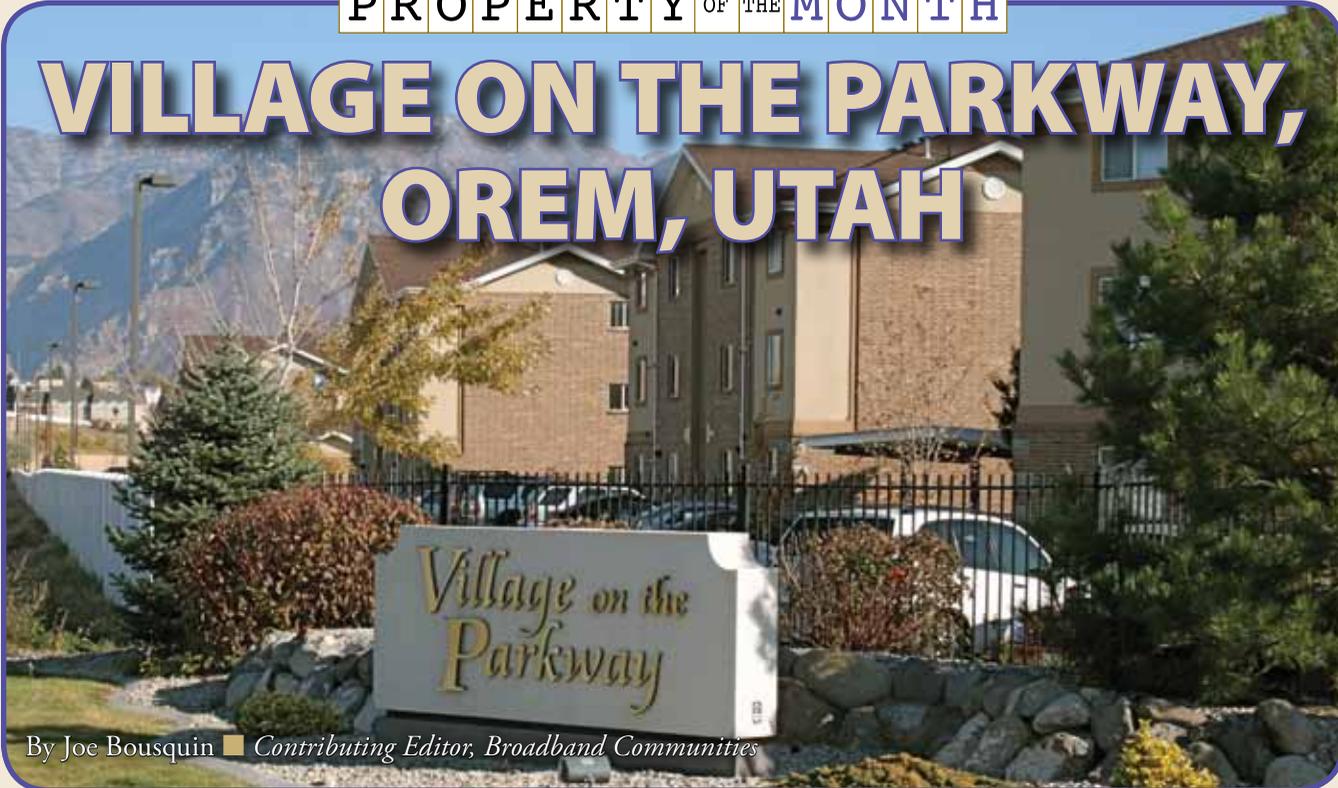# VILLAGE ON THE PARKWAY, OREM, UTAH

By Joe Bousquin ■ *Contributing Editor, Broadband Communities*

This month, we showcase Village on the Parkway, a student-housing community in Orem, Utah, that is linked to the 16-city municipal network UTOPIA and receives services from InfoWest, based in St. George, Utah. Our thanks to Julie Paulson, Jonathan Crump and Jamie Brotherton of UTOPIA, Randy Cosby of InfoWest and David Pestana of Edge Creek LLC for their assistance in preparing this feature.

For David Pestana, partner at Edge Creek LLC, keeping up in the tech-amenity race can be a double-edged sword. Offering ultra-fast speeds bundled with an all-inclusive rent package certainly attracts residents. The downside is that when an amenity is included in the rent, residents have a tendency to blame the owner when something goes wrong.

That was true at Village on the Parkway, a 432-bed, off-campus, student-housing community in Orem that serves both Utah Valley and Brigham Young Universities. When Edge Creek bought the property in 2008, it was already connected to UTOPIA, the municipal fiber optic network deployed by the 16-city Utah Telecommunication Open Infrastructure Agency, one of the largest of its kind in the country. As an open-access network, UTOPIA offers multiple service providers the opportunity to deliver services over its all-fiber infrastructure.

> ## *Village on the Parkway had a great fiber-to-the-unit network – but the Wi-Fi system didn't take advantage of it. Result: 432 unhappy students.*

However, the service provider that Edge Creek inherited with the property soon faced financial challenges, and a technical glitch slowed down the network for Village on the Parkway's data-starved students. Though the network was capable of a total throughput of 730 Mbps, students started complaining – vocally – that their wireless connections were hopelessly slow.

"If you don't give them good, fast wireless, they'll let you know about it right away," Pestana says. "That's extremely important to our students."

The problem turned out to be the single – and congested – wireless access point that served the property. Although it was commercial-grade and offered

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good coverage, it tapped into a single 10 Mbps pipe. Because students used wireless access much of the time, the dedicated 10 Mbps wired connections to their individual units were largely unused. "We weren't utilizing more than 80 percent of our bandwidth," Pestana says. "UTOPIA and InfoWest helped us understand that."

InfoWest is the competitive local exchange carrier that Edge Creek called in once its inherited contract expired. The company is one of 12 service providers that offer Internet and other data services over UTOPIA.

Although InfoWest wasn't the cheapest among those providers, according to Pestana, its service has been smooth, reliable and, most important, fast since it started serving Village on the Parkway late last year. "Even when we compare it with our other properties throughout the state, InfoWest and the UTOPIA network are killing it here," Pestana says. "There's just no comparison."

After InfoWest installed a dedicated wireless access point for each of the property's 72 six-bed suites in a single day, Pestana stopped getting 3 a.m. calls whenever his residents pulled all-nighters. As a bonus for his predominantly Latter-day Saints residents, InfoWest provided a safe-surfing filter to weed out malware and adult-content sites, something that turned out to be highly marketable to his residents' check-writing parents.

"Some of the bishops in the community had voiced concerns," Pestana says. "We feel – and our parents feel – this is just a much safer environment for our students."

Students pay the equivalent of just $10 a month for their 10 Mbps x 10 Mbps connections. For Pestana and the students at Village on the Parkway, though, it's really just the speed that matters. He notes, "We've got other properties that get 30 Mbps total, while we're at 730 Mbps here." Each suite has a dedicated 10 Mbps, and so does the office and common area.

In addition, because InfoWest made clear through its marketing that it was responsible for addressing any service problems, residents have stopped calling the owner about Internet issues.

"When you don't hear from them, you figure that's a good thing," Pestana says.

Now, Pestana and the residents' parents – most of whom pay the rent for their children – can all sleep better at night.

VITAL STATISTICS

Property Description: Village on the Parkway is a student-housing apartment community in Orem, Utah, that serves student residents who attend Utah Valley University and Brigham Young University.

Greenfield or retrofit? InfoWest retrofitted a wireless network over an existing fiber infrastructure that was installed by UTOPIA when the property first opened in 2006.

Number of residential/commercial units: 72 residential units housing six students each, plus one office.

High-rise/mid-rise/garden style? Three-story mid-rise

Percent of units occupied: Up to 100 percent from late August through mid-April. All residents attend either Utah Valley University or Brigham Young University. From mid-April through mid-August, the community has approximately 75 percent occupancy.

Time to deploy: The original build for UTOPIA to install the network during construction took approximately six weeks. When the community switched to InfoWest in December 2010, all 73 units came online within one day.

Date services started being delivered: December 15, 2010

TECHNOLOGY

Jamie Brotherton, UTOPIA's operations manager, and Julie Paulson, UTOPIA's communications manager, provided the following responses.

How does fiber get to the property? The property is connected to UTOPIA. Orem is a UTOPIA member city.

PROPERTY OF THE MONTH HIGHLIGHTS
VILLAGE ON THE PARKWAY

- *This student-living community in Orem, Utah, was built in 2006 and purchased by Edge Creek LLC in 2008.*
- *InfoWest provides data services to residents over the UTOPIA fiber network. Each unit has its own fiber connection.*
- *The Wi-Fi overlay installed by InfoWest makes use of the fiber connection to each unit.*
- *Vendors include Ubiquiti and Allied Telesis.*

Retail service providers such as InfoWest can use the fiber optic "runways" that UTOPIA provides, and complexes such as Village on the Parkway have an affordable fiber optic option.

To help others understand UTOPIA, we frequently use the Salt Lake International Airport as an analogy. Salt Lake City owns and operates the runways, towers, terminals, and so forth, but nobody flies "Salt Lake City Airlines." Why is Salt Lake City in the airport business? The answer is intuitive to most businesses and homeowners: If Delta, United, Frontier, SkyWest, Southwest and other airlines each had to build an airport to serve customers in Utah, the cost to fly there would be significantly more expensive, and far fewer options would be available.

UTOPIA provides the fiber optic "runways" for member cities. It does not offer retail services, just as Salt Lake City International Airport does not have an airline. The result is similar. Companies such as InfoWest can use our fiber optic runways, and complexes such as Village on the Parkway have an affordable fiber optic option.

UTOPIA is a 100 percent fiber optic network. At Village on the Parkway, each of the 73 units has a separate strand of fiber that runs to a high-speed switch in the unit; this allows the InfoWest and UTOPIA network operation centers to monitor each apartment unit as a separate address.

How is fiber distributed inside the building? Fiber runs from UTOPIA's Network Operations Center to Village on the Parkway. Inside the building, a dedicated fiber strand runs through PVC conduit to each of the student suites. Inside each unit, UTOPIA has placed an Allied Telesis AT-iMG606 Intelligent Multiservice Gateway, which con-verts the fiber signal into an electric current that can travel over copper. The gateway is a 100 Mbps-capable active Ethernet portal with six RJ-45 copper ports.

What is the FTTH technology? This is an active Ethernet deployment.

How did you deal with wiring and plug access within the units? UTOPIA ran metal conduit from an aboveground transition point to the side of the building and then extended PVC conduit through utility chases leading to each unit. We sealed each penetration with commercial-grade, room temperature vulcanizing (RTV) sealant and National Fire Protection Association–rated firestop.

Have you provided wireless signals within units? UTOPIA does not deploy wireless solutions. However, InfoWest deployed a separate, remotely managed wireless access point with a unique WPA2 key for each of the 73 units. Each apartment's wireless access point – a Ubiquiti AirRouter – is connected directly to the fiber access portal and authenticates with our internal ISP systems via Point-to-Point Protocol over Ethernet (a specification for connecting multiple users on an Ethernet LAN to a remote site), allowing us to log, monitor and control usage. Each router also distributes the wired bandwidth to a 12-port switch in the unit's closet, which is used to distribute Ethernet to various ports in each unit.

How much square footage did you have to dedicate to the network inside the building? The Allied Telesis equipment with uninterruptible power supply typically requires about 1.5 square feet of wall space. It was installed in existing utility closets or equipment rooms.

SERVICES

Randy Cosby, vice president of InfoWest, provided the following responses.

Does the building have triple-play services? Not currently, although the infrastructure would certainly allow for it.

Are there other technology amenities? There is wireless access in all common areas.
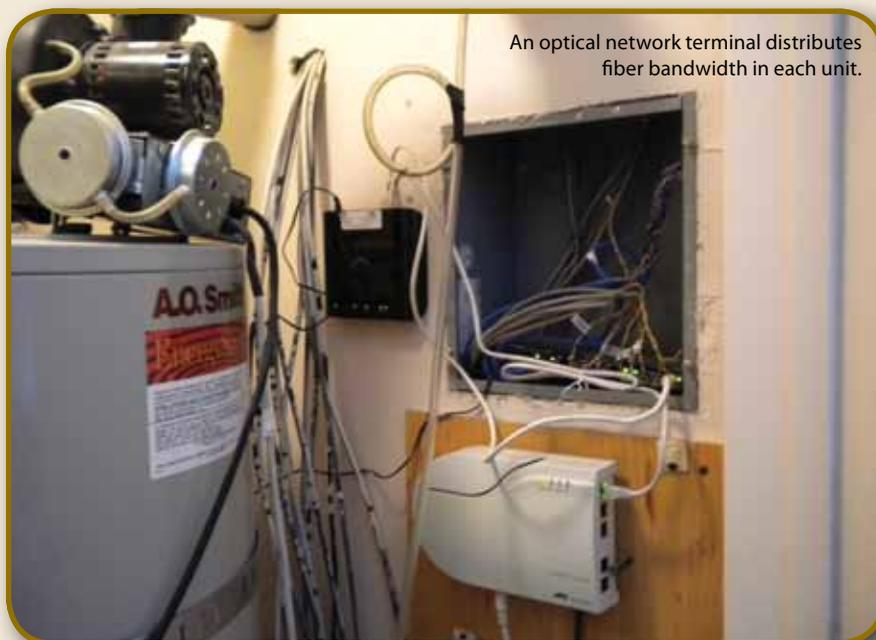
An optical network terminal distributes fiber bandwidth in each unit.

Also, because UTOPIA is an open-access system, residents or the property owner could contract with other providers for additional services.

Who is the wireless service provider? InfoWest.

Do residents have a choice of service providers? Because only one of the six copper handoffs at the access point is currently being used, individual tenants are free to contact and purchase additional services from any UTOPIA provider.

However, student residents pay for InfoWest service as part of their rent. The cost per unit on a bulk-rate contract from UTOPIA is the most affordable option for both the tenants and owner. Typical residential customers who receive InfoWest services over UTOPIA pay $27.95 per month for a 10 Mbps up, 10 Mbps down connection in addition to a $25 per month fee to their local utility company. The bulk-rate fees for

Each unit has its own wireless access point, a Ubiquiti AirRouter.

student access at Village on the Parkway are much lower.

How did the owner set up the multiple choice capabilities? UTOPIA provisions each of the six copper handoffs to be used by different providers. If a resident signs a contract with a provider, the provider submits an order to UTOPIA, which then activates the additional port.

If residents have an issue or a technical challenge, whom do they call? InfoWest provides free support to the residents and works in cooperation with UTOPIA or the local building management to solve problems with wiring, power and so forth.

BUSINESS

Jonathan Crump, UTOPIA's director of sales, responded to these queries.

InfoWest plans to replicate this deployment in housing complexes in the UTOPIA service area. It has also adapted the model to non-UTOPIA areas.

Who owns the network? Who paid for what? Originally, UTOPIA paid for the deployment of fiber and electronics to all multiple-dwelling-unit properties. Village on the Parkway did not pay for the infrastructure when it was installed more than five years ago under the agency's original build-out plan.

Newer UTOPIA deployments require the property owner to have "skin in the game," but eight of the 16 UTOPIA cities have provided financing to properties using a contractual utility enhancement (CUE). With CUE financing, UTOPIA installs fiber and electronics to each unit, and the property owner repays the city over either a 10- or 20-year term. The contract has the same legal status as a utility contract. If the property owner sells the property during the contract period, the contract transfers at closing to the new property owner, just as a water connection or other municipal service would. However, the loan does not encumber the property with a lien, as traditional financing would. CUE financing allows UTOPIA in most cases to install the needed infrastructure and still provide a competitive return on investment for the community.

UTOPIA maintains ownership of the infrastructure. This benefits property owners because UTOPIA maintains and repairs the fiber and electronics, just as any city maintains its own streets and water systems.

Are services automatically included in the rent? Yes

If residents are billed directly, who handles billing and collection? Any additional services purchased by a tenant are billed directly to that tenant by the service provider.

What has the return been on this implementation, in dollars or otherwise? From the InfoWest perspective, we are able to show this as a successful implementation that we plan to replicate in other housing complexes in the UTOPIA service area. We have also adapted this model to non-UTOPIA complexes in southern Utah.

The main concern of the complex owners was better support and consistent service. They didn't want to be the first-line support, and they were finding themselves in that position with the previous provider. We also were able to provide a service that automatically filters adult websites and malware as part of the package, which is an attractive offering to the parents of Village on the Parkway's student residents. The filtering is nearly identical to that used at Utah Valley University, the local college that the majority of the residents attend.

UTOPIA has learned that deploying fiber directly to each unit provides the best return on investment for a complex owner. Even though the initial cost may be higher than other deployment methods, the cost is quickly recovered because of higher customer satisfaction, which results in far fewer customer complaints, truck rolls and other problems.

Each unit at Village on the Parkway is provisioned for 10 Mbps, and InfoWest and UTOPIA can deliver 10 Mbps to each unit independently. So if unit 57 is using its 10 Mbps 24/7, units 56 and 58 are not affected. If unit 57 needs 100 Mbps, the residents can purchase the additional 90 Mbps through the complex owner, InfoWest or another provider.

ONSITE EXPERIENCE/ LESSONS LEARNED

What was the biggest challenge?

Jamie Brotherton, UTOPIA: Coordinating all the elements to ensure a smooth transition to InfoWest service while being able to monitor and support this large an installation. Although there are only 73 units in this community, each unit houses six students, which means we service more than 420 users at this complex. We developed scripts and tools to help us mass-configure wireless routers, map the complex and coordinate with UTOPIA and our systems.

What was the biggest success?

David Pestana, Edge Creek: Where other providers have struggled, InfoWest has come in with a good track record to provide a fast, reliable and smooth-running system. They weren't the cheapest provider we could have gone with, but it's been worth it. There was also the one-day transition. InfoWest installed preconfigured access points in every unit, verified and repaired any connectivity or wiring issues and then tested Internet speed and reliability.

What would you say to owners who want to deploy a similar network? What issues should they consider before they get started?

David Pestana, Edge Creek: Make sure you're dealing with a full-service provider that can support the network it's offering to your residents. Ask yourself whether residents are getting access just to a network or to the necessary services and support that should come with it.

How did the vendor interact with residents during installation?

Randy Cosby, InfoWest: InfoWest worked with building maintenance to access each unit. We provided printed instructions for accessing the wireless network as well as instructions for contacting our technical support team. It was done at the beginning of a winter break, so the impact was pretty minor for the students – most of them were home for the holidays when we installed. ❖