

One Fiber, Two Providers: Givens Gerber Park, Asheville, North Carolina

In this issue, **BROADBAND COMMUNITIES** showcases Givens Gerber Park, an affordable senior housing community whose residents can choose between two broadband services delivered over the same fiber infrastructure. Thanks to Ricky Foor of Givens Communities and Alan Bertsch of Qypsys for gathering the information for this profile.

By Masha Zager / *Broadband Communities*

Givens Communities is a United Methodist Church–affiliated nonprofit that provides care for seniors in several types of communities – ranging from independent living through skilled nursing – throughout western North Carolina. Its mission of compassionate care emphasizes opportunities for residents to live their lives to the fullest. This requires providing a community atmosphere, a wide variety of activities, and catalysts to participate in as many of those activities as possible.

“That’s where technology comes in,” says Ricky Foor, technology director for Givens Communities. “Phone, internet and cable are all tools we provide residents to enhance their lives. Wireless access is very important to us because it opens up the door to allow them to interact with the community, the region and the world as a whole.” Each community has a website, a community TV channel and, in some cases, a mobile app to keep residents informed about menus and activities and facilitate contact with staff members.

Each community (except one that Givens purchased rather than built) is built with a fiber-to-the-unit network that will enable residents to

access any new technology as it develops. “We’re planning ahead and thinking about what will happen,” Foor says. “Will residents need 3D video? Virtual reality? The medium that gives us most chance of success with these is fiber.”

Givens provides triple-play services to residents over its own networks and invests any profits from those services in the communities’ technology infrastructures. In addition, it always offers residents a choice of providers, usually through a parallel copper or coaxial network. Foor explains, “I don’t believe that forcing residents to subscribe to one service is appropriate.”

GERBER PARK

In 2016, Givens developed a new community, Gerber Park, to provide independent living for low- and moderate-income seniors. The community, which includes HUD-subsidized, tax-credit and affordable middle-income apartments, is being built in three phases and includes such amenities as a café, a community room and a fitness room. “It’s a home where residents can age in place at a standard of living that we believe everyone deserves,” Foor says.

Like earlier Givens properties, Gerber Park was outfitted with a passive optical network that



could support business functions, health monitoring technology and resident internet access. However, in the new community, Givens went a step further: With help from systems integrator Qypsys, it installed a fiber-to-the-unit network that could deliver its own services *and* the services of the local cable company. Residents can choose whichever service bundle they prefer (most choose Givens services), knowing that the services will be delivered over the same robust, reliable infrastructure.

Building a consolidated infrastructure costs about the same as building parallel infrastructures, Floor says, but in the long run, the maintenance costs are lower for a single network, making the total cost of ownership lower. Maintenance isn't the only issue, Floor points out – troubleshooting is easier, too: "There's only one wire to worry about."

VITAL STATISTICS

Property Description: Givens Gerber

Park is a vibrant, affordable community located in the South Asheville neighborhood of Asheville. It offers one- and two-bedroom rental apartments to seniors 55 and older. Amenities include a café, a fitness center, elevators, a library/computer room, raised garden beds, a medical clinic, tenant storage areas and access to nearby grocery stores, pharmacies and shopping. Residents enjoy

activities and services designed to help them remain healthy, engaged and active. Rent is determined by household income.

Demographics: 55-plus independent living, with a broader income range than is typically found in traditional affordable housing.

Greenfield or retrofit? Greenfield

Number of units: 262

Style: Mid-rise

Date services started: November 2016

Special requirements: Ability to deliver services from two providers over the same network

SERVICES

Services offered on the network:

Givens offers residents high-speed internet access with a top speed of 100 Mbps, along with video and digital voice services. The video service is injected into the PON

from the cable provider that also serves the community.

Provider choice: Residents may purchase voice, video and internet services from Givens or the incumbent cable company. All services are delivered over the same fiber network.

Point of contact for resident technical support: Givens operates a technology help desk.

BUSINESS

Who owns the network? Givens owns all parts of the network.

What marketing approaches are used? When residents' applications are accepted, Givens asks them to state their communications package options and encourages them to call the technology department or the property manager with questions or concerns before they move in, regardless of the choices they make.

PROPERTY OF THE MONTH HIGHLIGHTS ~ Givens Gerber Park, Asheville, North Carolina ~

- Affordable housing for senior independent living
- Triple-play services are available from two providers – the property owner and the incumbent cable company.
- The two providers share the same fiber infrastructure.
- Vendors include iPhotonix, Dasan Zhone Solutions, Cisco and 3CX.



The communications panel in a resident apartment.

What is the take rate? For Givens services, the take rates average 83 percent for voice, 65 percent for internet and 95 percent for video.

Network benefits:

Ricky Foor: I do not believe that our decision to provide FTTH would have made a difference to residents' decisions to join or stay in the community. However, we believe this decision will improve the quality of communications in their

homes and, hopefully, their daily lives overall. This network allows Givens to provide a higher level of service to the residents who choose our system for their cable, internet, and phone.

TECHNOLOGY

Resident Network

Broadband architecture: Fiber to the unit. Givens services are delivered via GPON to an ONT placed in the communications panel in each unit. Cable company services are delivered via RFoG to an ONU in the same communications panel. The fiber in the patch panel is connected to either the GPON ONT or the RFoG ONU depending on which service a resident selects.

Method for running cables between buildings: In-ground conduits installed during construction

Internet connections: The headend for the internet connection for Givens broadband service is at Givens Estates, about a mile from Gerber Park. The OLT at Gerber Park connects to the headend over Givens' MPLS fiber backbone network. For cable broadband service, the connection to the cable network is at a node at Gerber Park.

Business Network

The Givens business network uses the same fiber backbone the resident network uses, but rather than making use of the OLT at Gerber Park, it terminates at a Cisco switch and connects to an office LAN. Givens employees can access the Givens business network wirelessly through wireless access points built into the ONTs in residents' apartments. (The business Wi-Fi network is invisible to residents and separate from the residents' Wi-Fi network even though the same ONTs serve as wireless access points.)

Vendors and Strategic Partners

Gypsys and iPhotonix are responsible for the PON network design, installation and maintenance. Modern Edge Technologies is the fiber and low-voltage cabling partner. Advanced Data & Networks Solutions is the integrator for the multicampus data network. Equipment vendors include Dasan Zhong Solutions (OLT), iPhotonix (ONTs) and Cisco (switch for the business data network). 3CX software is used at the headend as a virtual PBX for the digital voice service for both business and resident networks.

LESSONS LEARNED

Answers by Ricky Foor, Givens

What was the biggest challenge? Fitting an FTTH design into the plans for



Employees from all the Givens Communities campuses tour Gerber Park to view the construction progress.

a building that was not originally designed to support fiber to the home. Standard low-voltage designs include separate lines of service for cable, internet and phone to each home, and the different utilities take care of home runs to the apartments from the utilities' main point of entry. Taking that design out and squeezing in the FTTH design was the largest challenge for us because the contractor, architect and trades were unfamiliar with FTTH. To overcome this challenge for the first phase of the building, we tried to educate trade leaders in weekly meetings.

What was the biggest success?

Implementing converged private and carrier services on a shared infrastructure, which allows us to facilitate preferences for either type of service – and then competing effectively with the carrier. To convince people to leave a marketing giant, our job is to live up to the standards we present. We don't charge any fees, and we don't offer any special promotions. At the end of the day, we offer a great benefit to residents, generate income for the technology infrastructure and still offer lower prices than the carrier, outside of promotions. Our speeds are faster, and our customer service is better. We have a dedicated circuit to the edge of the property, so we have a stronger, more stable solution.

We outfitted every wall outlet with internet, phone and cable jacks. Residents don't have to rent equipment – they can just turn up service and get internet and phone to all outlets, and we manage the Wi-Fi network. Residents can have a wired printer in the bedroom and print from another room. They can plug a phone into any jack. The services are built into the home.

What should other owners consider before they get started on a similar deployment?

- Being heavily involved in the electrical planning process when the drawings are made will reduce cost and frustration.

- Always run fiber through conduit.
- Using a fiber patch panel in the communications panels will save headaches and money in the long run. The fiber ends do break, and this makes repair as easy as a patch fiber rather than a resplice.
- Ensure that all outlets in the apartment have cable, phone and internet jacks. ❖

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