

Q&A With Richard Holtz, InfiniSys

## The Way to Smart Apartments

A system architect of MDU technology amenity systems shares his views on the MDU market and the requirements for developers and owners to meet the needs of their residents.

By Heather Burnett Gold / *HBG Strategies*

**M**any of **BROADBAND COMMUNITIES'** service provider readers are eager to break into the fast-growing multiple-dwelling-unit (MDU) market or increase their existing presence in that market. To find out more about what it takes to compete in the MDU market, I reached out to Richard Holtz, CEO of InfiniSys, a leading designer of innovative technology amenity systems for apartments, condominiums and mixed-use developments.

To grow in this market, service providers need to understand the business model. This means being able to demonstrate how they can assist property owners, developers and lenders in generating additional revenue while meeting residents' needs in a high-quality manner. Service providers must also understand the crucial role architects play in the selection of technology at a property.

Following are highlights of my conversation with Holtz.

**HEATHER BURNETT GOLD:** *How did you come to start InfiniSys?*

**RICHARD HOLTZ:** I'm a trained engineer who got into the MDU technology business purely by accident. Returning to the United States in the late 1980s after running a multinational business in Switzerland, I explored how to deploy intelligent home



Richard Holtz, CEO of InfiniSys

controls. Speaking on the topic for a Parks Associates conference brought me to the attention of some high-end property owners, who asked to meet to further explore the concept for apartments. As a result, we developed the InfiniSys SmartApartment product. As I was asked to develop and implement more plans for technology

deployment in MDUs, I realized I had a unique niche and went on to create many trademarked product offerings, including the FTTA (Fiber-to-the-Apartment) system, the NetworkedApartment, Wireless in the Unit, and the SmartApartment.

**HBG:** *What technology amenities are your clients looking for today?*

**RH:** The SmartApartment and NetworkedApartment designs allow InfiniSys clients to provide high-speed data connections (wired and Wi-Fi), digital satellite television, high-definition TV, IPTV, access control, voice communications, audio and video entertainment systems, energy management, security cameras and alarms, video concierge, community channels, clubhouse theater and gaming rooms, fitness center smart equipment, and more. SmartApartment and NetworkedApartment designs utilize robust low-voltage technology and infrastructure.

If feasible and cost-effective, fiber is the preferred delivery method, especially when planning for the future. InfiniSys recommends that service providers run fiber to every unit or, at least, that developers and owners consider installing fiber-to-the-unit pathways. InfiniSys will lay out the NetworkedApartment design for the pathways from the main communications room to the building communications closets and unit distribution panels.

**HBG:** *How are you typically brought into projects?*

**RH:** Sixty percent of the time, developers bring us into the project, and 30 percent of the time, architects request our help. Market differentiators are our use of Newforma, a project and engineering management tool used by builders and architects, and AutoCAD for our engineering drawings.

About 90 percent of our work is design and 10 percent is contract-related, working with service

providers and attorneys. We always bid out multiple service providers – LECs, MSOs and three to six ISPs. We sole-source a service provider only for bulk projects or if the economics are extremely compelling.

InfiniSys helps negotiate with technical subcontractors and service providers to get clients the best pricing, service and results. The goal is to minimize infrastructure installation costs while maximizing recurring revenue opportunities and ensuring the systems meet or exceed expectations. We do not function as attorneys but will help draft a contract with the appropriate technical standards. We always recommend the property owner use a competent telecommunications attorney.

**HBG:** *Are you working with new construction or existing MDUs?*

**RH:** The bulk of our work (90 percent) involves greenfield deployment, which includes all properties in which there are no structural impediments to deployment, including buildings stripped down for total rehabilitation.

In the case of existing properties, most technology decisions occur during acquisition or swapping of ownership or at the end of a service provider's contract term. The smartest service providers, who want their contracts renewed, work proactively with the various stakeholders during their contract terms to ensure the properties they service are technologically competitive. This is especially true in student housing and other bulk contract services properties.

For existing multifamily residential properties, InfiniSys helps owners, managers, architects and interior designers understand the current condition of the property and the network and telecom agreements needed. At the same time, we help make design changes to the infrastructure that will assist developers and owners in adding technology and value to their properties.

InfiniSys engineers assess the condition of the technology infrastructure and determine any additional expenses necessary to modernize the property. With a comprehensive technology assessment, InfiniSys conducts an in-depth, on-site audit to evaluate the design and condition of the current systems; evaluate the technical and business terms of existing contracts governing the internet, TV and phone services (and potentially other services); and prepare a budget for any necessary improvements. Further, InfiniSys procures necessary proposals from various service providers.

**HBG:** *What types of MDUs do you serve?*

**RH:** InfiniSys is not typically brought into properties with fewer than 50–100 units, as that is typically the minimum needed for economic use of our services.

About 50 to 60 percent of our market is in the luxury multifamily segment, both rental and condominium. In this market, 90 to 95 percent of communities have multiple providers, as owners and developers are sensitive to offering consumer choice to residents. Many residents have had poor customer service experiences with the incumbent telephone, internet or TV operator and want the option of choosing among providers. To help avoid poor service experiences in the future, InfiniSys creates strong service level agreements with all its providers.

Student housing represents the next largest segment, which constitutes anywhere from 20 to 40 percent of the market. All services provided to this group are typically bulk single provider deals, and about 80 percent are with private providers, which are more willing to meet the needs of developers or owners.

Most standard bulk contracts have five-year terms, typically set to correspond to the technology lifetime of the Wi-Fi electronics used at these communities.

The final market segment we

serve, which is one of the fastest-growing, is the senior active and memory care segment. As in student housing, most services are delivered from single-source providers under a bulk deal.

**HBG:** *Who pays for construction of these systems? And who owns them?*

**RH:** The market has evolved since the cost of capital dropped in 2008, and owners now pay for and own approximately 90 percent of the deployed technology in bulk deals. Owners understand the different depreciation rates for the various components and their cost of capital versus that of the service provider. Owners do a capitalization rate analysis on each recurring dollar they spend.

In other deals, especially for luxury properties, the payment and ownership of the capital assets are part of the deal negotiation and vary by the owning entity.

**HBG:** *What is driving the demand for greater bandwidth?*

**RH:** InfiniSys has seen tremendous increases in bandwidth demand from residents. The sweet spot of demand is now between 100–200 Mbps per user. Gigabit speeds to users tend to be over-hyped; in the Wi-Fi space, 200 to 300 Mbps is a practical limit of today's access points. The number of connected devices is also on the rise; one client property reports up to 30 devices per user.

As every ISP can verify, there have been tremendous increases in video streaming with the growth of IPTV. Indeed, on college campuses, Netflix typically constitutes more than 50 percent of streaming traffic.

Among property uses (as opposed to resident uses), access control is dominating. Eighty to 90 percent of our clients need limited bandwidth for access controls but see a significant, increasing demand for cloud-based video surveillance. Further, smart thermostats are growing in usage, with 15 percent

of the properties offering them as an IoT amenity.

**HBG:** *What technologies will meet that demand?*

**RH:** Despite the growth in the number of devices, many of which are wireless, I don't see a switch to wireless broadband for the infrastructure. Wireless access points do not have the same potential of meeting requirements for bandwidth and number of active sessions without a physical upgrade every three to five years. This is because of the advances in the technical standards that govern their design and use. It's possible that in the future, everything will be wireless, but there is no guarantee of this once we see holographic video.

The only exception is for Wi-Fi calling, which may undermine the use of multiple providers in luxury MDUs. As residents come to expect and then demand Wi-Fi calling everywhere from their garages to their units and throughout the complex, they will require a level of connectivity that only a single source, bulk provider can offer. Wi-Fi calling will not work when multiple providers each provide Wi-Fi from individual units. The reason is related to who pays for the service and authentication.

Service providers should keep a close watch on this trend because it will be of further significant impact over time. Propertywide Wi-Fi is far cheaper from a capital standpoint than a cellular telephone-enhancing system such as a DAS.

**HBG:** *Which wireline technologies do you recommend to clients?*

**RH:** For the first 15 to 20 years, InfiniSys pushed fiber to the apartment to the nth degree. We continue to promote fiber, but now we subject fiber projects to a rigorous proprietary cost/benefit analysis because of improvements in copper throughput and the deployment of DOCSIS 3.1, which have enabled properties to deliver bandwidth speeds that residents

demand without deploying all-fiber solutions. However, InfiniSys usually designs (at a minimum) fiber to the communications room and future proofs with a couple of spare microducts to ensure that, if and when fiber is needed, it can be installed cost-effectively.

One issue holding back fiber to the unit is the evidence that, if fiber is deployed using GPON or a future PON architecture and has an overly aggressive split ratio, the fiber throughput will be slower than copper. What technology is utilized, and when and where, is highly dependent upon the regional location of the MDU and the availability of local support and service needed to maintain a given infrastructure.

Fiber has come way down in deployment cost; however, with DOCSIS 3.1 and other new copper technologies, each project must be evaluated for both today's cost and future requirements.

InfiniSys always recommends running pathways for fiber, which allows owners to be ready for future changes in wireline transmission. But, just as with broadband deployment within the multifamily industry, one size does not fit all.

**HBG:** *How can property owners stay on top of all these technology changes?*

**RH:** InfiniSys finds a large variation in the knowledge of property developers/owners/architects with respect to technologies. Because we want them to thoroughly understand our recommendations, we offer in-depth design and other materials and assign each project a dedicated engineer to explain the advantages and disadvantages of the options. Customers receive continual updates on all the latest MDU broadband distribution and deployment options. ❖

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