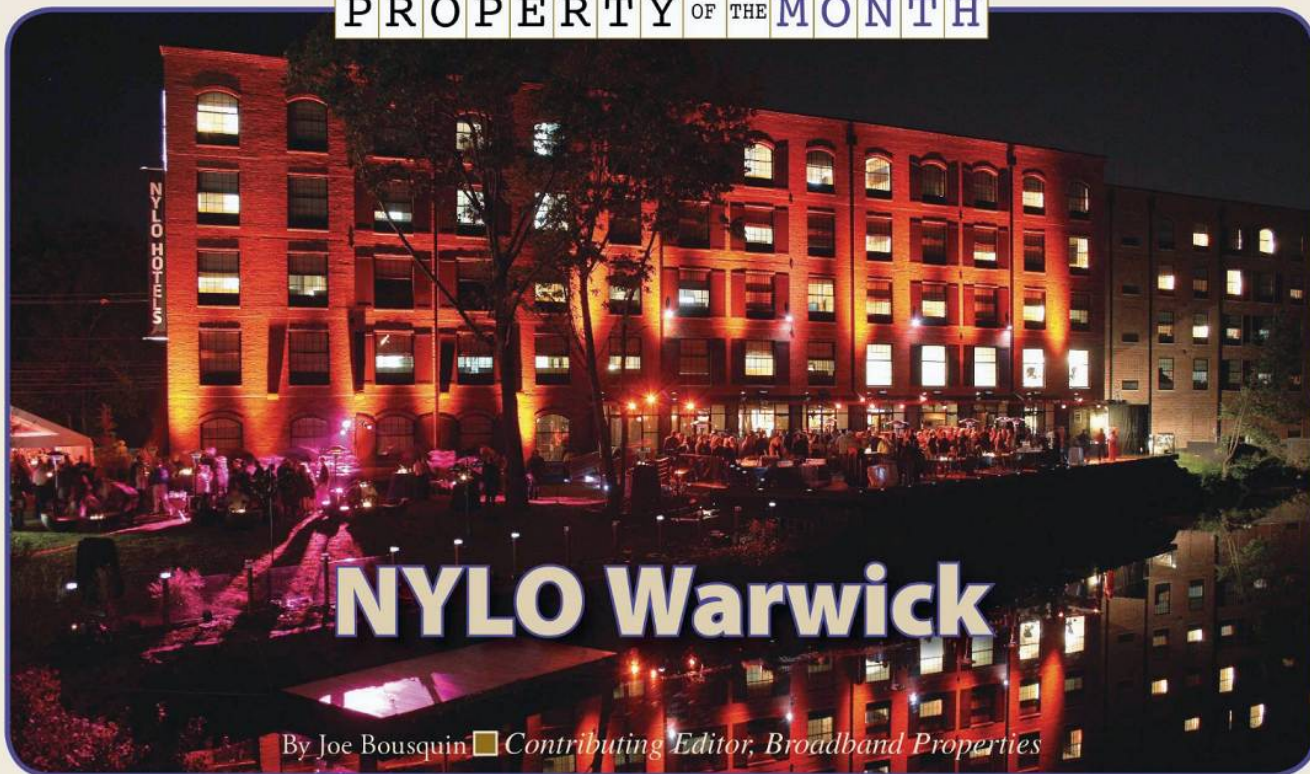


BROADBAND PROPERTIES
PROPERTY OF THE MONTH



This month's showcase features NYLO Hotels, a boutique hospitality brand that develops loft-style properties. Working with CLC Networks, a communications provider that focuses on the hospitality industry, the hotels have installed a radiating, or "leaky" coax infrastructure to ensure consistent, reliable wireless coverage throughout their buildings, and fiber and Cat 6 for traditional, wired ports. Our thanks to NYLO's Patrick O'Neil, as well as CLC's Mark Probst and Michael Wagoner, for their assistance in preparing this feature.

When Atlanta-based NYLO Hotels set out to create a new kind of business-friendly, ultra-chic boutique hotel chain, its executives met to discuss the things they *didn't* like about a typical hotel stay. Near the top of the list? Paying hundreds of dollars to stay the night, and then getting slapped with a double-digit access fee for Internet service.

"One of the things that sets us apart is we don't nickel and dime our guests," says Patrick O'Neil, executive vice president of the firm. "If you are thirsty in your room, we have free bottled water – you don't have to pay \$7 for it. The same goes for free wireless and free wired Internet access throughout our hotel. That was one of the core things we wanted to do when we came up with the NYLO concept."

At NYLO Plano at Legacy, the firm's inaugural property (it opened in 2007), guests in all 176 loft-style rooms and eight suites enjoy free 100 Mbps wired service, along with wireless access that's reliable, despite the building's tunnel-form construction and thick concrete walls. Says O'Neil, "I think the biggest success is the fact that it works the way it's supposed to work." The company has since built a second hotel in Warwick, Rhode Island, with a third slated to open in the Dallas area in the third quarter of 2009. It has more than 40 franchise sites in its pipeline.

Getting to this point wasn't easy. When NYLO started searching out a service provider partner, most hospitality-focused vendors couldn't get past the company's no-charge attitude. "They all were pushing us to charge \$12 a night, and then split the revenue where they got \$8 and we got \$4," O'Neil says. "That just didn't fit our philosophy."

But CLC Networks, an Atlanta-based service provider that caters to the hospitality industry, saw an opportunity in the



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A distribution rack on each floor of the hotel sends wired and wireless Internet signals to each guest room on the floor.

hotel firm's needs. By acting as the firm's technology infrastructure design team, CLC proposed to design and install the hotel's internal network, and then take a monthly fee to support guests' help-desk needs.

For Mark Probst, CLC's CEO, it was about understanding the hospitality owner's needs, and catering to its guests' preferences. "It's not just about having a connection to the Internet any more," Probst says. "The whole user experience has to be considered. Guests demand high connectivity, speed and quality."

Using radiating coax cables – commonly known as "leaky" coax – that run down the center of the hotel's hallways and act as antennas to distribute a consistent wireless signal, CLC created a network tailored to NYLO's building designs. The firm was also the right size to give NYLO the attention it needed as it established its brand.

"We worried that if we went with a really large provider, there would be the possibility of us getting lost in the mix," O'Neil says. "With CLC, it's a quick phone call and my problem is solved." CLC's deployment for NYLO Warwick, the firm's second property, is detailed below.

VITAL STATS

NYLO Warwick is an upscale boutique hotel with design-quality styling in a hip, relaxed atmosphere. CLC designed a radiating coax solution to distribute the wireless signal across the property, as well as wired Cat 6 ports in each room, while matching

NYLO's approach to interior spaces with exposed ductwork and wiring. CLC provides proactive maintenance and responsive, 24/7 call center support.

Greenfield or retrofit? Greenfield

Number of residential/commercial units? 163 guest rooms, four suites and 1,450 square feet of meeting space

High-rise/mid-rise/garden style? Five-story midrise building

Time to deploy? Five days

Date services started being delivered? August 2008

TECHNOLOGY

What is the FTTB technology? Fiber connectivity to the property is provided by Verizon and its 20 Mbps FiOS service. A single-family BPON optical network terminal (Tellabs' 1600-611 ONT) is installed in the main point-of-entry room on the hotel's ground floor.

How are signals distributed inside the building?

Michael Wagoner, vice president of engineering, CLC Networks:

Installation included five interior wireless access nodes (one per floor) feeding a network of radiating coax, supporting network infrastructure and a visitor-based network (VBN) gateway. The unusual design aesthetically matched the open-ceiling, loft feeling of the property, and provides wired and wireless high-speed guest Internet access, as well as connectivity for staff point-of-sale (POS) devices.

CLC Networks uses interior-rated, 12-strand multimode fiber from the property's main distribution frame (MDF) to each of the five guest-floor intermediate distribution frames (IDFs), which feed HP ProCurve Gigabit Edge Switches.

In each IDF, CLC deployed BelAir's two-radio, wireless BA-100 Access Node, along with radiating (leaky) coax from Trilogy Communications to distribute wireless signals throughout each floor. Guest-room phones and wired Internet connections are fed via Category 6 cabling. Every floor has a 1-Gbps-capable pipe and a 100-Mbps-capable line to the guest room on the internal network. We use that method so that if we want to run IPTV over those lines in the future, for instance, we can do that on a 100-Mbps port. You

SPECS SPOTLIGHT

FTTB Infrastructure	Fiber to the intermediate distribution frame (IDF); radiating (leaky) coax and Cat 6 to guest rooms
Internet Connectivity	Verizon FiOS 20 Mbps
Radiating Coax Vendor	Trilogy Communications
Wireless Access Node	BelAir BA-100 with a 500 mW Radio
Switches	HP ProCurve Gigabit Edge Switches

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The NYLO Hotels are targeted to business travelers; a fiber connection provides all guests with free, high-speed wired and wireless Internet access.

can soak up 18 Mbps to a HD IPTV stream, and still have plenty of bandwidth for the rest of the network. It makes for a very robust and future-proof internal property network.

Why did you choose this distribution architecture? Although the property's original design called for 12 standard access points mounted on the hallway ceilings of each of the five floors, CLC Networks created a design using only one high-powered access node per floor with a network of radiating coax. Not only did this reduce the overall numbers of devices needed for the property, but we were also able to ensure each guest room received the same level of wireless signal propertywide.

We chose the BelAir BA 100 product, which is traditionally an outdoor wireless access node, because it has

a 500 mW radio, one of the more powerful radios in the industry. Instead of having multiple devices connected on each floor, we used a divider to jump the BelAir's radio output onto two lengths of leaky coax running down each direction of the hallway. So instead of having a 100 mW radio and amplifying it, we used one 500 mW radio and split the power over two pieces of radiating coax that are anywhere from 160 to 180 feet.

How was the technology installed to reduce cost and protect the aesthetic? In keeping with the open loft architecture of NYLO's hotels, cables are run on J-hooks in the overhead space of the hallways before being routed into "smurf" tubes [so called because they are often bright blue] that terminate at the outlets in each guest room.

Using the leaky coax for the wireless was a particularly nice solution in this case. Not only did it give us that industrial look and feel, and tied underneath the existing J-hooks that were carrying the Cat 6 down the center of the hallway, but it also allowed us to get the signal right in front of the door to each guest room all the way down the hall. That's better than a traditional access point, where your signal typically enters the room at an angle. This allowed us to be pretty much 90 degrees straight into the guest room.

How much square footage did you have to dedicate to the network inside the building? Could closets be shared with other utili-



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ties, or did you need to create a dedicated maintenance space? The MDF is roughly 450 square feet. It houses CLC Networks' gear, corporate IT, LodgeNet Video on Demand, Mitel PBX and the property's AV and security systems. Each floor's IDF is roughly 150 square feet and is shared with CLC Networks' edge switches, wireless access nodes, voice cross-connects and the electrical panels.

SERVICES

Are there amenities beyond voice, video and data, or IP systems for managing the property? The property does employ IP-based systems to manage utilities, and CLC remotely monitors all of our on-site equipment in an effort to be proactive should an issue arise. Wired and wireless high-speed are available throughout the property, including the restaurant, lounge, and pool.

Who are the service providers? Verizon provides the voice and data services to the property. CLC Networks distributes and manages the service over wired and wireless networks within the property. LodgeNet provides video services to the guest rooms.

Do guests have a choice of service providers? No

Who provides support? If guests have an issue or technical challenge, whom do they call? CLC Networks provides guest support for both wired and wireless high-speed Internet from our 24x7x365 call center.

BUSINESS

Who owns the network? Who paid for what? The network is owned by NYLO Hotels, which buys 20 Mbps Internet connectivity from Verizon, using its FiOS product. NYLO then contracts with CLC for continuous guest support.

What were the costs associated with this implementation? In order to offer an upscale brand at a mid-scale price, NYLO's average per-key development cost is just under \$115,000, compared to the industry average of more than \$190,000 for a full-ser-

vice hotel. The internal technology infrastructure cost less than \$75,000 to build.

Are services automatically included in the guest fee? Yes

Who handles billing and collection? While CLC Networks has the ability to integrate à la carte charges onto

a guest's folio via its property management system, NYLO maintains an all-inclusive pricing philosophy. Mid-week room rates range from \$89 to \$209 per night.

How are the services marketed, and by whom? There is an instruction card within the guest room detailing available services. For further in-

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struction and or troubleshooting, guests can access CLC's 24x7x365 call center.

What has the return been on this implementation, in dollars or otherwise?

Patrick O'Neil, NYLO: It's very hard to measure, but I think the biggest return comes in signing corporate accounts. When you go into a potential client, and tell them your rate, they come back at you and say, 'This is what I'm getting from somebody else.' Well, that other hotel may charge \$15 for high-speed Internet. With us, it's free, and it works. When we tell our prospects that, they get it. It helps us get into new accounts, by being up front about what we charge. They know that this rate is the rate they're getting with us. If they're paying \$15 a day for Internet access somewhere else, and they stay with us for three days, that's \$45 off their bill.

ON-SITE EXPERIENCE/LESSONS LEARNED

What was the biggest challenge?

Michael Wagoner, CLC: This hotel has a very industrial look and feel, and the entire building is concrete, including floors, ceilings, and the walls in between the rooms. The only bit of Sheetrock is on the wall facing the hallway, where the main door is for each guest room.

Because of that construction, when we tested traditional access points in the ceiling, they only penetrated so far into the guest rooms. Using them would have required a more



dense deployment in terms of access points, which would have been more expensive.

That's why the radiating coax was such a good fit here. We preconfigured and tested the entire network in our Atlanta labs prior to shipping to the site. Once on-site, it was as simple as opening the boxes and placing the equipment on the right locations.

Patrick O'Neil: You can definitely spend less money on it than we did, although we also didn't spend a fortune on it. Basically, you could just put one wireless router on every floor, and have the signal get weaker the farther away you get from the router. But that's not really what we wanted to do. It's important that the signal is strong and fast. And it is, which means that we don't really get guest complaints.

What was the biggest success?

Patrick O'Neil: It's free to our guests, it's accessible, it's fast, and it works. It's everything it should be.

Michael Wagoner: An on-budget, on-time deployment ready for opening day.

How has the network affected life at the property? How has it helped position the hotel?

Michael Wagoner: Very few guest calls into the call center, and very few technical issues.

Patrick O'Neil: We have a lot of technology companies that stay with us, and they rarely ever complain about the Internet service. If they ever do, it's usually because of the way their laptop is set up. So it's hard to say what the return on it is, but if we had really bad Internet, would we be keeping our key corporate accounts? Probably not.

It all comes back to the bottom line. It helps us increase our value for every dollar paid.

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

Michael Wagoner: Definitely work with a reputable firm that uses quality equipment. This is a unique design created for NYLO. While it can be adapted to many situations, not everyone can do it.

Patrick O'Neil: Know what your bids consists of. Just because one bid is lower than the other doesn't mean that they're quoting on the same equipment, or the same install method, or the same kind of implementation. You need to know if you're comparing apples to apples, or apples to oranges. Your upfront costs might be a little more than you expected, but if you do it right, the fact that you have such minor issues moving forward is well worth it. **BBP**

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