

New Technologies for Hotel Television

HOTEL DELIVERS SATELLITE TV ON CAT 5 CABLE

"I saw a big, expensive disaster coming," said Dale Sennie, who was in charge of completing the new Sheraton Baltimore Washington Airport Hotel early in 2006. "I had to find a better way."

Sennie is a Network Engineer for LTD Management Co., which built and manages the six story property. The previous construction manager had specified Cat 5 for a converged network with VoIP phones and streaming video to the TVs.

The phones worked fine. But the manufacturer of the streaming video product said its new MPEG-2 media server would not be ready in time for the hotel's opening. That simply was not acceptable to LTD, which specializes in high quality hotels and customer services.



Wiring closet at the hotel

Cat 5 was the only cable installed to all 203 guest rooms in the Sheraton, and all the walls and ceilings were already in place. It was too expensive and time consuming to retrofit all the rooms with conventional coax cable.

Problem Solved

The problem was solved by Tom Conley at Bulk TV and Internet, which designs and installs satellite TV systems at commercial properties across the country. He recommended a Lynx Video Network that delivers television on Cat 5 cable.

"I was ecstatic when I found out that I could get this done on Cat 5 cable," Sennie said. "People told me that I would get a poor signal, interference, and other problems. But that was not the case at all. It was amazing."

When the hotel opened in May 2007, all the TVs worked flawlessly, offering 48 channels on 42-in. flat screen displays. "The picture was crystal clear; I mean perfect," Sennie said.

The Satellite Master Antenna Television system installed by Bulk TV delivers DIRECTV signals via coax cable to the headend. The headend re-modulates the signals from LNB to RF frequencies and sends them over RG-11 cable to wiring closets on each floor.

The wiring closets are equipped with RF amplifiers and Lynx hubs. The hubs convert unbalanced coaxial signals into balanced signals that travel to the guest rooms on Cat 5. Then a Lynx wallplate converter changes the signals back to coaxial form before they enter the TVs.

Because Lynx delivers frequency modulated analog and digital signals (RF), it does not use any bandwidth on the network itself. It simply uses the copper path provided by pair four of the Cat 5 cable.



Signal converter behind a TV

Cleared for Takeoff

"The people at Lynx did a great job of working with our technical staff to pre-engineer the entire layout," Conley said. "The picture quality was exactly what the Sheraton expected."

The total cost of the Lynx Video Network and the headend was approximately \$40,000, according to Sennie. "This is a fraction of what it would have cost to tear out drywall, pull coax through walls and ceilings, then repair everything," he said.

Because the new Sheraton is less than a mile from Baltimore Washington International Airport, the system was tested to be sure emissions did not exceed Part 76 of FCC guidelines. "There is always concern about emissions when a property is located near an airport," Conley said. "But the entire system was thoroughly tested and no problems were found."

Looking back over the installation and start-up, he said. "This was an exciting project for us. We proved that you can run television on Cat 5 cable without using streaming video. If somebody calls with a similar problem, we can honestly say that we have a proven solution."

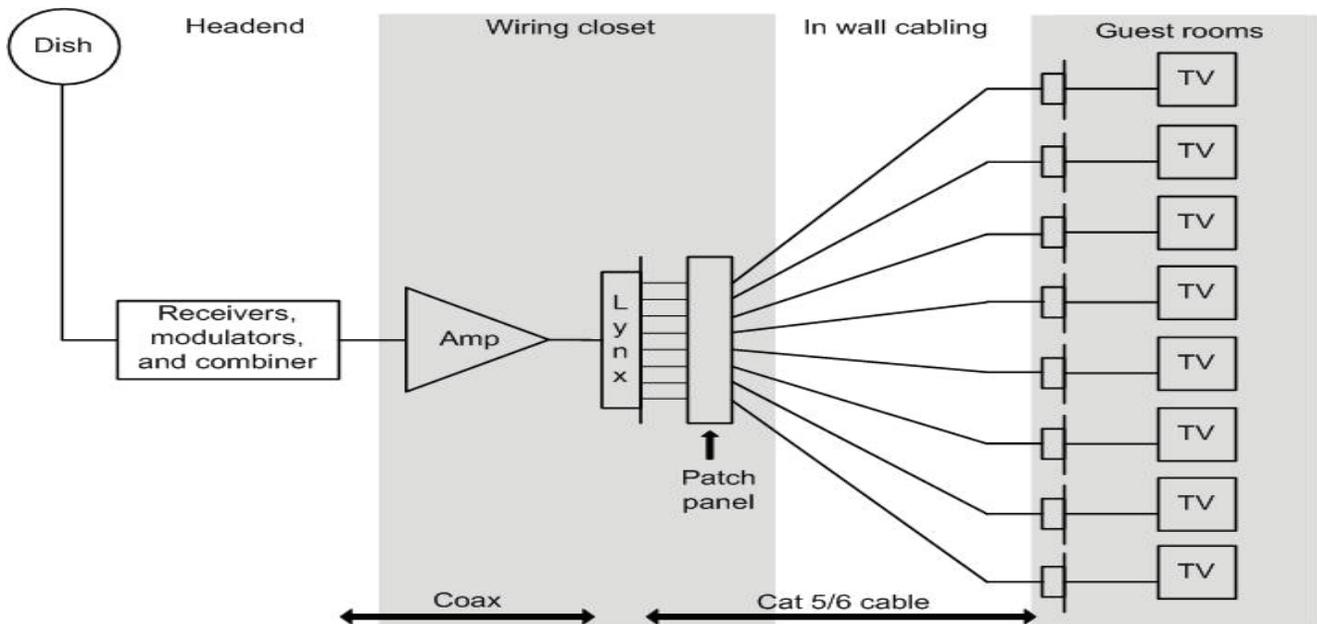
Product Photos



Lynx 16- and 8- port distribution hubs convert a coaxial input signal to Cat 5 or Cat 6 output signals. A single-port converter or wallplate F changes the Cat 5 or Cat 6 signal back to a coaxial signal.

System Design

Satellite TV Application



R&D 100 Awards

The Lynx Video Network received the 1996 R&D 100 Award for its ability to deliver television signals on a dedicated twisted pair cable. The Lynx Video and Data Network received the 2003 R&D 100 Award for its ability to simultaneously deliver television and data (Ethernet) on a single twisted pair cable. The R&D 100 Award is presented by *R&D Magazine* to recognize the 100 most technologically significant new products introduced each year.

ISO 9001 Certified Quality System



www.lynxbroadband.com



12219 Wood Lake Drive • Burnsville, MN 55337 • Phone: 952-894-9590 • Fax: 952-894-9380