

IT & TV CONVERGE ON CAT 6 AT NEW ALL-DIGITAL HOSPITAL

Dwight Erdmann calls it "patch and add," because all he has to do is connect a TV to the Cat 6 network and it's ready to go. Television on Category 6 cable is one of many leading edge technologies at the new St. Clare's Hospital in Weston, WI, where he is the Communications Planning Analyst.

The 107-bed facility opened in October 2005. It is one of the first hospitals in the nation to go all digital, including a chartless patient information system and campus wide wireless telecommunications and data systems. Patients use a 23-in. flat screen monitor to learn about their conditions, order movies, and send and receive email.

A major goal in designing the hospital was to operate all TV programming and information systems over a single, converged network, according to Jeff Lee, Senior Telecommunications Designer at the Minneapolis architectural and engineering firm of Hammel, Green and Abrahamson, Inc. (HGA).

The firm specified Cat 6 cable to carry TV signals from 20 IDF closets to patient rooms, and recommended a Lynx Video Network from Lynx® Broadband as the centerpiece of the television distribution system.

Erdmann was enthusiastic about the results, saying, "The

flexibility with Cat 6 is just phenomenal. Any place we have a data jack, we can have a TV there, too."

The main source of programming is satellite signals that travel on coax from a dish on the roof to the headend on the top floor, where they are remodulated to lower frequency RF channels.

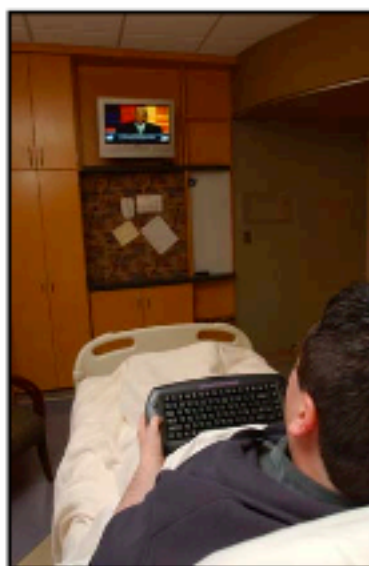
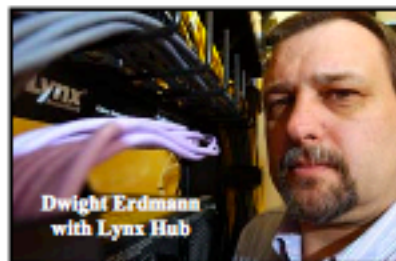
The channels then travel over RG-11 cable to the IDF closets where the Lynx equipment is located.

St. Clare's has 15 eight-port and 9 sixteen-port Lynx hubs,

which have the capacity to deliver TV signals to 264 monitors. One port on each hub delivers a signal to one TV via one Cat 6 cable.

At the point of use, a small Lynx converter changes the TV signals back to coaxial form for delivery to the TV set. St. Clare's has 184 single port converters and the capacity to add 80 more.

Lynx equipment incorporates RF baluns and common mode chokes. The baluns convert unbalanced coax signals into balanced signals that travel on Cat 6 cable.



"We get good, sharp pictures in all the patient rooms and waiting rooms," said Erdmann. "Anywhere there is a data jack, we can plug in a TV set and have a picture on the screen in minutes."

"Lynx certainly met all of my expectations," Lee said. "However, you've got to think a little differently when designing a Lynx network, because it requires a stronger signal than a traditional trunk-and-tap coax system."

"There is a little more initial cost to buying and installing a Lynx system, but it isn't significant," he said. The Lynx Video Network at St. Clare's cost

about \$45,000, compared to \$40,000 for a conventional coax system.

"However, when compared to the \$500,000 telecom infrastructure for the entire hospital, the additional \$5,000 is quite small," he explained.

"It never really came down

to cost on this project," Lee continued. "Rather, it came down to performance and functionality. There is a little more cost with Lynx, but most building owners will recoup those extra costs by avoiding the need for additional cabling in the future."

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