

Z-Band Provides TV Distribution For Benjamin Russell Hospital for Children

Challenge

In a children's hospital environment, providing quality entertainment to the patient room is key. In-room entertainment provides a much needed distraction for patients from their health conditions. Television facilitates both entertainment and education content for the patient. In August 2012, Children's of Alabama opened its new 12-story replacement facility in Birmingham, The Benjamin Russell Hospital for Children. This facility utilizes state-of-the-art TV distribution to entertain and educate patients throughout their stay. The rooms in the new facility include:

- Two TVs in each room. One for the patient and a second for parents, siblings and visitors
- Full HD television content
- Patient education and entertainment system
- Video-on-demand features
- Internet access
- Online games

Solution

The hospital partnered with EDI, Ltd., a healthcare technology consulting and design firm, to design its CATV Distribution System. EDI created a design specification in which

entertainment programming and educational content is distributed to televisions over Category 6 UTP cable. The hospital's CATV distribution equipment is housed in the telecom rooms; racked and stacked along with servers, patch panels and patient education systems. EDI's project manager, Jerry McDonell, P.E., recommended Z-Band's television distribution technology for this replacement hospital.

"Construction standards are usually enforced for a new facility," McDonell said. "But, over time with major and minor TV additions, the standards for conventional distribution systems are difficult to enforce. The result is a poorly performing system that is difficult to repair. The Z-Band approach removes most of the calculations and rebalancing necessary to keep an older system functional."



A TV in the emergency room at The Benjamin Russell Hospital for Children receives all of the viewing content via the Z-Band Television Distribution System.

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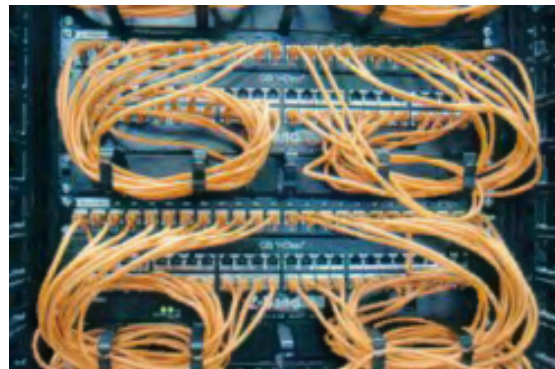
Design & Installation

Z-Band created a design layout for the new building, as well as plans for a retrofit of existing buildings on campus. By creating a master technology plan for both the new and existing structures, the existing television systems and new distribution technologies have run simultaneously, without service interruption throughout both the new build and retrofit processes. The new HD head end is housed in the Benjamin Russell building and shared with other buildings on campus via a single-mode fiber infrastructure, resulting in a unified, campus-wide channel lineup. Z-Band technology resides in 30 telecom rooms within the hospital and distributes to more than 650 TV locations.

The hospital has plans to add live broadcasts to its viewing offering. The performance room footage will be sent to the CATV head end, combined into the channel lineup and distributed to TVs throughout the facility. Room-bound patients remotely view events in real time. The hospital distributes a combination of RF, IP and live video throughout the facility on the Category 6 UTP cable.

Results

The Z-Band system's main advantage is cost savings on initial install, as well as maintenance and upkeep. The system utilizes patch panels and category cable; maintenance teams do not need to travel throughout the hospital to address individual TV picture quality issues. Additions, moves and changes to the TV distribution are managed from the telecom rooms and picture quality is controlled through the central CATV head end. "We have had zero issues with Z-Band," said Nathan Scott, technology construction coordinator, Children's of Alabama. "Once it is in place and tuned to the proper signal levels, it is seamless and bulletproof in its operation."



A view of a completed Z-Band install, distributing from the telecommunications room out over UTP to the TV locations.