



Customer

Education Telecommunications Network (ETN), Los Angeles County Office of Education and surrounding school districts

Application

Distance Learning and Teacher Training

VBrick Equipment

VBrick Model 6200, MPEG-2 network appliances

Networks Employed

(Digital California Project) and CERFnet leased lines; Switched Ethernet (LAN)

THE CHALLENGE

One of the most effective and efficient ways to improve the education of both students and teachers is through high quality, interactive video communications.

The Los Angeles County Office of Education (LACOE), responsible for 1.7 million public school students, provides support to teachers, administrators, parents, schools and the county's 81 school districts. The Educational Telecommunications Network (ETN), the multimedia production division within LACOE wanted to introduce an interactive video system to connect schools to each other and connect school districts to LACOE.

ETN sought to use The Digital California Network (DCN) that provides a high-speed digital pathway between their office and many of the school districts. The challenge was to develop a video communications solution that could traverse this existing network and provide both one-way streaming and two-way interactive video at a reasonable cost.



THE SOLUTION

ETN designed an interactive staff development session as a pilot project to showcase the ability to send high quality video and audio communication over the State's digital networks. After assessing vendors, LACOE selected VBrick Systems, whose powerful, affordable video systems are used by other educational institutions, including New York City Public Schools and the Utah Education Network.

ETN linked Pomona, the Hacienda La Puente school districts and the California Polytechnic Institute in Pomona, CA (Cal Poly Pomona) with the LACOE using VBrick 6200 MPEG-2 encoder/decoders. This allows LACOE and ETN to send and receive DVD-quality video streams via the IP network. Using multiple cameras, video switchers and TV monitors, participants in each location can interact in real-time videoconferences with "continuous presence" - the feeling that all participants are in the same room, even if they are hundreds or thousands of miles apart. The multiple VBrick 6200 encoder/decoders allow viewers to view all 3 remote locations on TV monitors simultaneously.

At Cal Poly, the video and audio were also converted into MPEG-4 and Real Networks proprietary formats at a lower rate (about 250 Kbps) for streaming over the Internet to thousands of viewers worldwide.

THE BENEFIT

This pilot project network successfully demonstrated that students, teachers and administrators at California schools could use high quality video to enhance the education process. By leveraging the power of high-speed networks, interactive video-over-IP can be a reality for K-12 and higher education institutions. ETN is looking to expand this video network to all of the school districts in the Los Angeles area. In addition, they plan to connect the video network beyond the California borders through the Internet2 network that connects 200 universities and colleges.

"The ease-of-use and superior quality offered by VBrick's video network appliances were instrumental in making this webcast possible. The collaboration between VBrick Systems and ETN over the DCP network is a powerful example of how advanced video networking technologies can broaden the horizons of our classrooms and expand the minds of students and educators."

Richard Quinones, director of the Educational Telecommunications Network at the Los Angeles County Office of Education.

