CASE STUDY

CAMPUS NETWORKING

EDUCATION

Proxim's Wireless Technology Sings at Berklee College of Music

Not only is Boston's Berklee College of Music the largest independent music school in the world, it is a leading proponent of technology in and for music. After establishing the first college-level major in music synthesis, it built the world's largest networked computer facility dedicated to music education. Its latest initiative: expanding its use of wireless networking to eliminate the need for all leased lines while giving its students, faculty and administrators robust high-speed connections to the Internet and each other, both in the classroom and out.

Since the mid-1990s, Berklee had been using a 16 megabits per second wireless system to link some of its administrative buildings, but it was running out of capacity. Moreover, it wanted to extend the wireless links throughout the campus.

So Berklee turned to wireless solutions company Direct Network Services to design and build a high-speed, high-capacity network. Direct Network Services immediately recommended Proxim's Tsunami point-to-point systems. "The Tsunami wireless Ethernet bridges were the best products to meet Berklee's performance and reliability needs," explains Michael Duhigg, director of sales and marketing for Ayer, Mass.-based Direct Network Services.

The Tsunami products provided a step-up in throughput capacity and the capability to transmit longer distances, notes Duhigg. The Tsunami product family—10MB through Fast Ethernet to Gigabit products—also gives Berklee an upgrade path as its requirements for more data capacity grows. The wayside T1 feature built into the products also offers Berklee the opportunity for further savings on voice lines.

After completing a site survey, Direct Network Services deployed a wireless network of one Tsunami 100 Mbps point-to-point link and four 45 Mbps point-to-point links. The new system connects all administrative facilities and classroom buildings, which are scattered throughout Boston's Back Bay neighborhood and split by the Massachusetts Turnpike. As a result, Berklee dropped all of the DS3 circuits it had relied on, achieving substantial savings by eliminating these monthly recurring expenses.

In addition, Berklee provides high-speed wireless connections for its student dorms, a capability that would have been cost-prohibitive using T1 lines and which offer a fraction of the speed and capacity of the Tsunami links, according to Dave Lustig, Berklee's assistant vice-president for technology.

With this connectivity, students can record music in their rooms, using a computer-connected mini-keyboard, and transmit MP3 files to other students for compilation in a composition, for instance, or send them to professors. Now, students don't have to all be together in a studio to compose music.

Also, more than 30 percent of Berklee's students are from outside of the United States—the highest percent among all U.S. universities and colleges—so they are able to stay in touch with family and friends more easily using NetPhone, ICQ and other Internet services.

Ultimately, Berklee plans to switch some Tsunami connections to serve as back-ups for some locations when it can tap fiber lines that are being laid across the Mass Pike. The buildings that still can't reach the fiber will rely on the Proxim equipment.

In the meantime, the added capacity and connectivity from the wireless system are allowing more professors to incorporate the Internet into classroom sessions. They can do real-time audio streaming, for example. The school also is piloting a portal that allows 20 instructors for 30 courses to post assignments, send email and have students submit assignments. It plans to continuously extend the portal to more faculty and students.

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