VBRICK

In southeast Kentucky, five community college campuses that are part of the Kentucky Community and Technical College System are innovators and leaders in producing video and distributing it throughout the region. At the core, Southeast Community College, which offers classes in broadcasting and telecommunications, houses a brand new full-blown television studio and uses VBrick Systems products to help create a powerful distribution network.

Southeast Community College director of technology Charley Simpson describes the sophisticated set-up that began with multiple two-way interacti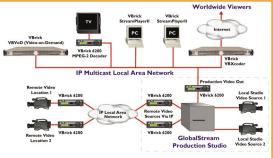ve classrooms across campus and expanded to include a brand new television studio, which relies on a Globecaster computer-based switcher and nonlinear editing system, with an auto-patch for input and output of video and audio. Incorporated in the rack as part of the auto-patch, the VBrick digital video networking products enables the College to distribute a signal from the television studio into the interactive classrooms, distribute conventional television and cable throughout the LAN, and turn any classroom into its own television studio.

"We already had videoconferencing technology," explains Simpson. "What we lacked was the ability to stream video from our television studio to our ITV network. Now, with VBrick, we can plug in a camera and microphone system and create a television studio in any of our classrooms, theaters or laboratories. We take the information, pump it across the network into the studio and then decide how we want to distribute it, whether it's across the IP network or across the Web."

Simpson adds, "What we've been able to do with the VBrick is to create a closed—circuit television network in our interactive classrooms. Now we can stream video and audio across the network and provide connectivity to classrooms that didn't exist before."

With the portable VBrick appliances, instructors can also bring one into any classroom or laboratory and stream from that location across the interactive TV network. That's been a huge boon for Southeast Community College's innovative nursing program. With VBrick video appliances, the nursing program is able to show hands-on demonstrations directly from the lab-classrooms. "We couldn't roll a bed into a television studio," Simpson observes. "It wasn't practical." Now, Simpson simply delivers a VBrick appliance to whatever classroom or lab is giving the demonstration, plugs it into the LAN and sends the signal back to the studio, from where he distributes it across the closed circuit TV network. In that way, nursing students on different campuses receive the benefits of the hands-on training demonstrated. "If it weren't for the VBrick set-up, we never would have attempted this integrated nursing program across the five campuses," he adds.

"Students are accustomed to watching television and if you give them anything less, they miss the educational message," adds VBrick president Rich Mavrogeanes. "Videoconferencing doesn't work. Web streaming isn't good enough. The bar has been raised, and the technology that's used needs the quality that meets that bar."

Each of the five Southeast Community College campuses has its own Local Area Network (LAN) connecting its computers. On the main campus, material is distributed throughout the LAN from the television studio. Because the other campuses don't have a television studio to distribute the signal, the video is routed on the existing ITV backbone, a T-1 line. Once the material is received at the other campuses, it is distributed to the desktop via that campus's LAN. "VBrick allows us to bring a signal from the TV studio to the classrooms on the other campuses and also allows us to distribute television and cable," says Simpson. "With VBrick, we can provide connectivity to classrooms that didn't exist before. We're transmitting out of the classrooms as if they were TV studios."

In the future, says Simpson, VBrick Systems products will be used as part of a system to create "live synchronous training." With the goal of developing and distributing content inexpensively, live synchronous education is a growing trend in education that VBrick technology enables. Utilizing VBrick products, Southeast Community College will record a class, live-cast it ("synchronous" education) and simultaneously record it, for archive. The recorded class enables asynchronous learning; students can watch the class on the intranet or on the closed circuit TV. In fact, content can be redistributed any time in the future in a variety of ways. "We've almost eliminated the cost of producing content, and it's available in live synchronous version and asynchronous verion for later use," says Simpson. "And it also becomes a very valuable aid for the instructor who can use it for a lecture. It may not be the whole class, but it becomes a critical component to enhance that class."

VBrick's Mavrogeanes points out that one of the strengths of the system is how easy and cost-effective it is to implement and maintain. In the past, creating a closed-circuit television system or re-purposing classroom content would have required the kind of expensive and complex technology solutions that would have been out of reach of smaller college systems. Using VBrick to support security and surveillance cameras are yet another use, in addition to revenue-generating services such as delivering conventional cable TV to college dormitories.

"Each VBrick device has a useful life of its own, but when you stitch them together, you get a complete, multi-purpose, end-to-end system," says Mavrogeanes. "Instead of relying on different, often incompatible technologies for streaming video on the Web, videoconferencing, authoring content, security and monitoring— with VBrick, it's one technology that forms a system and does all of it, lowering complexity and cost."

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