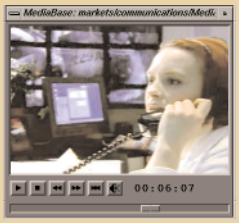
Success Story

The University of Queensland

"MediaBase on SGI is still the best solution for our requirements."

—Derek Powell
Manager
Presentation Services
The University of Queensland



The University of Queensland is one of Australia's leading institutions of higher education, serving around 30,000 students from Australia and 132 overseas countries. While the principal campuses of St. Lucia, Gatton, and Ipswich are in South East Queensland, the fastest growing region of Australia, the University of Queensland has teaching and research establishments located throughout the state. Reflecting the comprehensive nature of its teaching, the university has its own experimental mine, several farms, a dental school, teaching establishments at major hospitals, and island research stations located on the Great Barrier Reef and in Moreton Bay.

University programs include the arts; biological and chemical sciences; business, economics and law; engineering, physical sciences and architecture; health sciences; natural resources, agriculture, and veterinary sciences; and the social and behavioral sciences.

In light of its many locations and its diverse teaching and research programs, the university has been keen to establish an IT infrastructure that will support the flexible delivery of teaching and learning programs and enable staff and students to access audiovisual resources wherever they are.

While text-based Web pages and even short media clips are easily served from a variety of platforms, the task of streaming quality video assets is much better suited to specialized hardware and software systems. Information Technology Services (ITS), the university's central provider of IT, began investigating the best options for media streaming in early 1999. After reviewing and testing a number of products, ITS embarked on a pilot project that culminated in the installation of an SGI™ Origin® 2000* system running Kasenna™ MediaBase software.

ITS Manager of Presentation Services Derek Powell was clear about what was required in a server solution. "Streaming media is still in its infancy and is likely to grow exponentially," he said. "We need to have a solution that embraces a number of streaming standards, especially the MPEG standards, that is cross-platform capable and that is easily scalable to handle growth in user numbers and stored assets."

Previous experience with SGI™ hardware in specialized high-performance computing areas had given the Information Technology Services staff confidence in the support services available from SGI, and this was an important factor in the choice of platform. "SGI was prepared to work with us to overcome initial problems, and through its organization we were able to access experienced people who could advise us the best way to configure our services," Powell commented.

The MediaBase server will be progressively integrated with the university's e-learning systems, which will provide for the login and authentication of students. The aim is to have a totally transparent interface so that once the student logs in to a subject homepage, the relevant video assets stored on MediaBase are just a mouseclick away.

It is already clear that the system is capable of more than just video on demand (VOD) services. Soon after its installation, the MediaBase system was providing live broadcasting from a major conference held on Queensland's Gold Coast some 50 miles south of the university campus.

*SGI Origin 2000 is now marketed and sold as the SGI™ 2000 series.

“The conference organizers wanted to be able to offer some of their keynote presentations live across the Internet to reach people who couldn’t attend the conference session,” recalled Powell, who coordinated the four-day broadcast. “Using MediaBase as a relay, we were able to offer live broadcasts and also automatically archive each presentation so that it was available as VOD to those who couldn’t log in live.”

The broadcasts originated from a professional Sony® DVCAM camera, which was connected via IEEE-1394 to a Mac® G4 running Sorensen Broadcaster—one of the encoders predefined in MediaBase. A microwave data link was established from the conference hotel on the Gold Coast to a telco hub, where it was routed via fiber to the university network.

This data link handled e-mail and Internet access as well as voiceover IP services but was configured to guarantee a fixed bandwidth to the encoded video signal all the way to the MediaBase server. MediaBase acted as a relay, making available up to 100 high-bandwidth QuickTime™ streams. Using a simple browser interface, viewers could join the broadcast live or view any session from the beginning—even before the session was finished.

Powell expects this kind of service to grow along with the more traditional services for video courseware. “MediaBase has proved very flexible in its ability to serve a variety of differently encoded assets in both high- and low-bandwidth applications. While eventually we expect that encoding standards will become standardized, for the moment we are going to need a system that will handle anything we can throw at it. Right now, MediaBase on SGI is still the best solution for our requirements.”

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3219 (12/2001) J13298