Practical magic

Hollywood movies are increasingly computer generated. Big-budget pictures use effects in every shot, but more modest films have started using CG imagery as well, to reduce costs. As a result, post-production houses are under constant pressure to increase capacity while also keeping up with the very latest technical advances - putting huge demands on their data storage.

That's why one post-production company turned to Nexsan, the leader in innovative storage technology.

The chamber of secrets

The Moving Picture Company (MPC) is one of the world's leading post-production houses, based in Soho, London.

Building on over 30 years' experience in the advertising, television and music industries, MPC is now a pre-eminent name in feature film effects, recognised on both sides of the Atlantic. MPC's artists and technicians have created some of the most spectacular scenes ever committed to celluloid, with recent projects including Troy, Alien Vs. Predator, Big Fish, Ella Enchanted and Harry Potter and the Prisoner of Azkaban.

However, it isn't just epics and fantasies that call for the MPC touch. Even 'straightforward' contemporary films, such as Working Title's Wimbledon, are using digital effects for crowd shots and to simulate complex camera moves. As the diversity and sophistication of CGI increases, MPC must strive to meet - and encourage - demand for new effects. Cutting-edge ideas soon become old hat, so if MPC is to remain competitive, it has to keep pushing the boundaries of imagination and technology.

The sorcerer's stone

Leading the push is Steve MacPherson, Head of Technical Operations in MPC's film division. Steve has worked in the computer industry for almost 20 years, which included a period at Silicon Graphics Inc. where he first crossed over into the movie world. Although Steve spent a couple of short spells working with MPC earlier in his career, he only took up his current role in June 2003. Steve's primary responsibility is running the MPC machine room: a huge storage facility and render farm with a 100TB capacity. Of that, around 40TB is dedicated to film work.

Just over four years ago, MPC made the decision to move from Silicon Graphics technology to an Intel/Linux-based solution. At the same time, theydecided to investigate new ways of storing and processing the vast amounts of data that their work generates. Their investigation led them to Nexsan Technologies ATAboy RAID array - and MPC has used Nexsan products ever since.

"Storage is pretty much a commodity to us - but Nexsan has proved to be so reliable over the past four years, and at such an attractive combination of price and performance, that it's become the bedrock of our storage system."

-Steve MacPherson, MPC

OPEN
storage solutions

Big fish

The future of MPC looks bright, with their work dazzling people in cinemas around the world. The company has gained a tremendous reputation in the film industry and there are plans for expansion. But success brings its own challenges.

Enchanted

Having upgraded to the ATAboy2, Steve now runs an extremely flexible hierarchy that allows him to allocate varying levels of storage and processing power to different projects, using MPC's own in-house software.

Each film project has a number of servers assigned to it, depending on how much capacity it requires. All the servers are attached to an Ethernet backbone. Via an edge switch, the servers can be connected directly to any part of the thousand-processor render farm. The balanced architecture of the network means that there is just enough storage capacity to feed the voracious render boxes.
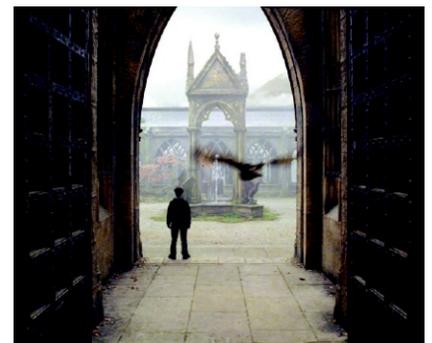
The high-capacity Nexsan arrays predominantly store image data: namely DPX, Cineon and TIF files. They also hold Job Description Files (JDFs) created by the advanced graphics applications employed at MPC. A large amount of storage space goes to application caching, mainly for 3D effects - many gigabytes of geometric data are generated and saved for future operations.

At any given moment, twenty or more artists can be working on different aspects of the same shot or sequence, making multiple passes, amending and rendering as they go. The network needs to be able to cope with all of these parallel, data-intensive operations - without impeding performance.

With Hollywood deadlines, time is always tight, and Steve has to ensure that any hitches are anticipated and eliminated. The Nexsan ATAboy2s are a vital part of that.

"We offer greater computing power to our artists, who use that to create fantastic new effects, which audiences love - but then they want to see the next new thing, so we have to step up capacity again. It's like a feedback loop: we always need to increase the amplitude, without distortion. Scaling capacity with Nexsan storage helps make that process seamless. "
-Steve MacPherson, MPC

Faced with the movie-going public's insatiable hunger for bigger and better effects, Steve is glad to have had a solid, scalable foundation for the MPC architecture, enabling it to grow. Just a few months on from the last upgrade, Steve is already thinking about the future - and with Nexsan's help, he can be sure that MPC will be keeping audiences spellbound for years to come.