



Intelligent Storage for Digital Content



Applications

- The daily workflow of creating, processing and editing major motion picture films.
- Managing hundreds of thousands of files in the digital intermediate process.
- Multiple concurrent access to files across Windows, Macintosh, Linux and SGI systems.

Challenge

With more than 20 terabytes of film and video content managed in the post production process at any one time, high performance storage was a critical requirement for staying on time and on budget with major motion picture projects. FotoKem needed a storage system that could handle multiple concurrent activities, integrate in a cross-platform environment –and deliver extreme performance.

Isilon IQ Benefits

Nearly nine terabytes of Isilon IQ storage delivers FotoKem:

- Unmatched ability to accelerate and streamline the digital content workflow.
- Powerful clustered storage allowing for simultaneous access with sustained high performance.
- Fast and easy installation and ongoing management in a cross platform environment.

"We have seen tremendous benefits from Isilon IQ because it delivers the same high performance regardless of the number of projects in the pipeline, and is incredibly easy to use. It took us longer to take Isilon IQ out of the box than it did to install the system."

— Bill Schultz
FotoKem

ISILON IQ CASE STUDY

ISILON PLAYS A CRITICAL ROLE IN STORAGE OF MAJOR MOTION PICTURES AND OSCAR-WINNING FILMS

FotoKem Turns to Isilon Over Traditional Storage Vendors to Accelerate the Post-Production Workflow

FotoKem is one of the most successful media services companies in the world, with a 40-year-old tradition of improving the quality of films from classic black and whites to today's blockbusters. FotoKem was founded in 1963 to provide film processing and printing services to film makers, and has established its reputation as a post-production house focused on quality, service and speed.

In the early 1960s, FotoKem visionary and founder Gerald Brodersen recognized trends taking shape in the film industry and resulting technology needs going unmet. With Brodersen at the helm, FotoKem entered a growing market at the right time, with an approach to technology and customer service unlike any other. FotoKem continually expanded, and today offers post production and complete media services solutions for its customers –which include the top film and television studios in the world. The company boasts a spectacular, cutting-edge post production studio, with five fully-outfitted theaters and capacity across the company to accommodate hundreds of projects at any one time.

FotoKem's technology innovation enables it to be involved in every stage of the post-production process, from creating a pristine digital master of a motion picture, to its exclusive printing system for creating seamless color-correction within a given scene. Recent FotoKem projects include the digital processing of film trailers for 2004 Oscar-winner "Monster" and other major motion pictures.

NOW PLAYING: SPECIALIZED STORAGE FOR DIGITAL INTERMEDIATES

FotoKem is one of the best kept secrets in the post production business, yet has developed an exceptional reputation with customers that include Warner Bros., Columbia Pictures, The Walt Disney Company and Universal Studios. The combination of its engineering- and customer-centric approach results in continuous innovations in digital video techniques, including mastery of the digital intermediate process, the industry's most progressive technology for perfecting the final look of major motion pictures.

Throughout the digital intermediate process, FotoKem creates thousands of digital files –averaging 13 megabytes in size each– that are accessed, processed and rapidly moved throughout the workflow. To create digital intermediates, motion picture film is scanned and a digital copy is created and worked on by multiple workstations simultaneously. It is in this stage that FotoKem technical specialists make critical decisions for color correction and dirt removal to create a perfectly pristine digital master. Once all frames in a digital film are flawless –and there are 24 frames per second– FotoKem creates a perfect master set of digital files that are recorded back to physical film. The finished film is then

ready for distribution to movie theaters, and converted to digital video for other distribution outlets, such as DVD and television.

To create, edit and manage thousands of large files at one time, FotoKem works in a heterogeneous computing environment with a combination of NAS and SAN storage technologies, Windows and Macintosh systems, Linux and SGI servers, and multiple digital asset management and creation tools. The company's extreme, continuous and simultaneous access of files by editors and automated processes –all in a cross-platform environment– caused it to reevaluate its storage infrastructure and look to one that was fast, flexible and able to meet FotoKem's performance demands.

"We needed a scalable, reliable, high performance network storage system that was fairly general purpose, in that it could be used for multiple jobs and multiple applications in our daily digital content workflow," said Paul Chapman, FotoKem's senior vice president of technology. "While our SAN is certainly good at some tasks and applications, it did not scale very well when it was loaded with multiple concurrent jobs, and we needed something that could handle more than 10,000 large files in a single directory. Isilon IQ was optimized for sequential, linear reads and writes and delivers the consistent high performance that is required in our digital content environment."

BREAKTHROUGH STORAGE FOR BLOCKBUSTER HITS

FotoKem began evaluating a new storage approach when the need for speed and performance in its daily workflow exceeded that from what existing systems could deliver. FotoKem put Isilon IQ to the test against incumbent storage technologies from Blue Arc and Network Appliance and other shared storage solutions. With Isilon IQ, FotoKem saw exactly the results it needed to keep projects moving quickly across the workflow and out to movie theaters for consumers.

FotoKem manages more than 25 terabytes –25,000 gigabytes– of digital content at any one time, with up to eight terabytes moving quickly in and out of the Isilon IQ cluster for the exhaustive editing process. FotoKem uses Isilon IQ for the daily workflow of creating, processing and editing film content, and to manage hundreds of

thousands of files in the digital intermediate process. Isilon IQ played a role in speeding the access to files while digitally processing film trailers for "Monster" and other major motion pictures.

FotoKem maintains unseen benefits from its use of Isilon IQ, including:

1. The ability to scale capacity and throughput quickly and easily, keeping pace with enormous workload spikes;
2. Maintaining consistently fast access to multiple projects in various stages of the post production workflow;
3. A single, simple view for managing all content in the system, regardless of storage pool size;
4. A cross-platform computing environment, where all technologies integrate and perform seamlessly.

"From a business perspective, Isilon IQ's ability to handle more concurrent projects at once allows us to take on more work without swamping our IT storage and server infrastructure," said Bill Schultz, senior vice president and general manager in FotoKem's Digital Film Services Division. "The most important benefit from Isilon IQ is our ability to do more projects and generate more revenues from our existing resources. Isilon IQ allows us to accelerate the digital content workflow, complete more projects, and get finished products back to customers even faster, on time and on budget."

At different points of time in the workflow, the 8.6 terabyte Isilon IQ cluster will be up to 90 percent full, and storing thousands of large files. Storage utilization increases and decreases depending on the number of concurrent projects in the workflow, but regardless of FotoKem's workload or project schedule, Isilon IQ manages content easily, and scales capacity higher than FotoKem will ever demand.

Because FotoKem is recognized as a pioneer in the development of digital media, production and film services, they continually look for innovative new technologies and even better ways to support their customers. With Isilon IQ back stage at FotoKem, they can do both.

Isilon Systems, Inc.
220 West Mercer Street
Seattle, WA 98119

T 206-315-7500
F 206-315-7501
E sales@isilon.com

www.isilon.com

