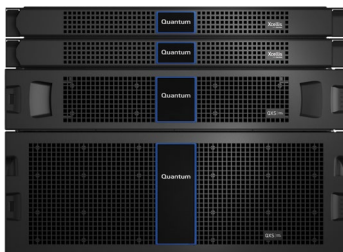# Quantum®

Innovative Post House Selects StorNext-powered Xcellis Scale-out NAS to Manage 4K Workflows

A premier international content preparation, localization, post production and distribution company needed a new storage solution to keep up with 4K work and launch a new, AI-based content-restoration service. After an industry-wide search, the clear winner was Quantum's Xcellis® Scale-out NAS, built on the StorNext® platform. It provided cost-effective scaling for performance and capacity, strong security features and superb support.

FEATURED PRODUCTS

Xcellis Scale-out NAS

> **"**The Xcellis scalability was also a real advantage for us. It let us add performance and storage capacity independently—which means we'll be able to grow to meet future demands while avoiding forklift upgrades.**"**
>
> **Steve Spear**
> Senior VP of Operations, Visual Data Media Services

was a major problem, so Visual Data looked for a solution that could double capacity and deliver the performance to support multiple 4K and UHD operations at the same time.

MATCH-BACK PROBLEM CREATES NEW OPPORTUNITY

"Just as important to us as upgrading to 4K workflow was giving us a way to take advantage of a major new opportunity to solve the problem of re-mastering existing content faster and more efficiently," Spear says. During the 1990s and early 2000s, when the first non-linear editing systems were used for episodic TV and direct-to-video motion pictures, work was shot on film initially, but production teams edited and finished on standard-definition video, eliminating the need to create a cut negative of the final version.

"That new workflow made everything faster and less expensive," Spear explains, "but it created a major nightmare when content owners wanted to distribute their SD content in HD or 4K." With no cut negative to scan, the only way to get old features to 4K is to perform a match-back—scanning the original dailies and eye matching against the finished SD element in order to conform the content.

"Traditional match-back is incredibly slow and expensive," Spickler explains, "because editors have to search through all shot film, one scene at a time, and match them with the original images in the dailies. It takes many weeks of editors' time just to find the images in a single, 30-minute TV series episode, so it can literally take years—and millions of dollars—to process multiple seasons of an hour-long program."

AI-BASED IMAGE MATCHING SOFTWARE CREATES OPPORTUNITY

In late 2017, after more than a year of development, Visual Data was ready to offer a new match-back service leveraging image-matching software that uses AI to automate the process. It's called Matchmaker. In the new service, Visual Data scans the dailies in 2K or 4K, ingests a proxy of the finished SD content for reference, runs the image detection software

to automatically identify the needed frames for each scene, and creates an EDL which lands in Resolve. Then, the company finishes the process by restoring the picture and audio, color correcting and transcoding out to any required deliverable. "Right now, the application eliminates more than 95% of the manual work involved in the match-back process, and because it's based on AI, it's getting better the more it is used," Spear said.

"We are starting to revolutionize the restoration process of library and archived content," Spear said. "What used to take many weeks now gets done in a few hours—and the process is much more economical. But to make it work, we needed a storage and processing environment to take advantage of our new capability." The plan was to buy high-performance storage to support both our traditional core business and our new Matchmaker business. The question was, which technology to use.

QUANTUM XCELLIS AND STORNEXT SOLUTION TOPS LIST

"We started by looking at everybody in this market—easily 10 vendors—but quickly narrowed it down to three," Spickler explains, "and built out systems to test what they could really do." The final choice was decided based on a combination of factors: performance, scalability, security, manageability, technical support and cost effectiveness. "We ultimately wanted a vendor who could perform technically, and would think and act like a collaborator with us. The clear choice was Quantum."

Amy Lounsbury, Senior Account Manager at Diversified, the company's integrator, adds, "Diversified's Media Workflow Group presented the Quantum Xcellis platform based on its flexibility and performance characteristics as a true high-performance hybrid storage solution."

The planned configuration included an Xcellis Workflow Director running StorNext software, QXS RAID arrays, a Fibre Channel fabric and an Xcellis Workflow Extender to provide access to the files over the company LAN.

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Steve Spear
Senior VP of Operations, Visual Data Media Services

ABOUT VISUAL DATA MEDIA SERVICES

Visual Data Media Services provides a full range of content preparation, localization, post-production and distribution services for television, feature film, and new media clients, including restoration, captioning, localization, transcoding, and mastering into Digital Cinema Package (DCP) and Interoperable Media Format (IMF). The company has also launched an innovative media restoration and upgrade project that uses image recognition software to slash the time needed to convert existing SD content into 4K or UHD programming. With offices in Los Angeles and London, Visual Data serves an international market that includes premier suppliers to broadcast, theatrical, on-demand, and over-the-top platforms.

> "
> Quantum's cost-per-TB beat everybody, and the system's flexibility will help us keep costs low going forward.
> "

Steve Spear – Senior VP of Operations, Visual Data Media Services

SOLUTION OVERVIEW

- Quantum Xcellis Scale-out NAS
  - Xcellis Workflow Director with StorNext software
  - Xcellis Workflow Extended with Distributed LAN Clients
  - QXS™ RAID arrays—1.5 Petabytes
- Scannity HDR film scanner
- Telestream Vantage transcoder
- Tedial Media Asset Management

KEY BENEFITS

- Quantum's high-performance storage and file system supports multiple simultaneous 4K and UHD scanning and mastering operations, simplifying workflow and reducing the time to complete projects.
- Ability to scale performance and capacity independently gives clients the ability to grow their systems to meet future needs while avoiding forklift upgrades.
- Support for both Fibre Channel SAN and LAN connections allows customers to create an optimal balance between performance and cost.
- System provides ease of management to allow a six-fold increase in capacity without adding staff, and security controls to meet the most stringent studio audit requirements.
- Expert, responsive service from Quantum and its partner, Diversified, ensures smooth ongoing operations.
- Lowest per-TB cost and flexible support for the cloud provides a system designed to stay economical into the future.

Visual Data Media Services is an innovative content preparation, localization, and post-production company with branches in London and Los Angeles that has carved out an enviably successful position in a highly competitive field by matching their technical capabilities to the needs of a fast-changing market in a careful, incremental way. "Our goal has always been to provide the most responsive service for our clients at a cost that keeps all of us competitive," explains Steve Spear, Visual Data Senior VP of Operations. "We only change technology when it is necessary and when we are certain that we have made the best possible decision for both workflow efficiency and economics."

The Visual Data team realized that major change was needed to upgrade its existing mastering business and to take advantage of a major new opportunity created by the company's innovative approach to restoration.

UPGRADING TECHNOLOGY INFRASTRUCTURE NEEDED FOR 4K WORKFLOWS

Visual Data had been successfully providing post production services, film scanning and transcoding for a wide range of international customers, preparing content for distribution across the world's premier broadcast channels and digital platforms. "We provide everything from ingest and scanning to editing, captioning and localization," says Spear, "and we became a premier resource that our clients can count on to finish the whole mastering and delivery process on schedule with the very highest quality."

The company has been providing its services successfully since 1995, but in 2017 it was clear that a major infrastructure improvement was needed. "We started to see a huge increase in 4K and UHD projects, and our old system just couldn't keep up," explains Ken Spickler, Visual Data Director of Engineering. "Whenever we had to process uncompressed 4K files, the existing NAS infrastructure was just too slow to handle more than one job at a time." The team got the work out, but managing around the bottleneck

4K WORKFLOW FOR MULTIPLE OPERATIONS

"On the performance side, our tests showed that the Quantum system did everything that we needed and more," Spear says. "With StorNext-powered Xcellis, we were able to run 4K scanning, UHD transcoding and a 4K playback all simultaneously, and everything worked perfectly without a single dropped frame! We even got a higher frame-per-second rate on the Scannity scanner than their spec. It was awesome."

The StorNext security features were also very important to the team because they delivered a higher level of granularity than their old system, allowing them to provide an improved audit trail for studio clients. "The Xcellis scalability was also a real advantage for us," Spear says. "It let us add performance and storage capacity independently—which means we'll be able to grow to meet future demands while avoiding forklift upgrades." Quantum's

manageability was also a major advantage; it allowed the team to increase capacity by six times without adding staff.

EXEMPLARY SUPPORT, LOWEST OVERALL COST

Service and support were important to Visual Data because the company has what it describes as a modest-sized operation—with 35 to 40 client workstations—and a goal to keep IT overhead low. "We knew that Quantum was a big player used by all the major studios, and needed to be sure we wouldn't be overlooked," Spickler says. The experience, as it turned out, was nothing but positive both from Quantum and Diversified. "At one point, we called with an issue and had two guys there within an hour, bringing their lunch with them. They worked right alongside us and got everything resolved that afternoon." Diversified's Amy Lounsbury adds, "We were just as excited as the team at Visual Data to see the full potential of the new

Quantum solution, so all hands were on deck to make sure the implementation was on-schedule and on-point."

On overall economics, the Quantum solution was also the clear leader. "Quantum's cost-per-TB beat everybody," Spear says, "and the system's flexibility will help us keep costs low going forward." The Quantum system gave the team the option of using Fibre Channel for some clients, while using Quantum's Distributed LAN Client (DLC) for others. DLC combines Ethernet connectivity with block-based transfer that outperforms NFS and SMB to boost performance and keep costs low.

With plans to leverage cloud storage in the future, Quantum's approach to the cloud was also an advantage. "We like the fact that Quantum gives us the most choices," Spear says. "Quantum supports third-party commercial cloud offerings, and the StorNext file system lets users see all the content, no matter where it is, through one interface—a really great feature."

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