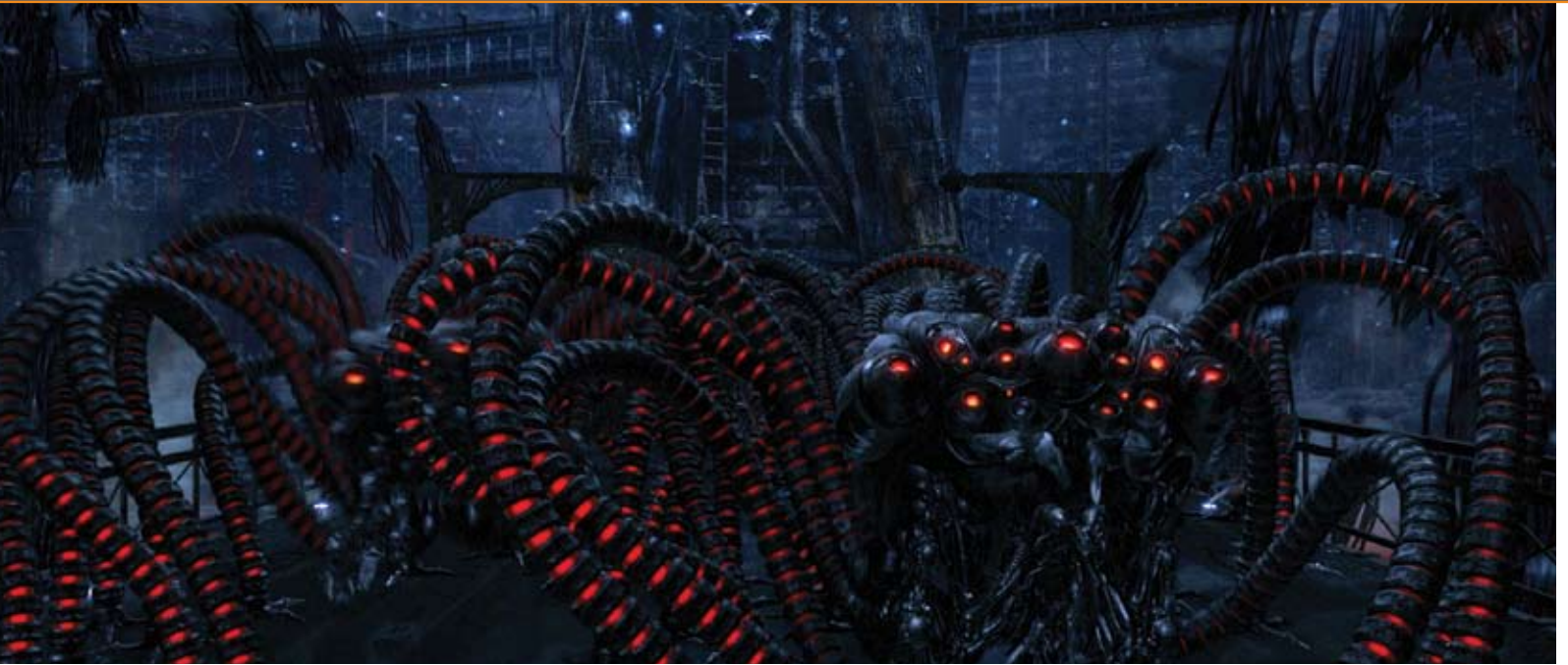




BLUEARC STORAGE SPEEDS DELIVERY AND INCREASES QUALITY OF CGI

Creativity and talent drive great visual results. Lightning fast storage is the accelerator. In CGI development, quality and speed are vital. BlueArc lets artists create more revisions and dramatically speeds render farm output – fueling extraordinary productions on schedule while reducing costs.



Warner Bros. Pictures and Village Roadshow Pictures provocative futuristic action thriller "The Matrix Revolutions". Distributed by Warner Bros. Pictures. Photo Courtesy of Warner Bros. Pictures.

- **REDUCE** artist idle time to support more revisions with higher quality
- **INCREASE** productivity, improve work environments and reduce night charges
- **SPEED** rendering and compositing while reducing failed renders and dropped frames
- **IMPROVE** the sophistication of effects with more iterations
- **REDUCE** management and infrastructure costs by consolidating storage and using multi-tiered storage

"With BlueArc, even in a crunch, there weren't any slow downs. With our old systems, it would take up to 15 minutes to open a Maya file. Now it's a matter of seconds."

- Jami Levesque,
Director of Technology, Meteor Studios

With more CGI shots now required for the average film, leading visual effects studios have had to focus on ways to improve and accelerate the artistic process. Carefully applying new technology, studios have been able to improve artist quality, shave time off production schedules and create more scenes. Bottom line benefits? The ability to produce higher quality work, win more contracts, and generate greater revenue.

At the heart of a CGI network, BlueArc network storage systems offer industry-leading performance to drive stunning improvements in rendering speeds and dramatically reduce artist wait times from file transfers to downloading shadow masks. BlueArc removes the data-flow constraints that bottleneck even the most powerful render farms. This means faster renders, fewer dropped frames, and far less rework for the render wranglers. And BlueArc storage provides fast data access that allows artists to focus their attention on spectacular results and higher quality.

Knowing that large, concurrent projects often require fast deployment or storage upgrades, BlueArc's unique modular architecture makes it easy and affordable to support this dynamic environment. BlueArc systems support features like Intelligent Tiered Storage that allow mixing high-performance "active file" disk drives with lower-cost "archival" disk drives, while allowing massive capacity scaling up to 4 PB under a single namespace. When creative teams need to quickly expand storage or increase performance, BlueArc provides simple, modular upgrades that require no expensive 'fork-lift' replacements.

CASE STUDY

Giant Killer Robots

Introduction

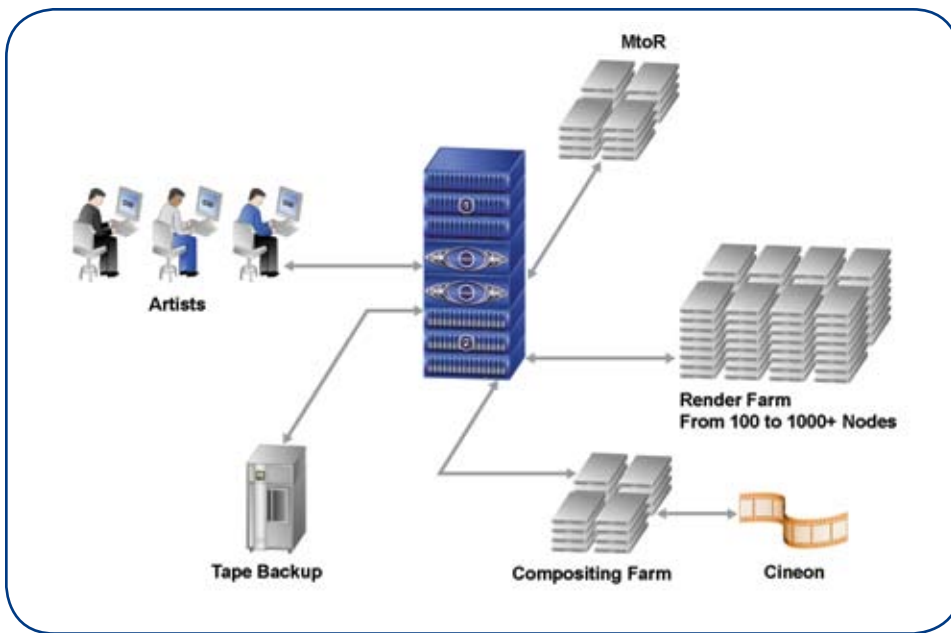
Giant Killer Robots (GKR) is an Academy Award-winning visual effects boutique specializing in high-end, high resolution CGI animation. Based in San Francisco, GKR provides complete animation services from preliminary creative and technical guidance to final compositing. The company services all aspects of the entertainment industry, including movies, commercials and music videos. GKR's recent works include: "Blade Trinity," "Scooby Doo, Too," "Matrix: Revolutions" and "Matrix: Reloaded," "Dreamkeeper," "Scooby Doo," "League of Extraordinary Gentlemen" and "Terminator3."

Problem

GKR's ability to win new projects depended on the company's ability to expand rapidly as it exploited new opportunities. If the infrastructure could not keep pace with the company, business would suffer. Yet the company's existing central storage infrastructure was inadequate for the company's rapidly expanding data needs. As the company's render farm expanded beyond 20 workstations and 15 render machines, the disks started to bog down.

Solution

With Titan, GKR has achieved performance statistics exponentially higher than the company's pre-existing storage technology – upwards of 250 to 300 Megabytes per second. The increased performance and scalability of the system enabled GKR to support the real-time editing and rendering of image files produced by more than 50 digital effects artists, storing the high definition, high density layers and textures that form the building blocks of GKR's creative artistry.



BlueArc Media & Entertainment Architecture

BlueArc storage solutions: optimized for use by digital artists. Using BlueArc's Titan, many of today's top effects studios have been able to remove storage constraints and eliminate the need for specialized infrastructures or data distributed across compute nodes. With Titan, companies are enjoying significant reductions in render time, and no more failures or "hangs" due to I/O timeouts. Titan also reduces artist idle times to open and close source files by providing smooth, simultaneous user access to shared datasets. This removes the need for duplicate datasets, reducing versioning errors and greatly simplifying data management, all while improving the work environment, reducing overtime and night production costs.

Solutions that increase creative productivity and help contain production costs. Built upon BlueArc's patented hardware-accelerated architecture, Titan delivers the most flexible, high performance, highly scalable, storage solution available today. By maximizing data access and user loads with extremely low latency, Titan dramatically accelerates the process of digital image creation and rendering and enables collaboration among a team of artists. In addition, Titan's enterprise-class management tools provide the assurance of ongoing access to each creative project's critical files. The end result is increased productivity in the digital pipeline through improved performance and capacity while reducing the cost of ownership.

"That's where BlueArc makes a difference. If you have an environment with a lot of reference files and a central location, and the central location is BlueArc – it is at least 6 to 8 times faster."

- Wendi Davies, Manager of IT, Mainframe Entertainment

CUSTOMER HIGHLIGHT



CGI from "The Cat in the Hat."

Rhythm & Hues Studios is a 18 year-old computer animation and visual effects studio that has worked on such big screen hits as "Babe," "The Sixth Day," "Scooby-Doo," "The Cat in the Hat," "Behind Enemy Lines," and "X-Men 2."

- Scene file rendering was reduced from six hours to 15 minutes
- Size of file reads and writes more than doubled
- Ease of management eliminated requirement for full-time storage administrator
- A 50% reduction in cost per megabyte of storage



Titan

BlueArc Titan Storage

- Hardware accelerated file system
- Up to 20 Gbps aggregate throughput and over 200,000 IOPs per node
- Bladed modular architecture
- Supports NFS, CIFS, iSCSI and NDMP
- Scalable up to 4 PB of storage under a single namespace
- Tiered Fibre Channel and SATA storage
- Virtual Volumes with Parallel RAID Striping

Tiered storage enables a more cost effective digital workflow.

Titan is built to address a variety of storage needs and budgets. Studios with heavy renders require maximum throughput, while others may require lower throughput at reduced cost. Unlike traditional solutions that require a separate storage server to address each need, BlueArc's unique Intelligent Tiered Storage supports any combination of fast Fibre Channel or lower cost SATA disk drives behind a single Titan. This helps studios drive down the cost of deploying and maintaining separate storage. Titan's all-in-one design allows administrators to manage throughput, storage capacity, or budgets, depending on the digital workflow requirements.

Stunning visual effects result from creative inspiration matched with the brilliant use of ever more powerful technology. The most innovative CGI creations require giving artists the time to design their vision of reality and then support that vision with rendering capabilities. In a world where rendering is done by advanced compute clusters, and image files move on ultra-high-speed networks, storage systems can become the bottleneck to remarkable results. BlueArc eliminates that bottleneck by delivering fast, tiered and scalable storage that fosters extraordinary achievement.

BlueArc's Titan scales with your digital workflow. In today's digital production environments, as new server and networking technologies are deployed, storage systems must also be upgraded to meet the growing needs of the digital pipeline. To scale capacity and performance, most storage systems require an expensive, 'forklift' upgrade. BlueArc's Titan eliminates these painful hardware replacement costs, by delivering a more scalable modular solution with maximum flexibility that allows creative teams to upgrade server modules and capacity without replacing the entire system. Titan's scalability will meet the growth associated with taking on new projects, hiring more artists or assuming higher resolution engagements.

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