



## BlueArc Behind More than Five Years of Charlex's Groundbreaking Visual Effects

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### Summary

Digital design, CG and effects atelier Charlex continues to flourish since the studio chose the BlueArc infrastructure for network attached storage in 2002. Charlex utilizes technology as a means to storytelling and artistry, as it continues to rack up recognition for its Fortune 500 clients. As the company pushes the boundaries of digital effects toward a more filmic look and feel, BlueArc Titan technology helps fuel creativity by providing the world's most responsive unified storage—the foundation for extraordinary effects and animation.

### The Customer

New York City-based Charlex ([www.charlex.com](http://www.charlex.com)), often cited for its signature creativity in the pages of Adweek and Advertising Age, works with the advertising, broadcast and entertainment industries to deliver communications and branding solutions. Charlex designers, effects directors, 3D artists, editors, sound designers and producers collaborate in concert to produce their most technically advanced art. Charlex has earned more than 100 industry awards by producing groundbreaking work for the top fifty of the Fortune 500 companies, including all of the major broadcast and cable networks.

### The Challenge

Pushing the boundaries of digital media has meant that Charlex operations are anything but routine. The Charlex creative teams, who may be working on the Apple Macintosh platform one day and on Linux or Microsoft Windows the next, are at the vanguard of studios exploring beyond photorealism to discover the unique storytelling potential of 3D effects. In the process, the volume of data-intensive images being shared within the studio caused a dramatic increase of storage requirements. The need to seamlessly share the data, first prompted the company to choose a BlueArc storage solution in 2002. Building on that success lead Charlex to further invest in BlueArc infrastructure as both companies' technologies evolved.

### The Solution

Initially, Charlex implemented BlueArc technology to eliminate performance bottlenecks in its network and direct-attached storage system. The investment resulted in a dramatic improvement in responsiveness that enhanced productivity and empowered teams to share files and explore new and innovative ways to collaborate. The distinctive hardware-based architecture of its BlueArc installation meant Charlex could add increasingly sophisticated software applications while supporting a threefold increase in personnel. Charlex also seized the opportunity to upgrade its BlueArc solution to support tiered storage and enhance both the performance and cost-effectiveness of its infrastructure.

## The Results

With scalable capacity through multiple petabytes—and throughput of up to 800 Mbps at over 200,000 input/output operations per second (IOPS), BlueArc's Titan Solution anchors a unified storage infrastructure that gives Charlex the speed and flexibility to continue to push the boundaries of digital media and its applications.

"Like Charlex, BlueArc is a pioneer in its field, taking an approach to storage technology that gives us more options and expands our potential," says Harry Skopas, vice president of engineering at Charlex. "In the five years since we selected and deployed BlueArc network attached storage, no other vendor has been able to deliver anything close to their performance and value. That made our upgrade path obvious."

Charlex effects designers collaborate effortlessly on incredibly data-intensive image files as the BlueArc Titan system manages simultaneous file access and up to 500 active processes concurrently. Designers can access any project file from any workstation, as BlueArc Titan supports Charlex's multi-platform requirements and both common Internet file system (CIFS) and Network File System (NFS) protocols.

From Charlex Chief Engineer Robert Muzer's perspective, powerful storage capabilities mean the company can build on its groundbreaking work in aggressive pursuit of its creative vision and business goals. In 2005, Charlex created Launch, a separate division focused on visual prototyping and pre-viz cinematics that help clients develop new concepts for commercials and brand identity. Launch and Charlex share facilities and resources; their respective workloads are demanding, yet the processes are quite different—putting infrastructure to the test.

With its need for real-time 3D rendering, the Launch group was first to take advantage of the BlueArc Titan server's enhanced throughput performance, while Charlex's visual effects business

has benefited from the unified storage solution's support for multiple storage formats. The production group has seen rapid migration to high definition (HD) rendering as more and more client projects shift to the HD format in anticipation of a national, mandatory transition to digital broadcasting in early 2009.

As teams work in both standard definition and HD formats, the company's storage requirements are further complicated by the need for archiving in a mixed-resolution production environment. Muzer says, "Titan's ability to communicate with our tape library via NDMP has eliminated our concerns about archiving large amounts of mixed-resolution data."

The combined storage demand for all groups now exceeds fifty terabytes of data including a primary file system for the production side of the business, another data set for the Launch group, and arrays used for nearline storage used in daily production and archiving.

## The Conclusion

Having conquered the technical challenges of photorealistic representation of hair, fabric, fire and other elements, the visual effects industry's next quest is for what Variety calls "digital performance," or the unique expressive capabilities of digital media. That's an area where Charlex has earned early recognition with "One Rat Short," an award-winning short film produced in 2006, recognized as "Best in Show" at the Siggraph Computer Animation Festival.

The modular design of the BlueArc Titan series gives Charlex even more room to grow and innovate. "When Titan came out with its superior performance and modular chassis, we knew it would be a solid long-term solution for our needs," says Muzer. "In a dynamic business like ours, having a built-in migration path is a critical advantage."



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