Walking the Dog animation studio manages creative assets with HP StorageWorks X9000

Studio meets growing demand for 3D content with reliable, scalable HP converged infrastructure

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Anton Roebben, co-founder and creative director, Walking the Dog

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WALKING THE DOG

Objective

Create a flexible, reliable infrastructure to support rapidly growing data volumes and a dynamic animation workload

Approach:

Build on trusted relationship with HP and local HP partner to create a secure and flexible, next-generation digital pipeline to support rapid growth with emphasis on 3D content

Business technology improvements:

- Provides scalable, reliable animation render farm for 24x7 workload—enables firm to meet challenging deadlines
- Eliminates bottlenecks in digital pipeline supporting global co-productions—expands options for studio partnerships
- Delivers 5x performance increase over previous storage system—allows firm to accommodate much larger projects without production delays
- Consolidates data center resources with thin clients, saving space and facilitating maintenance and repairs
- Increases storage cost-efficiency by more than 70% through tiered storage architecture for active and archived files

Business outcomes:

- Uninterrupted creative flow and deadline adherence is supported by reliable HP converged infrastructure
- Provide secure access and easy sharing of digital animation assets with studio partners anywhere in the world—enabling strong partnerships
- Supports dynamic project-oriented business model with growing emphasis on 3D animated feature films—positions firm to meet global demand

Animation producers Eric Goossens and Anton Roebben are living the dream. With their Walking the Dog animation studio, the Belgian natives are developing original projects, collaborating with other studios on co-productions, and garnering international attention.

Walking the Dog served as the executive producer for the 3D animated sequences in the French-Canadian-Belgian co-production, The Triplets of Belleville. The film was nominated for two Academy Awards® in 2003: Best Animated Feature and Best Original Song. The Brussels-based studio then played a key role in the production of the animated feature film, The Secret of Kells. Released in 2009, the Irish-French-Belgian film was nominated for an Academy Award for Best Animated Feature.

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Anton Roebben, co-founder and creative director, Walking the Dog

The success of Walking the Dog studio is a perfect example of how a small animation firm—run by the founders, shareholders, and owners Goossens and Roebben—can succeed in a fiercely competitive, deadline-driven business by leveraging creativity, experience, and state-of-art technology. The firm's animation production pipeline is built on an HP converged infrastructure that includes HP StorageWorks for digital asset storage, ProLiant server blades for its render farm, HP workstations for content creation and manipulation, HP Networking, and HP software and services. This new pipeline enables the studio to support its creative staff with the technology tools they need to produce the increasingly 3D content in high demand by studio partners worldwide.

Early success leads to major growth

In 2000, Walking the Dog opened its doors with a handful of HP workstations, HP servers, and an IBM storage system to handle the majority of its animation workload. "We have used HP equipment from the beginning because it is very reliable and stable," explains co-founder Roebben. "Our systems must be up and running 24x7 in order to meet our deadlines. HP tends to cost a little more, but we can rely on it and, for us, that is the most important thing."

The studio's early success brought an abundance of new projects from studios across Europe and beyond. Soon after Walking the Dog completed work on

The Secret of Kells—a mix of classical animation and 3D effects—it won a major new project from the renowned EuropaCorp studio based in Paris. EuropaCorp's A Monster in Paris, by Shark Tale director Bibo Bergeron, is an animated feature film scheduled for release in the fall of 2011.

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Expansion in staff and infrastructure required

Walking the Dog hires freelance directors, graphic designers, and animators to meet the needs of each project, expanding and contracting staff as necessary. In late 2009, the studio saw the need to add about 65 freelancers from Belgium, Canada, France, Italy, and Spain to work on A Monster in Paris. At about the same time, the firm consulted with Vartec NV, a Belgian Autodesk reseller and HP Preferred Partner, to design a new, more powerful IT infrastructure capable of providing the required 3D production pipeline.
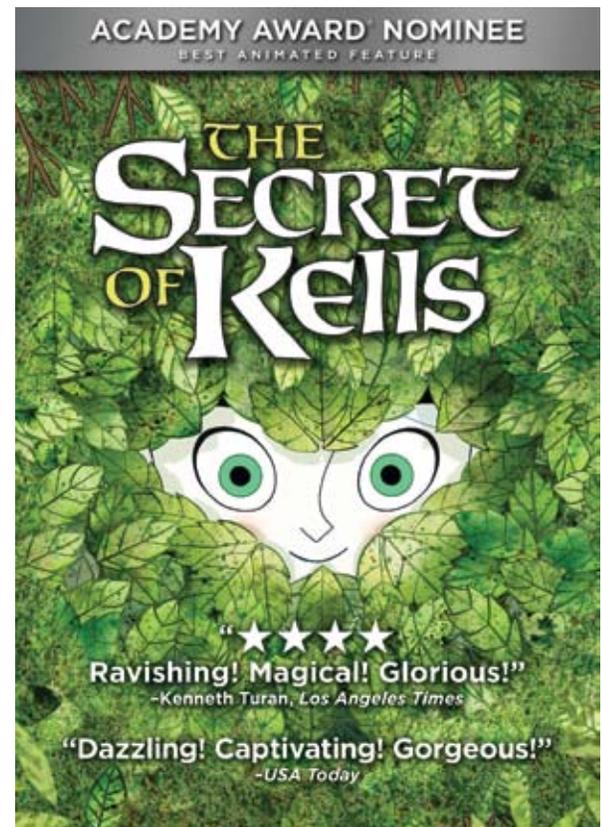
"In the 1980s and '90s, Eric and I were working for other companies on projects that involved 3D images," Roebben recalls. "A lot has changed of course. Back then, it was all done on UNIX® machines from Silicon Graphics that were very expensive. Today, costs have come down, but the compute power required has gone up tremendously. And when it comes to storage, it's not enough to simply have lots of terabytes. They have to be secure terabytes—secure in every way because your product depends on it. Your company depends on it."

To ensure secure storage for its digital assets and deliver the high performance required by its render farm, Walking the Dog chose the HP StorageWorks X9320 Network Storage System. It provides the highly scalable, high-performance storage needed by graphics workstations and servers running animation rendering software. Vartec installed the new storage system—preconfigured by HP Factory Express—in February 2010 and the studio began using it immediately.

Pay-as-you-grow storage delivers flexibility

"We're not working with huge budgets like you would find for Pixar and Disney productions," Roebben emphasizes. "We are typically working with a tenth of their budgets, so we need a flexible, cost-effective approach that allows us to pay as we grow. The HP X9320 storage system gives us precisely what we need, when we need it. We started with the 21TB model, but we just ordered an upgrade to 42TB. It has to be a powerful data pipeline to support our staff here and to share digital assets with partners in Europe and overseas. The HP X9320 is helping us meet our production goals."

Walking the Dog stores some of its digital assets using RAID 5 protection, but primarily uses RAID 0 to obtain the highest-possible access performance. "The biggest performance boost we get from our HP X9320 system is in I/O throughput," Roebben notes. "We are working with large bitmap files of 8MB each. In compositing a single image we may layer up to 60 bitmaps. That information needs to be available to the render farm with the least-possible lag time. The multiple servers built into the X9320 deliver that data about five times faster than our previous storage system."

The studio's render farm consists of six HP BladeSystem c7000 Enclosures equipped with 80 HP ProLiant BL2x220c G6 server blades, each with two Intel® Xeon® quad-core processors, for a total of 160 CPUs. The server blades were preinstalled and loaded within the enclosures by HP Factory Express, ensuring hassle-free start-up upon delivery. The studio's ProLiant render farm runs 24x7, supporting iterative

test rendering, and enabling animators to judge the impact of changes in scene lighting, textures, and images.

It takes an average of three hours to render a single animated image. A full-length animated feature requires more than 120,000 images for a total of 360,000 hours—or 41 years—of rendering time. To streamline the flow of data between the HP X9320 storage system and the ProLiant render farm, Walking the Dog uses HP Networking E5406 zl core switches for 10-Gigabit Ethernet backbone connectivity, eliminating bottlenecks.

HP workstations design by day, render at night

Walking the Dog artists, designers, and producers use HP Z600 Workstations equipped with HP DreamColor and widescreen LCD displays to create and refine lighting and special effects, and to perform image touch-up. The HP workstations support the studio's creative staff during the day and supplement the render farm overnight. "As we began to add an increasing number of workstations, we realized we needed to switch to thin client systems and consolidate the compute resources in our data center," Roebben explains. "HP thin client workstations save space and reduce the heat buildup in our work areas. We also find that consolidating systems in the data center accelerates render times and makes it easier to perform maintenance and repairs."

The studio uses HP Remote Graphics Software to take full advantage of its local compute resources and to communicate with partners at distant studios. "Most of our projects are co-productions done with studios and contributors throughout Europe and overseas," Roebben notes. "We have to provide a means to share digital assets securely. HP Remote Graphics Software helps us support our collaborators by enabling easy access to critical assets anywhere they have an Internet connection. We save time by providing our associates with self-service access and fast transfer rates."

Two HP ProLiant DL360 G6 rack-mount servers are dedicated to managing the flow of digital assets between Walking the Dog and its co-production partners in Paris and elsewhere in Europe. "For instance, EuropaCorp and Mac Guff studios store the original animation for A Monster in Paris," Roebben says. "For us, our larger HP ProLiant servers act as our communications pipeline so that there is a free, yet secure flow of information as it is needed by the production partners."

Tiered storage fits the budget

Final animated frames are stored in an online/near-online archival system consisting of an HP StorageWorks X1600 Network Storage System and associated HP StorageWorks 1/8 G2 LTO-4 Ultrium Tape Autoloader. This archival system, in combination with the high-performance HP X9320 solution, gives the studio a tiered storage architecture that provides cost-effective and secure storage for each level of the production pipeline.

For finished sequences, this second tier storage provides near on-line access at about 72% of the cost. "The X9320 supports our render farm and animators with the highest-performance storage," Roebben explains. "Once a sequence has been finalized and approved, we can move it off to less costly, somewhat lower-performance storage. It works out very well."

Roebben observes, "We're working on 1,500 things at once and communicating with dozens of associates around the world. It is very important for us to be there, providing the most up-to-date tools and easy access to digital assets." Walking the Dog receives service and support from both its local HP reseller, Vartec as well as directly from HP via Support Plus Service. "Our HP infrastructure with HP services provided by our local HP partner, Vartec, provides us with the reliable platform we can depend on. HP reduces our risk and improves the odds of success."

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