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*"Oktapodi" winner of the Imagina 2008 "Best Animation" award*

Photo Courtesy of GOBELINS, l'école de l'image

# GOBELINS, l'école de l'image Renders Award-Winning Animated Movies for Annecy International Animation Festival

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*– Christian Fodéré,
IT Manager at GOBELINS, l'école de l'image.*

For more than 20 years, animation students at GOBELINS, l'école de l'image ("school of the image") have created award-winning animations for opening night festivities of the famed Annecy 2007 International Animation Festival in Annecy, France. Each year advances in computer graphics enable them to create more stunning animations. At the same time these advances create progressively larger files, each of which require priority compute time for the final rendering stage. As they all queued together, 50 GOBELINS, l'école de l'image students found themselves in jeopardy of missing Annecy deadlines.

To render millions of high-definition images in time the 2007 worldwide gathering, GOBELINS, l'école de l'image turned to SGI, PipelineFX and Microsoft for a powerful Render Management solution.

"With opening night fast approaching, it's the final rush. For five months everything possible is done to meet the delivery schedule for the students' shorts -- plot, story board, decor, characters, animation, etc.-- on time," said Christian Fodéré, IT Manager at GOBELINS, l'école de l'image. "We then render the images, which make up the films and which, for the first time, were produced in full HD. Needless to say, 50 students count on the speed and efficiency of the render farm. Working with SGI, PipelineFX and Microsoft the school set up a solution to ensure that the deadlines were met and the students were able to deliver the highest quality animated films."

## GOBELINS, L'ÉCOLE DE L'IMAGE

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*– Constantin Maschas, Pedagogical Coordinator,*
  *GOBELINS, l'école de l'image*

Photo Courtesy of GOBELINS, l'école de l'image

The Annecy International Animation Festival is the number one international competitive festival celebrating the amazing creativity of the art of animation. For over 45 years the historic French town has been showing off the very best during six days of festivities. The Annecy Festival is one of the high points of studies at GOBELINS, l'école de l'image, whose graduates of the animation course currently work in major studios around the world and are recognized for their creative and technical excellence as well as their professional expertise.

GOBELINS, l'école de l'image is world-renowned for closely monitoring the constant changes — technical, artistic and organizational — that characterizes the animation industry in order to prepare students and trainees today for both the current and future skills required by the professional world of animation production. Six months before the Annecy 2007 International Animation Festival, GOBELINS, l'école de l'image took the next step in preparing their students for an increasingly HD world. The decision was made to render millions of high-definition image files in time for the opening night screening utilizing the SGI Render Management solution consisting of a powerful combination of servers, cluster management software and render management

software from SGI, PipelineFX and Microsoft® Windows® Compute Cluster Server 2003 operating system.

The GOBELINS, l'école de l'image render farm that saw the students' work to -final projection was based on SGI's high-performance Render Management Solution featuring an SGI® Altix® XE cluster and PipelineFX® Qube!™ render farm management software and Microsoft Windows Compute Cluster Server 2003 operating system.

SGI's Render Management solution excelled with the SGI Altix XE cluster systems based on Quad-Core Intel® Xeon® 5000 processors, running Microsoft Windows Compute Cluster Server 2003, and PipelineFX Qube! render farm management software. Because GOBELINS, l'école de l'image chose to render student animations in full uncompressed HD for the first time, the selection of this powerful combination of technology was a necessity.

"We needed lots of computing power and we needed it to be easy to manage, without our students being computer scientists" said Constantin Maschas, Pedagogical Coordinator, from GOBELINS, l'école de l'image. "Storytelling was our first challenge, because inventing a story to animate is much more difficult than animating someone else's story. And, each story had five or six students as writers, directors and then animators. We were not sure it was possible to meet the deadlines, but we knew that without a powerful render farm we could not do HD.

In previous years students would be running around all over the school, desperate to find a free computer to run some render batches. With the SGI and PipelineFX solution, it was unusually quiet, and all the films were completed before the school closed its doors for the summer. I would also like to stress that the students did not have to sacrifice quality, because the speed of the rendering let them refine their animations until they were satisfied with their work."

The animations were both hand-drawn and computer-generated and ranged in style from traditional cartoon to Japanese anime to semi-realistic. Two of the short films were fully 3D, created in HD with Autodesk® Maya™ (ver. 7.1) software, while three others were done with a mix of traditional and CG animation techniques. The rest were traditionally animated but color and compositing was done digitally.  Adobe® After Effects™ was used for compositing.

The average length of the students' films was one minute and 30 seconds and contained approximately 2,250 images in uncompressed HD. Running HD at 25 frames per second (fps) translated into 13.5 GB of digital information per 1:30 film. The final storage space per film was approximately 8 GB (final picture plus Dolby® surround sound), though several terabytes of intermediate pictures were generated

in the process. The files are stored using lossless compression and are used to generate HDCAM-SR or 35mm film master copies, depending on format requests from other festivals and television stations.

SGI Altix XE clusters leverage SGI's expertise in high-performance computing to provide solutions that are transparent across mixed workflows. PipelineFX Qube! is the leading render farm management software for film production, game development, and digital media education. Microsoft Windows Compute Cluster Server 2003 provides an enterprise-class high-performance computing operating environment. Ideal for production facilities that use Microsoft Windows operating system applications, this solution accelerates workgroup productivity and collaboration.

GOBELINS, l'école de l'image, is a school of visual communication operated by the Chamber of Commerce and Industry of Paris. It offers both basic and professional training in multimedia (web design, interactive projects), photography, graphic arts, industrial graphics (traditional and digital printing), video and animation (hand-drawn, digital and 3D). The animation department was founded over 30 years ago to prepare artists for the needs of the emerging French animation film industry. Working professionals, taking time out from their busy schedules in studios and production companies, teach nearly 90% of the courses.
"We are proud to work with a noted animation school like GOBELINS, l'école de l'image," said Troy Brooks, CEO of PipelineFX and consultant to GOBELINS, l'école de l'image, as the project neared completion. "The students' work speaks for itself in terms of quality, story and entertainment value. They really push the envelope in an educational environment and are taking advantage of Qube!'s ability



Photo Courtesy of GOBELINS, l'école de l'image

to maximize the throughput on their hardware, and make the best use of their time. Their students will be completely prepared to enter a professional environment, after their experience at GOBELINS, l'école de l'image."
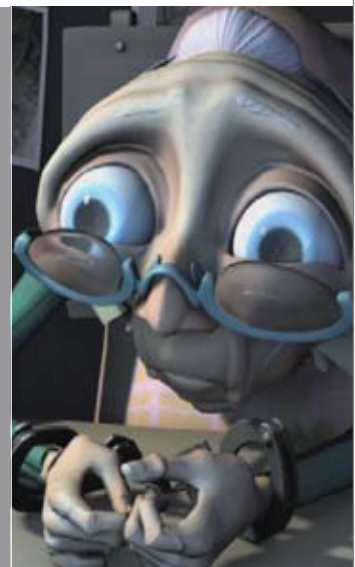
Brooks' predictions came to pass, with three GOBELINS, l'école de l'image students now working for Dreamworks and many more moved to London to work for Framestore CFC, the largest digital visual effects and computer animation studio in Europe. Other graduates found jobs in almost all animation studios in France, including the cutting-edge Bibo Studio in Nice, and another graduate is working for UbiSoft, a well-known French video game developer.



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GOBELINS, l'école de l'image, utilized a two node SGI Altix XE 310 cluster with Quad-Core Intel Xeon processors and an additional Altix XE 210 as front node. This configuration allowed a great density of performance in the lowest size of space (36 processors total). The full configuration processed animations running on Microsoft Windows Compute Cluster Server 2003 (64-bit processing), and PipelineFX Qube! 5.1 render farm management software. The solution was set up in association with the informatics teams from the school, systems integrator Caliséo and SGI France.

GOBELINS, l'école de l'image already requested SGI to deploy a second configuration to run the same solution for the animations films for MIFA 2008, the only specialised trade fair in the world that brings together the animation industry for television, cinema and video.

**GOBELINS**
L'ÉCOLE DE L'IMAGE

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