

# Trixter give Hektor a RenderMan make-over



The TRIXTER Studio has been doing animation for 10 years. In the last years we produced two seasons of the quite successful “Lilly the Witch” an animated children’s series based on the well known books written by German Author KNISTER. Over the years we came to the conclusion that it was time for a “Lilly the Witch” feature film. Instinctively wanting to push the boundaries of what we’ve done before and needing to meet the demands of a film quality production, it became the obvious choice that a live-action film with cg elements would be the best combination.

How long has it taken?

Preproduction started in April 2007 with the character development of Hektor the computer animated dragon and companion of the little witch called Lilly. To get a better feeling for how the character should look in the 3D world we built a physical maquette of Hektor as well as drawing up VFX Storyboards.

The development of the RenderMan Pipeline started in September and was finished in December 2007. Animation Tests were undertaken in October. Animation itself started in November 2007 and went on until April 2008. The Rendering and Lighting department as well as the Compositing department started in November and will work until the end of June.

How many people did it take to make this project happen?

TRIXTER consists of 20 regular employees. During the production about 30 freelancers were additionally working on the project.

The crew was split into departments such as Modeling, Rigging, Texturing and Shading, Animation, Lighting and Rendering, Pipeline Development and Compositing.

What is your tools pipeline?

Modeling, Shading and Animation were done using Maya, while Compositing is Shake based. Other tools that were used were Zbrush, BodyPaint, Photoshop, 3D Equalizer, as well as some inhouse tools. Important parts of our pipeline, like the scene manager, I/O EDL manager, lighting manager, Render Path Manager and a Render Queue Manager are just some of the tools that our Programmers developed for our special needs.

Why did you decide to switch to RenderMan?

First of all the most persuading factor that drew us to RenderMan was the ability to handle Feature Film productions, especially full CG films. Though the switch to RenderMan was not compulsory for this particular project, there were still many ways in which we could benefit from doing so, the obvious advantages over most other renderers being the high rendering quality and almost inconceivable speed with displacement and 3D Motion Blur, making our overall render times far more attractive. Other than that it was also a good possibility to develop our inhouse Pipeline for upcoming Feature Film projects.



How did RenderMan help, how was the Pixar's support?

Due to RenderMan's astonishing speed, render times were never an issue. The rendered layers for the Compositing Department included the computer animated Hektor and technical layers for the surrounding set, such as shadows and occlusion. For some of the shots the Rendering Department had to deliver more than 50 layers and the render time per frame never exceeded 45 minutes (on a quad core 2,4 Mhz PC) including subsurface scattering, point cloud occlusion, displacement and 3D Motion Blur.

Though our CG Character Hektor is a cartoon like magic dragon we headed for realistic skin attributes to seamlessly integrate him into the live-action plates. Some of the RenderMan features such as environment light, pointcloud occlusion and subsurface scattering helped us to accomplish the look we were searching for.

Our development staff made it possible to blend HDRIs, which made changes in the environment lighting of a scene easier to accomplish. This was necessary because Hektor moved through the scenery quite quickly and had to react to sudden as well as subtle light changes.

We got very fast support both day and night from Pixar and Escape Studios. Whenever problems or questions occurred, we received fast and competent solutions. The forum also provided great hints and instant help from RenderMan users all over the world. (Thanks guys!)

In terms of learning RenderMan, did you find it difficult, what was your experience?

It only took us 4 month to set up a whole new Lighting Rendering pipeline without any present RenderMan experience. Lighting Artists that joined our team were able to light and render within one day using our self developed pipeline tools.

Did RenderMan prove to be value for money?

We were pretty surprised about the low number of re-renderings that were needed during the production. Dealing with artefacts was suddenly a thing of the past. Most of the renderings went final after the first go. RenderMan made it possible for us to finish over 200 2k feature film shots in four month. So in a word, yes, we were very pleased that we choose to purchase and integrate RenderMan into TRIXTERs pipeline.