

Shot Breakdown for reel from Elizabeth Keith

This letter is intended to briefly detail my contributions to the shots on the accompanying DVD.

The first few shots are from the Disney animated feature *Meet The Robinsons*. I worked on the eye, hair and skin shaders and contributed to the cloth shading for this film. All of these shaders were written in Renderman™.

I was part of the pre-production team at Disney for *Bolt*. I worked on the occlusion and indirect diffuse shading modules for look development and the rendering support pipeline for the lighters.

As the look development and lighting supervisor on *The Prodigies*, I worked with the team to design the shader and a look development to lighting to rendering pipeline. I generated lighting rigs for some of the sequences; bid the look and lighting phases for all the shots and worked with the VFX on complexity analysis.

All work on *Roadside Romeo* was done at Tata-Elxsi's Visual Computing Lab in Mumbai and Pune, India. This was the first animated feature for their visual effects division. The backgrounds were done using Mental Ray™. The characters were rendered using Renderman™. I worked on enhancing Pixar's Slim and MTOR™ products to add fur and skin shaders, as well as setting up extra output layers during rendering. These layers were used to facilitate the compositing and allow the director faster feedback on lighting and color changes.

The beaver is from *Dr. Doolittle 2*. I added the talking animation and did the color and lighting at Rhythm and Hues, using their proprietary paint, rendering and compositing software.

On Buckbeak, the hippogriff, from the *3rd Harry Potter* movie, I worked on the shaders for the eyes, the beak and the inside of his mouth at Framestore in London. These shaders were written in Renderman™.

I wrote the shader for the water and the foam in *Peter Pan* at Digital Domain. The wave displacement was created using Martian Labs Hydrous Tools with Houdini™. These shaders were written in Sidefx's VEX shading language and rendered with Houdini's Vmantra™.

Fluffy, the three headed dog, from the first *Harry Potter film*, was done at Sony Imageworks. I worked on the Renderman shaders used for his nose, the pads on his feet, his tongue, the teeth and the rest of the inside his mouth. Most of these shaders were also used for the Troll in the bathroom.

These are some of the shots I worked on from *X-Men 2* at Cinesite™. I wrote the shaders for both the "clean" and the "dark" Cerebros. These are both RenderMan™ shaders. For Cyclops, I wrote the detailed patterning in the beam. In the shot with the Dr. Pepper™, I wrote and animated the frosting of the bottle. In the final shot of the movie, I replaced the lake and the background. These shaders were written in Sidefx's VEX and rendered in Houdini's Vmantra™.

These three shots are from *Terminator 2*, done at ILM. I did the modelling and animation in Alias™2. The head was a Cyberware™ scan, which was heavily massaged into a NURBS surface. This was used as the basis for the intermediate and final faces of the file interpolation. The color was a texture map made from the plate. I wrote the RenderMan shaders, did the animation, the lighting, some pipeline scripting, and the compositing.

The Harrier jet series is from *True Lies*, which was done at Digital Domain. I wrote a RenderMan™ shader for the jet heat signature in most of the Harrier shots. I also did some pipeline scripting to help their Maya™ and Houdini™ animators utilize the shaders and composite the shots with their proprietary compositor, Nuke™.

The helicopter crash series is from *Sum Of All Fears* done at Rhythm and Hues. I generated the dust using Houdini™ for the particle animation and Jig™, a volumetric renderer, from Steamboat Software.

"*The Wind Test*" is a scene set up at Oddworld Inhabitants to test a pipeline we wrote in Perl. It enhanced an early version of MTOR™, introducing the concept of static objects as RIB archives. It was also used to test what was then the new cloth functionality. The billowing bushes and trees test the replacement of Maya locators with objects

imported from other packages. The flying debris tests the particle systems translation as well as replacing the particles/locators with models, and finally atmospheric fog. I was the designer for the pipeline design, the technical supervisor for look development and trained the cinematics group in the RenderMan™ shading language and the RenderMan Artist Tools™.

Also from Imageworks is this shot from *Anaconda*. It started out as a locked plate of an empty barn. I did the lighting for the snake, the shadow generation for both the snake and the digital stunt man, and the holdout mattes in RenderMan™, using their proprietary Maya™ wire file to rib converter. I used Wavefront's Composer™ to add the actor, the real stunt man, the animated snake, their shadows, the leaves, the dust, and the camera move to the plate.

These shots from HBO's *From the Earth to the Moon* were done at Hollywood Digital. We used Houdini for modelling and tracking. I setup the initial pipeline for 10 shots and wrote the RenderMan™ shaders for the lunar surfaces. Most of the displacement was created with texture maps pieced together from the Clementine photos enhanced with Photoshop. However, since more craters were desired than the actual landing site would have had, I added procedurally generated craters to the displacement shader.

These shots from *Demolition Man* were done at VIFX, using their proprietary particle system. I attached cone shaped objects to the particles which were replaced by a reveal of the shader on the wall object at impact. The electrical current was hand animated by Peter Crossman. I did the color, lighting and composite.

This shot for *Batman 3* was done at Warner Bros. The background plate is a tall rectangular matte painting with false perspective. Edie Paul did the mattes for the live action police cars. I incorporated the tilt down, the flashing light effect, the roving police spotlight, the bridge in the background, the graffiti painted on the wall, and some color correction to the plate, using WaveFront's Composer™.

For the MCA *Funtastic World of Hanna-Barbera*, an IMAX ride film (roller coaster in a box), was done for Universal Studios Florida, at deGraf/Wharman Studios. The modelling was done by a lot of talented people with *S-Model* from Symbolics™. I did all of the layout, the camera work and shaders for the Flintstone sequences. I did the lighting and wrote the shaders using RenderMan for the launch sequence on the reel and two other transitional scenes not shown.

The *Interscope* film logo was done at Rez.N.8 using Houdini (then Prisms). I did all of the layout, camera work, shading and lighting. VEX was used for shading and lighting. This was rendered all of a piece, without compositing.

Desmond the Dog was done at Lost in Space in London using Sidefx's Houdini. It is a theatrical commercial for the *Lucuzade NRG* drink (a UK version of *Red Bull*). I did most of the modelling and some of the animation. I wrote all the RenderMan shaders. I also supervised the database, wrote pipeline scripts and did much of the compositing in Houdini's Ice.

Please don't hesitate to call or write with any questions. Thank you for your time.

Sincerely,

A handwritten signature in cursive script that reads "Liza".

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