

[Reel Breakdown]

reel url :: <http://www.vimeo.com/19895491>

[_] **Effects :: aggie bonfire memorial sparkler**

This piece is inspired by long exposure photographs of sparklers with the goal to interpret how a single long exposure image into a time-based composition. A series of long exposure photographs make up the background image sequence. Scene recreation is built in Maya with the Maya particles to achieve the desired effects. After Effects is used for compositing of the rendered images onto the background sequence.

[_] **Effects :: particles simulation**

This effect is a supplement to a music video project. The desired look is to get fluid that flows like glue similar to that of the reference clip shown. The effect is achieved with the use of Maya particles rendering out blobby forms. I created the particle effect and shape in Maya. The lighting and stretching of the fluid as it leaves the branch is done in post by another person in After Effects.

[_] **Effects :: smoke study (work in progress)**

This is the beginning current progress of an effects study of smoke simulation with the use of Maya fluids inspired by reference footage featured on left (<http://www.vimeo.com/5648342>).

[_] **Short :: dry cleaner (work in progress)**

Shown are excerpts from a short where the use of typography is incorporated in a non-narrative manner. The steam effect element is created from Maya particles. This piece is entirely created by myself in Maya and initial compositing in After Effects.

[_] **Model, rig and animation :: black bear**

This project examines the physical characteristics of a black bear and its range of motion into a rigged model featuring a quadruped to biped switch. The joints in the rig are automatically created through a self-written Python script. The script builds the rig based on where specifically named locators are placed. The script creates controller sets the hierarchy and constraints. The model, rig, animation and shading are all created by myself in Maya.

[_] **Materials study :: charcoal**

This is an exploration in materials study in achieving the characteristics and likeness of charcoal on newsprint. The implementation considers the characteristics of charcoal and how the medium catches on to the paper. Factors that determine the amount of charcoal deposits onto the paper are the grain of the paper, characteristics of the medium (shape of tip and softness), path and speed of the stroke, pressure of the medium on paper and the current amount of charcoal already on the paper. This program is entirely coded in C++.

The paper texture is created from scanning newsprint paper. The grain in the paper is dependent on the darkness and lightness of the texture. The darker pixels of the texture read as grains that are deeper into the paper whereas the lighter pixels of the texture represent grains that are higher. User defined characteristics of the medium include the shape of the charcoal tip, pressure of the medium, and the distribution of the pressure over the surface of the tip.

A 3D model is read in and the contours of the model are exported as a set of data points. The model data came from a colleague. These points are used in determining where the drawing is placed. The distance between the data points varies the speed of the strokes.

[_] **Lighting & compositing :: northgate characters**

Lighting and compositing of CG characters onto a series of photographs taking in consideration change of light as the sunsets and lights from shops and streets becomes more apparent. The scene is recreated and lit in Maya and composited in After Effects.

[_] **Ray tracer :: bouncing ball**

The ray-traced animation is coded in C++. Features of the ray tracer include sphere, planes, reflections, texture mapping, shadow, ambient occlusion, depth of field and motion blur. Although not shown, it can also handle triangles and refractions. Animation of the bouncing ball is a physically based simulation

coded in C++. The ball simulation data is exported from the physically based program for the ray traced animation.

[_] **Visualization :: heart and polymer**

This visualization supplements a presentation for a finalist in the 2008 Collegiate Inventors Competition to demonstrate the use of a polymer for organ transplant. The pumping of the blood through the veins is used with a bump displacement. The heart is modeled and shaded in Maya with the use of Maya's nCloth in the creation and animation of the polymer.

[_] **Traditional artwork**

This section shows a range of artwork in traditional mediums. They include figure studies, photography and sketches.

- [a] Figure studies in oil, 3 hours each, 9" x 12"
- [b] Figure drawing in pencil, 1-3 hours each, 9"-16" x 12"
- [c] Photography, 24" x 13"
- [d] Photography, edited in Photoshop, 11" x 14"
- [e] Photography, edited in Photoshop, printed on canvas and mounted separately, sizes range from 8"-14" x 42"