

Demo Reel Breakdown

0. *The Twilight Saga: New Moon* (Summer 2009)

Please ask for a reel that includes this material if interested. I don't know if I'm allowed to put it on the web.

1. *Rumble in the Roses* (2008-2009)

Death Character - Modeling, Unwrapping, Rigging, Skinning

Life Character - Face Modeling, Unwrapping, Rigging, Skinning

Monster's Mouth - Modeling, Unwrapping, Shading

Stomach Environment - Modeling, FX Animation, Unwrapping, Shading/Textures, Lighting, Rendering

Credits Sequence - FX Animation.

2. *Simulations* (2009-2010)

FEM Softbody - A tetrahedral finite-element soft-body simulation. I wrote everything, including the interface, in C++. The integration is semi-implicit.

Fluid - A rectangular-grid incompressible fluid simulation. Again I wrote everything and it uses the same framework as the softbody simulator.

Cloth - An explicit cloth simulation.

3. *IK Sandbox* (2008)

IK Solver - This demonstrates an iterative jacobian transpose based IK solve. It allows multiple end effectors and varying bone weights. It also supports a rootless solve allowing solutions to be relative only to user specified end effectors.

Interface - The interface allows editing and posing joint hierarchies. The user can arbitrarily pin and change the weights of bones to affect the solver behavior. There is also very simple keyframing.

4. *Interactive Raytracer* (2008)

Progressive - Demonstrates the ability to change the view as the raytracer renders progressively higher resolutions. The renderer is naively multi-threaded and completely written in C.

Raytracing - Supports fundamental rendering features such as reflection, refraction, antialiasing, texturing.

Advanced Features - Supports photon mapping and subsurface scattering.

5. *Discombobulator* (2006)

Procedural Mesh Detailing - Shows the application of the plugin to a simplistic trench. The script procedurally extrudes geometry out of an existing mesh and then proceeds to add extra doodads to the protrusions.

Blender Plugin - This script is written in Blender Python and is included in Blender's distribution.