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Demo Reel Shot Breakdown

Beach House (October 2008):

The model was created in Maya matching photographic reference closely. Indirect lighting calculation in Mental Ray (GI and caustics) were utilized in conjunction with light portals to illuminate the interior throughout the sun's journey.

Stage fright (November 2009):

Lighting and rendering, including the set up of caustic and volumetric fog shaders was done using Pixar's Renderman utilizing Slim. Maya was used for modelling and rendering texture based occlusion in order to preserve resources at rendertime.

VW takes over Porsche (July 2009):

A stitched panoramic photograph was camera projected onto geometry for accurate reflections in the car paint. I was responsible for image gathering, stitching, modeling of the environment as well as shading, lighting and rendering of all other elements.

Zartoshty Loft (March 2009):

The goal with this piece was to create photorealistic imagery without utilizing computationally expensive algorithms such as indirect lighting. Photographic reference from "Lofts DesignSource" (Canizares, 272). Furthermore reflection ray limits were kept low, and blurred reflections were interpolated rather than achieved through high sampling. For lighting purposes shadow maps were utilized and soft shadows with feathering edges were created by computing multiple shadow maps from slightly different positions so as to create the illusion of physically accurate shadows without incurring processing costs of raytracing. Occlusion was baked out as a texture and applied on the shaders during the rendering process in Mental Ray.

Shot from "A cloudy journey" (February 2009):

All aspects of this short film except the character (modelling, rigging) were my responsibility. All visual aspects of this production other than editing were completed in a Linux based environment. Maya was used for modelling and animation - shading, lighting and rendering utilized Pixar's Photorealistic Renderman - Mtor was used in the Linux pipeline with shell scripts and python code automating rib generation in an alternate fashion to alfred. Shake was utilized to composite the final piece as well as create the animated textures which were used in shaders attached to the windows as an alternative to computed reflections. This gave great flexibility in terms of reflected content in addition to increasing rendering efficiency.

"A cloudy journey" lighting breakdown (March 2009):

This breakdown shows the shot lighting for the character as well as the mapped animated textures for the windows. Since character lights were linked exclusively to the character, additional cameras were set up to capture shadow maps including all objects necessary for believable shadow creation. The reflections were created with camera motion and transformation in mind so as to create believable reflections. Orthographic views of the camera animation were used as direct references during the compositing of the reflection textures.

Shot from "End of Mediocrity" (February 2008):

The entire short was completed within nine weeks and every aspect of the production was created from scratch. Time saving workarounds such as a luminance depth render pass (to apply depth of field in post production) and final gather occlusion (to create a smooth yet efficient way of animation accurate occlusion) were used to cut down on render time. A lighting rig was set up in order to maintain consistency across all shots. This piece was rendered in Mental Ray as well as Maya Software to minimize the use of rendering resources.