



Thomas Nixon Effects Artist

EMPLOYMENT

November 2014-Present

Senior Technical Director: Sony Pictures Imageworks, Vancouver, BC, Canada

- Suicide Squad
 - Developed pyro and particle solve for fractal fire along with retime tools to slow both particle and fluid simulations to any rate.
 - Look development and initial concept development through the beginning of the project over a variety of effects for proofs of concept.
 - Twisting cloud tunnel effect.
 - Rain system for distribution over dozens of shots.
 - Dust and lightning effects for massive explosion.
 - Train platform destruction.
 - Road destruction, sparks, dust.
- Hotel Transylvania 2
 - Fire Extinguisher Foam – used Houdini's grain solver with sopsolver modifications.
 - Did various flip simulations for effects such as fire hoses and sasquatch tears dripping down characters' faces and glasses.
 - Ocean foam and spray - generated foam and spray elements for long beach shot.

June 2010 – September 2014

Technical Director: Double Negative, London, UK

- Godzilla
 - Water lead
 - Headed up the water effort under extremely short time constraints using Houdini's flip solver as well as Double Negative's proprietary solver.
 - Worked with R&D to get new in-house tools up to the task.
- The Hunger Games: Catching Fire
 - Water lead
 - Water fx using Houdini's flip solver and white water tools.
 - Developed a white water tool in DOPS before the release of Houdini 12.5, which had its own white water solver.
- Man of Steel
 - Generated water fx using Double Negative's proprietary flip water solver.
 - Created additional water and smoke/mist effects using Houdini's flip solver as well as the pyro tools.
- John Carter of Mars
 - Developed the particle simulation component of the crowd simulation tool set for use in the studio.
 - Refactored and upgraded python scripts for use with the proprietary crowd rendering toolset allowing for more efficient workflow.
 - Supported tools and junior TDs in their use of the tools.
 - Ran shots for the mounted crowds.

September 2009 – June 2010

Senior FX Technical Director: Framestore Ltd, London, UK

- Your Highness
 - Developed system for procedural animation of saliva on Hydra.
 - Created spraying blood elements as Hydra's heads are cut off.

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- Created force field magic system for use in final battle using L-systems and distortion elements for use in comp.
- Clash of the Titans
 - Wrote a plugin in Houdini's HDK converting Houdini geometry into Renderman pointclouds.
 - Look development for the Hades tendrils and "essence" effect in Clash of the Titans.
 - Developed tendrils effect tool to create Hades tendrils - procedurally animating geometry generating volumes using Framestore's "whisper" tool rendered in Mantra.
 - Developed the shader for use on all Hades "essence" effects. This was a volume shader that accepted pointclouds for internal illumination like embers.
 - Ran shots involving the Hades "essence" plume and helped get them to completion.
 - Supported junior TDs.

April 2008 – July 2009

R&D Technical Director: Laika Entertainment, Portland, OR.

- Wrote a Houdini toolset involving a plugin and to allow Houdini volumes to be rendered in prman.
- Pipeline development focusing on data flow from surfacing through effects and lighting.
- Developed tools in Houdini for effects, lighting and surfacing.
- Developed data tracking and generation methods for pointclouds.
- Perform bug fixes and general support for the pipeline.

FX Technical Director: Laika Entertainment, Portland, OR.

- Coraline
 - Created particle effects for the disintegrating sky.
 - Made a reusable HDA from a previously developed rig to animate the disintegrating sky.
 - Created particle effects in the world destruction sequence to add depth to the 3d effect.
 - Composited in shake and silhouette for rig removal and various compositing effects.

August 2006 – March 2008

FX Technical Director: Pixar Animation Studios, Emeryville, CA.

- Wall-E
 - Developed a tool in Maya to better tie rigid body simulations into the Pixar pipeline using instancing.
 - Ran particle simulations using previously developed effects rigs for Wall-E.
 - Developed and implemented volume shader for the thruster effect.
 - Used Houdini for particle effects on Wall-E as an initial test of its integration in the pipeline.
- Ratatouille
 - Ran fluid simulations using Physbam to create pouring and sloshing wine effects.
 - Ran Rigid Body simulations through Maya using ODE.
 - Ran particle simulations using previously developed effects rigs for Gusteau.
 - Created fire and smoke elements for use in the homecoming sequence using Maya fluids.
 - Created the fountain water in the central square using particles and an animated shader.

January 2005 – July 2006

Technical Director: DNA Productions, Irving, TX.

- FX TD
 - Ran fluid simulations using a level set CFD solver developed at DNA as a plug-in for Houdini.
 - Developed various tools for the effects team.

- Developed and generate effects for shots in Ant Bully (primarily the flood sequence).
- Layout TD
 - Developed tools for use site-wide in the production of the film Ant Bully.
 - Developed a camera OTL that allowed for in-camera flipbooking and camera shake controls.
 - Developed a deformer tool allowing artists to deform groups of geometry; later modified the tool to be applied to the animated characters.
- Modeling TD
 - Developed a grass modeling OTL to procedurally generate the grass for much of the film.

May 2004 – December 2004

Animator/Programmer: Martian Labs/Elements Studios, Los Angeles, CA.

- Research and development of methods for generating effects in Houdini for the films Exorcist: The Beginning and Bee Season.
- Created water effects for a Sea World commercial spot.
- Developed VEX scripts for geometric manipulation as well as shader writing for photorealistic film quality effects.
- Contributed to tool development for a fluid dynamics solver (CFD).

Oct 1998 – Aug 2001

Associate Systems Engineer: Lockheed Martin at NASA's Stennis Space Center in Mississippi.

- Worked in an optics laboratory for the Commercial Remote Sensing Program in research and development of system calibration methods for airborne and spaceborne imaging platforms. Responsibilities included design of equipment for the laboratory, design of a world-class optics laboratory for imager calibration. Development of innovative applications for ground truthing of remote sensing data.

Jul 1997 – Dec 1997

Intern: Blue Line Engineering, Colorado Springs, CO

- Performed data analysis with Mathematica, and used AutoCAD to draw diagrams of motor systems. Helped with the assembly of components for the company's design for a NGST (Next Generation Space Telescope) involving adaptive optics.

SOFTWARE

- 3D Modeling and Animation: Houdini, Maya, Lightwave, Modo
- 2D Packages: Shake, Adobe After Effects, Photoshop, Illustrator, Premiere
- Tracking: 3D Equalizer
- Operating Systems: Linux, Windows, Macintosh
- Programming/Scripting Languages: Python, C, C++, VEX, MEL, TCL

EDUCATION

Savannah College of Art and Design, Savannah, GA – August 2004

Master of Fine Arts; Major: Visual Effects (incomplete)

Colorado College, Colorado Springs, CO – May 1998

Bachelor of Arts; Major: Physics; Minor: French

The University of Paris IV (Sorbonne), Paris, France - 1996 – 1997

- Studied French Political History, French Literature, Phonetics, and Art

MATH

- Calculus I-III
- Vector Analysis

LANGUAGES

- English – mother tongue
- French – fluent