

**PETER OPPENHEIMER****206-524-6554****peter@hitl.washington.edu**

## Education:

Stanford University M.S. Computer Science 1980  
 Princeton University A.B. Mathematics 1979 Magna Cum  
 Laude

## Work Experience:

- 4/93- **University of Washington, Human Interface Technology Lab, Seattle.**  
**Virtual Reality Software and World Design Research.**  
**Medical Simulation and Interface Group**
- 1-3/97 **Zombie, Virtual Reality Entertainment, Technical Consultant**  
 7-8/93 **Colossal Pictures, Consultant, Video Production**  
 8-11/93 **George Coates Performance Works, Creative Consultant**
- 8/82-7/91 **New York Institute of Technology Computer Graphics Lab**  
**Development of 2D & 3D Graphics Software Tools**  
**Computer Graphics Research**
- 7/79-7/82 **Bell Laboratories Holmdel, NJ.**  
**Member of Technical Staff. Graphics Programmer.**  
 Videotex Systems.
- 12/78-1/79 **IBM: Thomas Watson Research Center, Yorktown Heights, NY.**  
**Mathematical Graphics Programmer.**  
 Developed Fractal Graphics software and imagery with Benoit Mandelbrot.
- Media Include: Virtual Reality  
 Film and Video Animation Production  
 Lenticular and Stereoscopic Installations  
 Music Videos  
 Computer Graphics for Live Theater and Music
- Performance  
 Graphics Software Tools
- Themes: Medical Simulation  
 Artificial Lifeforms and 3d Fractal modeling  
 Character Animation, Avatars, and Virtual Humans

Live Action and computer generated hybrid models and effects  
Image Based Rendering

Software Skills include: **C, UNIX, OPENGL, TCL/TK, PHOTOSHOP, ALIAS, WTK, DIVISION.**

### Experimental Productions:

**Dr. Skitzenheimer:** (1986: video 6 minutes) Brother Peter O' Peter from The Society for Harmonious Complexity and Doctor Skitzenheimer from the Institute for Global DNA Research delve into genetics, beauty, and our relationship with nature.

**One Special Coming Right Up:** (1987: video, 3 minutes) Electrified Love Fest in synthetic 3 1/2 D

**Soapy:** (1989: Stereoscopic film (Dual Strip 35mm) , 1 1/2 minutes) A Thin Film about a Fat Head.

**Replicate:** (1991: video 6 minutes) Dr. Skitzenheimer returns to the lab to manipulate some human genetics... his own! 2D and 3D computer Special effects on live action plus artificial lifeforms.

**Human Bomb** (1993: Colossal Pictures, Liquid Television, 2 min) John Sanborn Director. Story by Mark Leyner. Cerebral morphogenesis in the Wild West

### Music Videos:

**Kraftwerk:** *Musique Non-Stop*, 3D lighting director, animation, effects  
**Two in a Room:** *She's Got Me Going Crazy*, 3D backgrounds

**Robert Palmer:** *Baby Your a Rich Man*. Animation Director

### Art Installations:

**Cyberia:** (March 1993, Virtual Image Gallery, New York) Lenticular Images of 3d Computer Models in collaboration with R. Anthony Munn and Depthography Inc.

**Cornography:** (June 1991 Danceteria, New York) Computer generated erotic images imbedded in "corn cob" viewers. Lenticular Images with Depthography Inc.

**Pepo Efferant:** (August 1991, Gargoyle Mechanique Laboratory, New York) Group Sculpture Show, Mannequin stereo viewers plus corncobs.

**The Fractal Universe Exhibit:** (Lawrence Hall of Science, Berkeley 1988) Video and still artwork

**SIGGRAPH 87 Art Show:** (Los Angeles, 1987) *D is for Dog* (Still Image)

**SIGGRAPH 85 Art Show:** (San Francisco, 1985) *Views I* (Fractal Tree image and 3d stereo pair)

Computer Graphics Projections for Live Theater and Music Performance:

**Zero Boy Cyberpunk Revue:** (January 1992, San Francisco)

**Psychic TV:** (1990, Pyramid Club, New York)

**Protean Forms Collective:** (1985-1989, New York) *SMILE, Visions of Paradise, Fun with the Forbidden, Psychedeli T.V.*

Presented Papers or Lectures:

**Artificial Life Workshop** (Santa Fe, 1990, Los Alamos 1987)

**School of Visual Arts** (New York, 1988)

**New York Academy of Sciences** (New York, 1988)

**Harvard Computer Science Colloquium** (Boston, 1988)

**Computer Museum Lecture Series** (Boston, 1988)

**Boston ACM SIGGRAPH Lecture Series** (Boston, 1987)

**SIGGRAPH 87** (Course on Natural Phenomenon) (Anaheim, 1987)

**Computer Graphics in the Arts and Sciences** (NY SIGGRAPH, 1987)

**International Electronic Image Week** (Keynote Speaker) (Paris, 1987)

**Non-Linear Science Seminar** (UCSC Santa Cruz, 1987)

**SIGGRAPH 86** (Technical Session & Fractals Course Chair) (Dallas, 1986)

**Graphics Interface** (Vancouver, Canada, 1986)

**ACM Seminar Series** (Boston, 1986)

**International Electronic Image Week** (Nice, France, 1986)

**NY SIGGRAPH Lecture Series** (New York, 1986)

Papers and Publications:

**The Artificial Menagerie**

Artificial Life Proceedings Paper, 1988

**Realtime Design and Animation of Fractal Plants and Trees**

SIGGRAPH 86 Proceedings (Paper and Cover Picture)

**Fractals Computers & DNA**

Graphics Interface 86 Proceedings  
**The Genesis Algorithm**  
 The Sciences Magazine, Sept/Oct 1985  
**Artificial Life Portfolio**  
 Omni Magazine, Two Page Photo Spread, Oct 1988

Software Tools:

**CORK:**

Interactive Generalized Cylinder (squeezed-from-a-tube) 3D  
 Modeling System.

**LIX:**

Realtime Interactive 3d Lighting Editor

**REFRACT:**

Realtime Interactive Fractal Tree Generator

**SPLEEN:** (SPLine InbetwEENer)

General Purpose Interpolator, lets one do keyframe  
 inbetweening in any command language

**COLOR:**

Color editor based on slices of a color cube space.

Awards:

**Artists using Technology for Humanity**

**First Place: Arts for Social Change Award, New York 1989**

Dr. Skitzenheimer

**Image du Futur**

**2nd Place: Art Category, Montreal 1988**

One Special Comin Right Up

**Artificial Life Workshop**

**Video Award, Los Alamos 1987**

Dr. Skitzenheimer

Computer Graphics artist Peter Oppenheimer's evolution into 3 dimensional output media emerged from his desire to transcend the boundaries of computer aesthetics. During his 9 years at New York Institute of Technology Computer Graphics lab, Oppenheimer developed many of the tools he used to create his artwork.

He has produced experimental film and video production, still artwork music videos, and computer graphics projections for live theater and music performance.

Major themes in these works include Artificial Lifeforms, 3d Fractal modeling, Character Animation, Live Action and computer generated hybrid models and effects, stereoscopic and lenticular imagery and Computerotica.

Presentations include Colossal Pictures' Liquid Television, Cornography Show at Danceteria Club, Projections for Psychic TV, George Coates Performance Works and Protean Forms Collective Theater Group, and numerous SIGGRAPH Electronic Theater Shows, Technical Sessions, and Art Shows.

Peter Oppenheimer received an MS in Computer Science from Stanford and an AB in Mathematics from Princeton. He has worked at IBM Watson Research Center with Benoit Mandelbrot, Bell Labs, and New York Institute of Technology before arriving at University of Washington Human Interface Technology Lab. At HITL he is a member of the Medical Interfaces Group, researching virtual tissue modeling

for surgical simulation, fractal branching anatomy, and texture mapping for improved fidelity. Other areas of interest include virtual world design, automatic architectural modeling and computer representations of people.