

MARK T. VANDEWETTERING

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Experience

Pixar Animation Studios

1991-2001

Senior software engineer, principally responsible for design, implementation and maintenance of Pixar's Academy Award winning RenderMan software.

Designed shading language architecture for Grail, Pixar's next generation renderer.

Designed and implemented a parallel version of RenderMan using POSIX threads.

Optimized depth-of-field rendering for Pixar's Academy Award winning short film *Geri's Game*.

Coinventor of stochastic level of detail rendering technology used by Industrial Light and Magic to render the Gungan battle sequences in *The Phantom Menace*.

Lighting technical director on Pixar's first feature film, *Toy Story*.

Developed Big Bang animation sequence for the IMAX film *Cosmic Voyage*.

Developed *Glimpse* shader previewing technology for Pixar's *Typestry* product.

Designed and implemented *Opal*, a RenderMan compliant raytracer.

Applied Mathematics Department, Princeton University

1989-1991

Designed and implemented tools for the visualization of fluid simulations. Wrote software to control a frame-by-frame video recorder. Wrote a column about scientific visualization tools for *Pixel*, a magazine dedicated to scientific visualization.

Education

M.S. Computer Science, University of Oregon

1986-1989

Emphasis on computer graphics, programming languages and operating systems. Author of the MTV raytracer, a public domain raytracer.

B.S. Computer Science, Math Minor, University of Oregon

1982-1986

Skills

Excellent C/Unix skills. Good skills in many programming languages including C++, Scheme, and Common LISP. Widely knowledgeable about many aspects of computer graphics including global illumination, sampling, image processing and compositing.

Patents

Stochastic Level of Detail in Computer Animation, Pending.

Interests

As a volunteer I teach telescope making for the Chabot Science Center in Oakland, CA. I am currently working on an introductory book about telescope making. I participated in the restoration of the 20 inch telescope at the Chabot Science center. I am also interested in recreational mathematics, open source software, and cryptography.