

Loren Carpenter
BIO
February 1994

Loren Carpenter, inventor and President of Cinematrix, is a pioneer in the field of computer graphics. He received his formal education in computer science at the University of Washington in Seattle. From 1966 to 1980 he was employed by The Boeing Company in a variety of capacities, primarily software engineering and research. While there, he advanced the state of the art in image synthesis with now standard algorithms for synthesizing images of sculpted surfaces and fractal geometry.

His 1980 film *Vol Libre*, the world's first fractal movie, received much acclaim along with employment possibilities countrywide. He chose Lucasfilm. His fractal technique and others were used in the *Genesis* sequence in *Star Trek II: The Wrath of Khan*. It was such a popular sequence that Paramount used it in most of the other *Star Trek* movies. The Lucasfilm computer division produced sequences for several movies: *Star Trek II: The Wrath of Khan*, *Young Sherlock Holmes*, and *Return of the Jedi*, plus several animated short films.

In 1986, the group spun off to form its own business, Pixar. Loren continues to be Senior Scientist for the company, solving interesting problems and generally improving the state of the art. Pixar is now producing the first completely computer animated feature length motion picture with the support of Disney, a logical step after winning the Academy Award for best animated short for *Tin Toy* in 1989. In 1993, Loren received a Scientific and Technical Academy Award for his fundamental contributions to the motion picture industry through the invention and development of the RenderMan image synthesis software system. RenderMan has been used by, for example, Lucasfilm's ILM to render the dinosaurs in *Jurassic Park*.

Loren and his wife Rachel founded Cinematrix to explore the intersection of computers and art. Currently Cinematrix is focussing on the development of the interactive audience participation technology Loren demonstrated at SIGGRAPH 91 in Las Vegas. It enables thousands of people to simultaneously communicate with a computer, making possible an entire new class of human-computer interaction.