Logoism

The Bridge Between Art and Mathematics

"Archaeology" (18 x 24) – Collection of Mr. and Mrs Ambrose

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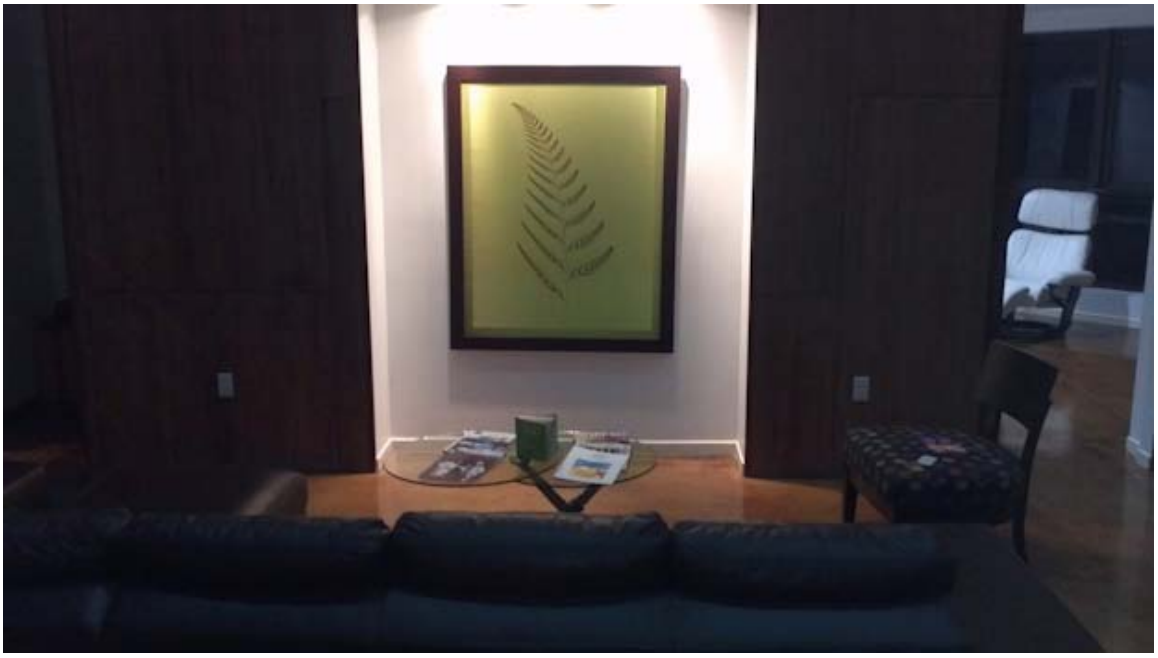

"Peace" (40 x 52) – Collection of Dr. Clarke

History

In the late 1960's, MIT professor Seymour Papert developed a computer programming language called LOGO. It was an educational tool that taught children programming and mathematical concepts. LOGO allowed students to draw pictures by giving commands to a "crayon" that floated above a white "canvas. Given a child's natural curiosity and creativity, the budding young artists quickly learned how to combine commands in order to create interesting pictures.

In 1996, I developed my own version of LOGO and named it "Commander Crayon." The software was just a hobby I tinkered with until – one day years later – I demonstrated it for a co-worker. Impressed, he urged me to explore the software's capabilities. I was an avid art collector at the time, and I constantly complained about the high cost of original pieces. My co-worker suggested that I use Commander Crayon to create my own "art" and save myself money.

At that moment, an artist was born.

The past eight years I have worked to transform Commander Crayon into an artist tool. In the process, I have created an art form. My work is an attempt to bridge the gap between mathematics and art. In my prints, I create natural-looking textures and shadings that are designed to elicit an emotional response from the viewer. I call this branch of art "Logoism," in recognition of Professor Papert's LOGO programming language. By creating a set of instructions that move an invisible crayon on the screen, I create images that could not have been developed with traditional tools.

Medium

All of my images are *giclees*, produced using a high-resolution inkjet printer to spray special long-lasting ink on canvas or paper to produce vivid images. The resolution and quality of the giclee process is unmatched by standard inkjet printers. The longevity of the inks is superior to lithographs and comparable to serigraphs.

Artist Statement

British physicist Paul Dirac once said, "God is a mathematician." That statement often comes to mind as I construct my art. God created a natural world that is beautiful. Scientists have developed equations to model the natural processes that create beauty in our world. If a link exists between the processes used to create a beautiful object and mathematics, one can reasonably conclude that the object's beauty itself has a mathematical underpinning. My art is an attempt to find that connection between beauty and math.

None of my images have been modified by hand. The images are the graphical representations of written programs consisting of mathematical equations and instructions. There are an infinite number of equations and colors from which to choose. To use music analogy, I am the composer (programmer) who writes the musical score (the program) that the band plays (Commander Crayon) to produce the music (picture) the audience hears (sees). I have done my job when you, the viewer, cannot tell and do not care whether an image was drawn by human hands or created on a computer. You just love it because it is beautiful.

Background

I graduated from MIT with a bachelor's degree in electrical engineering in 1990, and I did my graduate studies at Stanford University. I've worked as a contractor and consultant for several companies, including Apple Computer, AT&T Bell Laboratories, IBM, 3DO and Silicon Graphics. I am a self-taught artist who currently resides in Washington DC.

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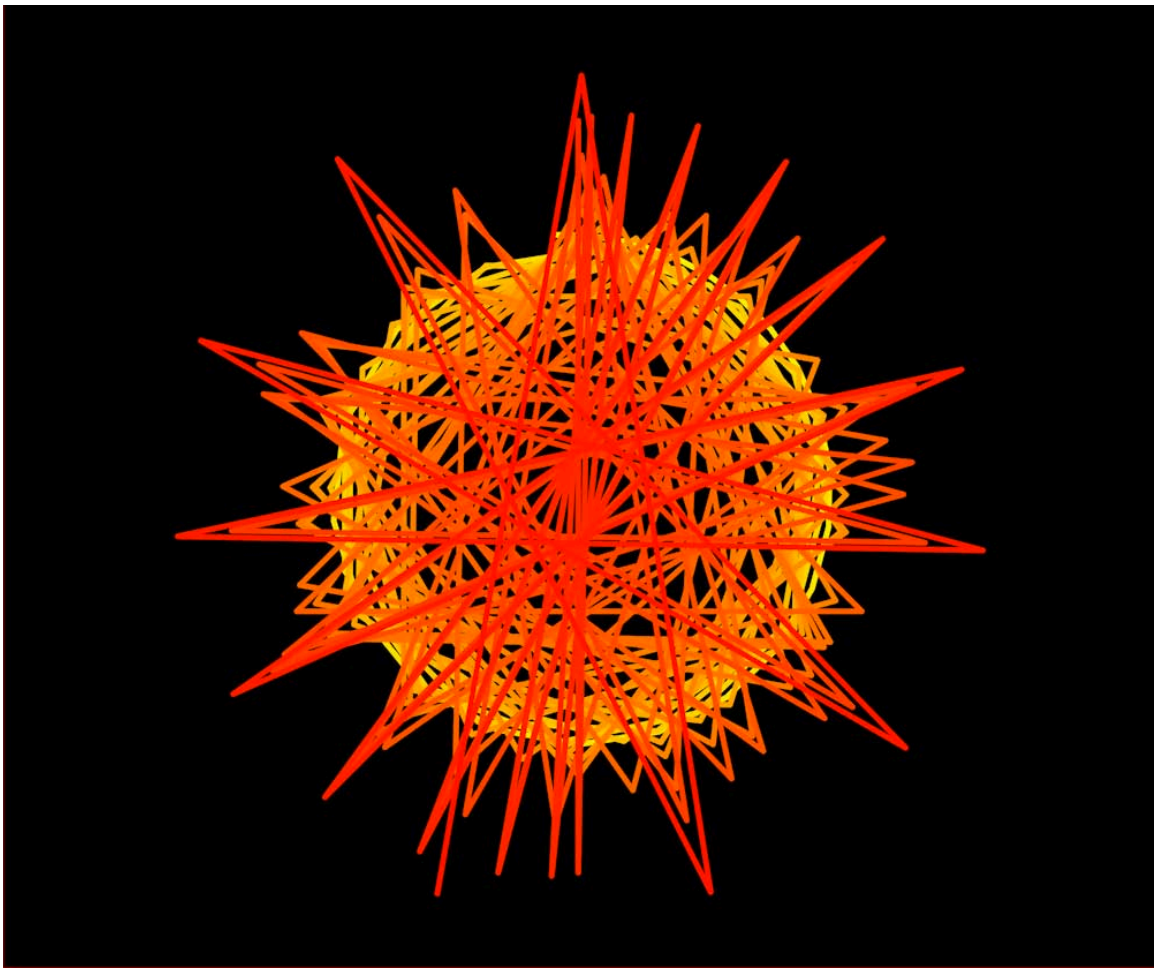
Ball of Yarn

An Example



This image is one of the first images drawn with Commander Crayon. The image looks like a"ball of yarn." The algorithm (program) used to create this image can be expressed in four commands. The program tells the crayon to draw 200 lines and to execute 200 turns. Each line should be one unit longer than the previous line. After each line is drawn, the crayon's direction should increased by the number of lines drawn. This process, repeated 200 times, creates the "ball of yarn." Note that only four instructions were needed to create this complicated image.

Algorithm

1.Repeat 200 times

2. Draw Line
   length = 1x + 0 [1 , 1 , 0]

3. Turn Right
   angle = 1x + 0 [1 , 1 , 0]

4. End Repeat

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