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The Art and Science of Light Painting

Abstract

A short overview of the making of light painting portraits explained by the artist.

Keywords

photography, harmonic light, exposure, light, light painting

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The Art and Science of Light Painting

Reid Godshaw



Light painting is the act of drawing with light during a long exposure, permanently solidifying any light during the exposure into a compression of time and space. Combining every movement, every



ray of light, and every object still enough to absorb that light into a single frame of long-exposure art. The overlap of art and science in light painting is plentiful, involving a vast array of aspects: color math, timing movements, exposure math, photography, performance art, interactive experiential art, layering, and so many more. In my opinion it is as much a science as it is an art.



The word photography means "painting with light" yet most people only associate photography with the act of the exposure painting itself onto the canvas (such as Film or Digital sensor) after the photographer frames the shot, alters settings, and clicks the shutter at just that right moment to get a beautiful freeze frame of an instant of reality.

"Light painting" is the act of etching an image onto a sensor, purposefully dusting away the darkness to reveal the light underneath. "Computational Light Painting" (A term coined by Steve Mann, inventor of the first computational light painting tools ever created) is the act of using a computer controlled light to create a light painting. This can either be artistic or even scientific in nature. For instance some of Steve's first computational light painting tools were created to visually show real radio waves that were invisible to the human eye by using sensors to detect the waves and play them back into visible reality using a programmed strip of lights (<http://wearcam.org/swim/>)



Most of my images are computational light paintings, using the help of high tech Light Emitting Diode (LED) wands, lasers, among many other tools controlled by computers. I use technology to create multi-layered cosmic looking images that seem to others like something that simply could

not be a documentation of real life events. The images become an enigma. Some of my favorite images are a type of light painting I have coined "light painting inception" where the painter is painting with a computational light painting tool that itself is playing back a previously captured light painting. Meaning that I'm painting with light paintings as my trails, using images I captured long ago as brushes in my future images, compressing light and art from long ago into time captured today. I continue to evolve in my craft of playing with light.