

CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Name(s)

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Project Number

S0319

Project Title

Drawing Optimization Technology (DOT)

Abstract

Objectives/Goals

The objective of DOT is to facilitate the process of stippling and pointillism, but also to prevent as well as aid those of have ailments such as arthritis that are easily caused by the repetitive motion of the traditional method of this art form.

Methods/Materials

LuzBot Taz 3D Printer, SolidWorks CAD Software, Solder and Soldering Iron, AA Battery, Pen Cartridge, and Motor.

Results

The amount of dots I was able to lay on the paper using DOT was exponentially greater than manually laying dots down by hand. Additionally, the ergonomic shape of my pen made it more comfortable for users and after using it they had less stress within their hand.

Conclusions/Discussion

The mechanics behind DOT prove to increase the efficiency of stippling and pointillism while the ergonomic shape makes for a much more comfortable and healthier way of drawing. I learned just how much the manual method of this art could be strenuous on the hand. My product helps those who have ailments such as arthritis to perform this form of art but also prevents such ailments due to the automation and ergonomic factors.

Summary Statement

DOT facilitates the process of pointillism, but also prevents as well as aids those of have ailments such as arthritis that are easily caused by the repetitive motion of the traditional method of this art form.

Help Received

None, I designed, built, and performs prototype testing myself.