Motivation

Real time display tables are prohibitively expensive for the average person with a personal computer. Persistence of vision is an artful effect which has not been used in a real time display. In this project, we explore its potential. We decided to create a touch screen display which could receive images from a personal computer.

Architecture

Two microprocessors double buffer the image: while one sends data to the LEDs, the other receives data for the next image.

Bluetooth module transmits data between the spinning platter and the host computer.

Platter is powered by copper brushes rubbing against the spinning shaft. Persistence of vision creates an image onscreen.

Development Environment

525nm Oval 4mm LEDs
Serial LED Drivers

2 MCU ARM Cortex M3s
Bluetooth UART controller module

AME 12V Blower Motor

Results

We can display images using persistence of vision. Power is transmitted through the drive shaft. A row of 16 LEDs spin on the platter, displying images on command. We created a piece of interactive art rather than a workspace planning tool.