Introduction

Persistence of vision is a phenomenon in which an image is active on the retina for approximately one twenty-fifth of a second. This effect is commonly used with movies by flashing a series of static images at a rapid rate to produce the illusion of motion. Our group, *Advanced Rotational Display with an Arc (ARDVARC)*, with the support of *Camosun College*, is taking advantage of persistence of vision to produce an exciting new advertising medium.
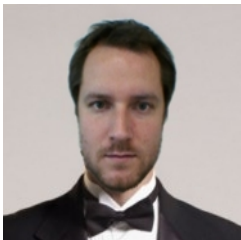
Project

Our ambitious 11 week project involves rotating 128 LEDs attached to one-half of the circumference of a hoop. At a rate of 30 hertz, the LEDs will create the appearance of a holographic globe. When completed, our globe will show a series of preprogrammed images using approximately 4000 different colours. Companies will see the potential for our globe to attract the attention of crowds at expos, luxury hotels, or major music and theatre shows.

Team Members

David Spinks

David has a strong interest in analog electronic theory and digital design. His goals for the project include designing the logic circuitry that will drive a pulse-width modulated signal to the LEDs, drawing the printed circuit board diagrams, and assisting Matt with the development of a wireless transceiver for transferring data to the globe.

Matt Tarasoff

Matt enjoys developing software and mechanical design. His objectives for this project include implementing a wireless interface to the globe, designing image manipulation software, populating the printed circuit boards, and working alongside the *Camosun College Mechanical Engineering Department* to construct the spinning armature.

Justin Temmel

Specializing in microcontroller programming, Justin has been tasked with writing the imaging code. This significant undertaking requires him to design software that will divide a *bitmap* image into eight pieces and then produce 4-bit binary colour codes for the logic circuitry.

Conclusion

Our persistence of vision project is an exciting venture for both our group and *Camosun College*. We'd like to thank the college for their financial support and look forward to producing an eye catching introduction at future *Camosun* technology fairs.