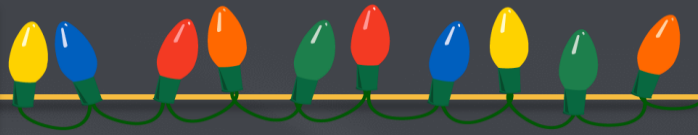
Christmas Lights Animation

By Interactive Lighting

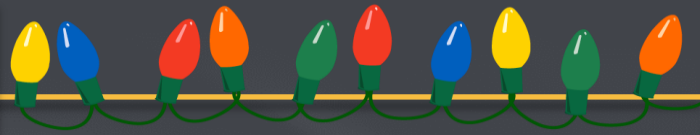
By:
Austin Wentz and Jordan Doell



Summary of project:

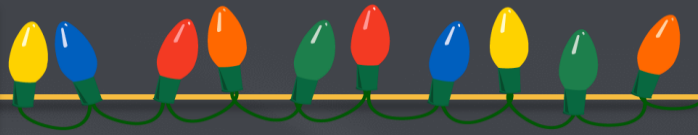
Sponsor - L3 Communications

Description - Christmas lights synced to music and controlled via an iPhone



Analysis:

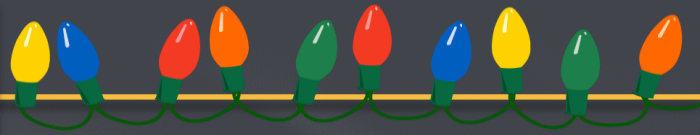
1. Use SSR's to power lights on and off
2. Raspberry Pi running Linux, connect to a separate controller
3. Connect controller to SSR's
4. Develop an iPhone app that can connect to the system from any wireless location



1. Analysis
2. Sprints
3. Problems/Issues

Sprint 1

- *Researched project, purchased items, and designed our approach*
- *No tangible prototypes in this sprint*



1. Analysis
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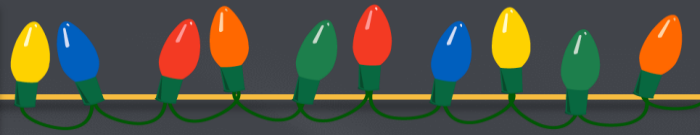
Sprint 2

1. *Assembled and soldered controller and SSR's*
2. *Developed a quick GUI for the iOS app*



1. Analysis
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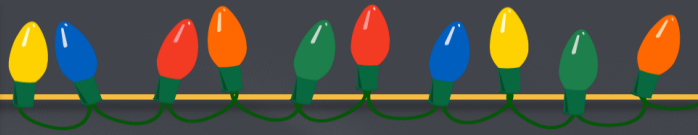
Sprint 3

1. *Purchased a display case for embedded components*
2. *Successfully made lights blink according to predefined sequence*
3. *Continued learning Objective-C and development of iOS app*



Problems/Issues:

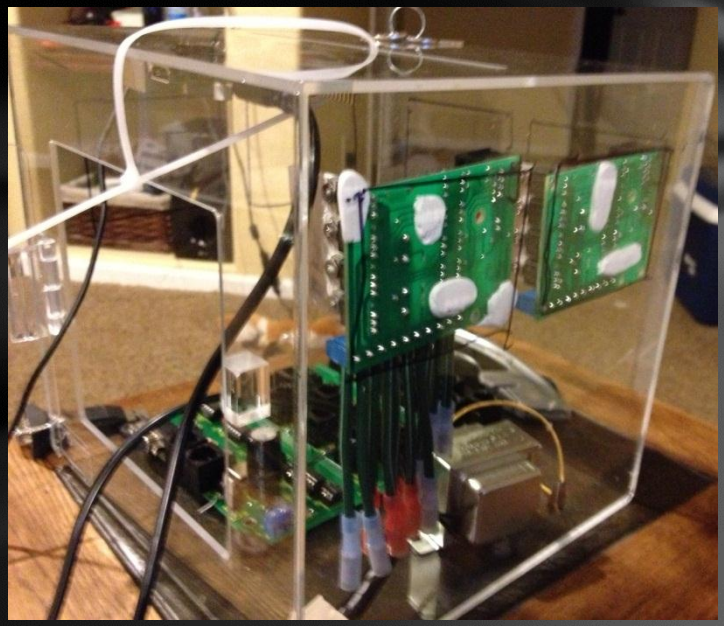
1. *Designing a box to hold SSR's and Raspberry Pi*
   - Solved by buying a clear box online
2. *Objective-C*

1. The Box
2. iPhone App
3. GUI

Display Case

- *Using an 8” acrylic ballot box*

Display Case In Progress



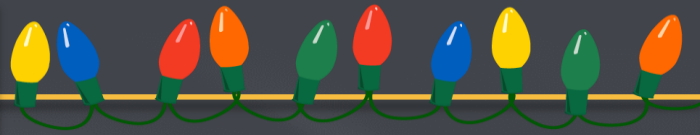
Controller In Action

Prototypes

1. The Box
2. iPhone App
3. GUI

Lighting Demo

1. *Insert Video Here*



iPhone App

Framework:

Part of a Remote Home Mobile Service

1. *Allows users to register and connect devices at home*
2. *A DDNS service is a registry of all home stations and devices*
3. *A home station has a server that is responsible for controlling each device*
4. *The home station tells which devices are online and lets you contact the lighting system*

1. The Box
2. iPhone App
3. GUI

iPhone App

GUI:

Time for a Demo!

Remaining Backlog

1. *Program & configure Raspberry Pi to act as midi sequencer for lights*
2. *Develop & implement iOS app to interface with controller to control lights & music*

1. Remaining Backlog
2. Revised Goals & Deliverables

Revised Goals & Deliverables

Questions?