Christmas Lights Animation

By Interactive Lighting

By:
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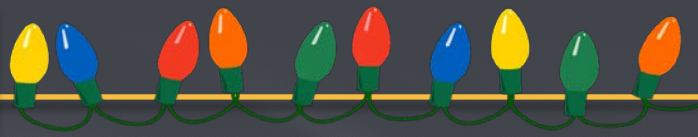
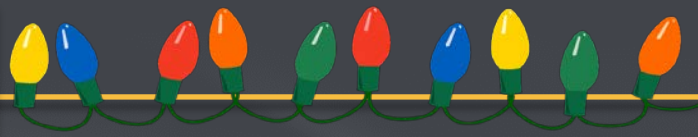


Summary of project:

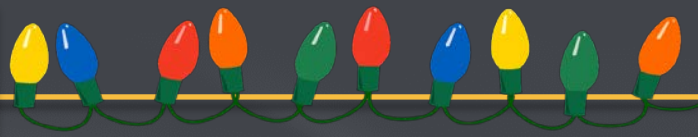
Sponsor - L3 Communications

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



Analysis:

1. Use SSR's to power lights on and off
2. Laptop running XBMC, connected 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

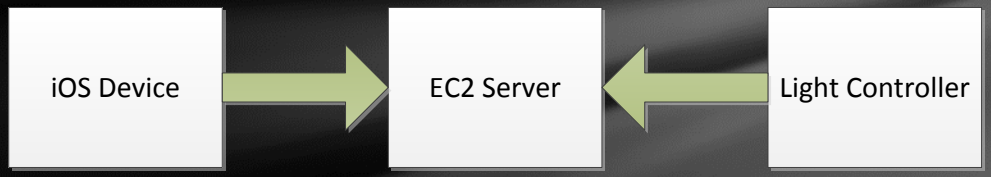


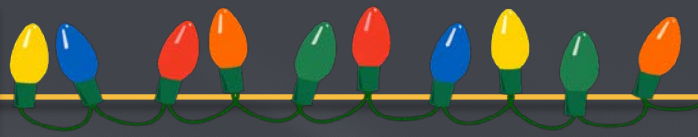
Sprint 4:

1. Configure EC2 server to act as middleman between iPhone app and Christmas lights
2. Develop RESTful web service to allow iPhone to send commands and Raspberry Pi to get commands
3. Begin connecting iOS framework to UI

“Middleman” Server

- *Amazon EC2 instance running Ubuntu*
- *Mobile device sends notifications or requests to the EC2 server.*
- *Computer connected to lighting controller queries EC2 instance for new information.*
- *Prevents having any issues with firewalls, network configuration, etc.*





1. Analysis
2. Sprints
3. Live Demo

1. Sprint 4
2. Sprint 5
3. Backlog

Sprint 5:

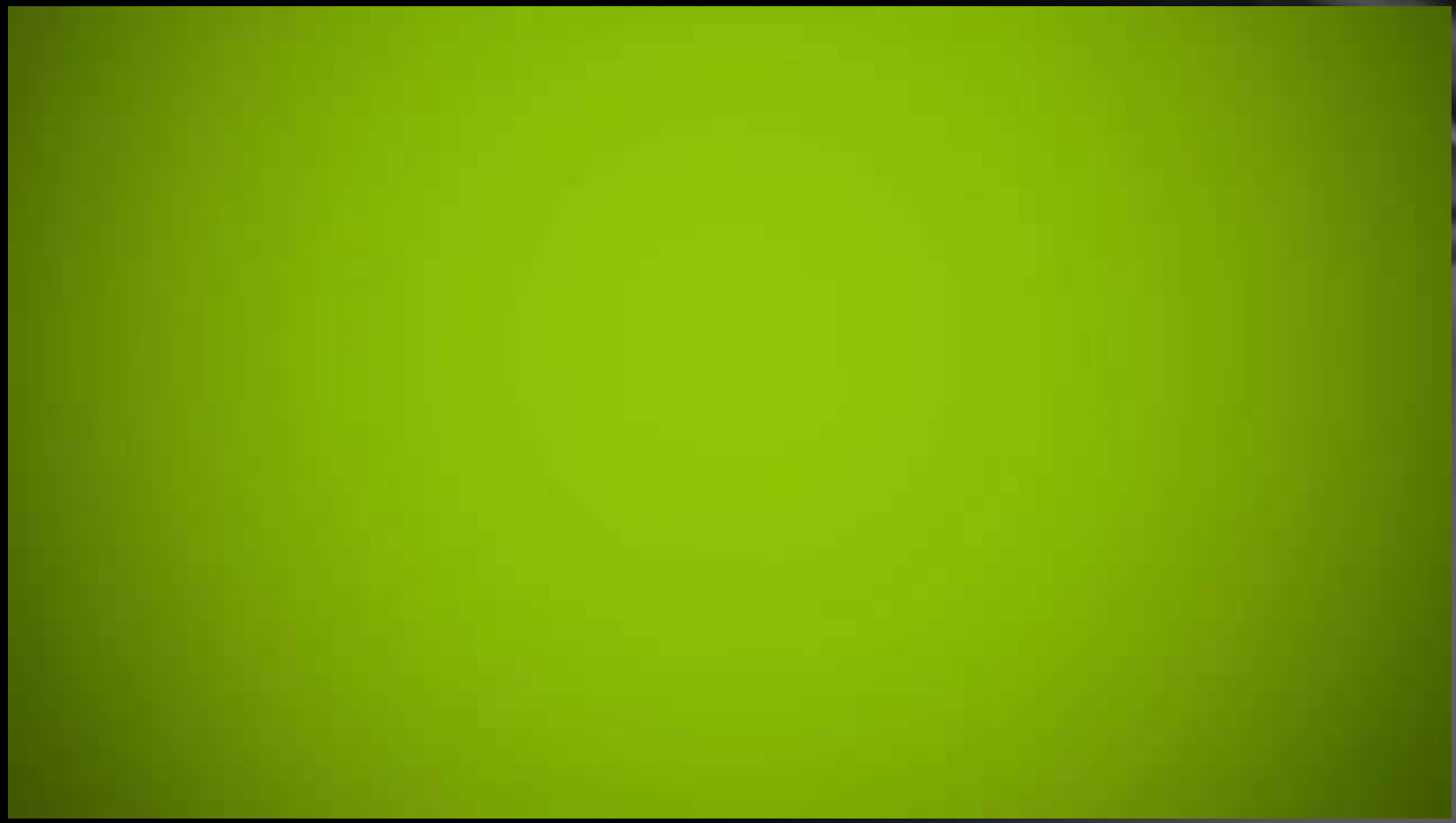
1. Implement XBMC plugin for client
2. Refine RESTful web service on EC2 server
3. Reworked app interface
4. Send JSON from iPhone to server

Why XBMC?

- Award-winning open source (GPL) media center software.
- Works on Linux, OSX, & Windows
- Can be installed on Raspberry Pi
- Designed for network playback and supports almost all audio and video formats
- Includes a built-in Python interpreter which allows users to develop add-ons

- www.xbmc.org for more information about XBMC

XBMC Demonstration



Our XBMC Add-on

- XBMC already has all the media playback functionality we need
- Created an add-on which adds ability to control lights manually or at the song level.

Backlog:

1. Test web service
2. Test client code
3. Test iOS App

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1. Analysis
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Live Demo!

Questions?