



Progress Report

The Dot Light Canvas

Project Team: Zachary Cochrane
Dana Sy
Aman Shoker
Bhavit Sharma

Contact Person: Zachary Cochrane
zwc@sfu.ca

Submitted To: Dr. Andrew Rawicz
Professor Steve Whitmore
Faculty of Applied Sciences
Simon Fraser University

Date Issued: November 27th, 2015

Revision No: 1.0

Introduction

The Dot Light Canvas is an electronic painting canvas that uses Light Emitting Diodes (LEDs) for illumination. The canvas consists of an infrared touchscreen mounted over a cloth painting canvas that will overlay an LED array. Users will be able to 'paint with light' by applying a smart stylus to the IR touchscreen, activating the LEDs behind it to illuminate the canvas in a variety of user specified colors. This document describes our progress on the Dot Light Canvas prototype model by covering the project schedule, financial situation, and prototype progress.

Funding

The Canvas prototype was originally estimated to cost a total of \$1130.

Total Expenditures to date: \$1128.47

Estimated Future Expenditures: \$100.00

Estimated Budget Difference: \$98.47

For funding, ArtTech received \$400.00 from the ESSEF Grant, so while the team has stayed reasonably close to the estimated budget, we are currently 728.47 out of pocket, with additional costs incoming for the canvas chassis. While the project has gone over budget, it remains within a reasonable 10% margin of the initial projected cost.

Scheduling

The Dot Light Canvas prototype was originally scheduled a thirteen week development period ending on December 18th, 2015. This date is still in effect and it is expected that the Art Tech team will have a completed prototype by this date. This leaves the team three days to run final tests as well as prepare for the project demo, currently scheduled for December 21st. Additional scheduling details concerning remaining project actions will be given in the progress section below.

Progress

As of November 27th, the prototype has made significant progress. Table 1 describes the prototype's current progress. Milestones highlighted in green are ongoing, and items highlighted in red are yet to be addressed. Completion dates for each of the highlighted items estimate when work on that specific item will conclude.

Table 1: Project Milestones

System	Milestone	Completion Status
Dot Light Canvas	Design of Canvas (Physical / Electrical)	Completed
Dot Light Canvas	Construction of Canvas Circuit	Completed
Dot Light Canvas	Construction of Canvas Chassis	Dec 16 th – 18 th
Dot Light Canvas	IR Touchscreen Integration	Completed
Dot Light Canvas	Draw Mode Functionality	Completed
Dot Light Canvas	Erase Mode Functionality	Completed
Dot Light Canvas	Color Select Mode Functionality	Completed
Dot Light Canvas	Clear Screen Mode Functionality	Completed
Dot Light Canvas	Canvas Unit Testing and Debugging	Ongoing – Dec 18 th
Smart Stylus	Design of Smart Stylus (Physical / Electrical)	Completed
Smart Stylus	Construction of Smart Stylus Circuit	Completed
Smart Stylus	Construction of Smart Stylus Chassis	Ongoing – Dec 4 th
Smart Stylus	Force Sensitive Resistor Integration	Completed
Smart Stylus	Mode Select Functionality	Completed
Smart Stylus	Stylus Unit Testing and Debugging	Ongoing – Dec 18 th
Full System	Bluetooth Integration of Stylus and LED Array	Dec 12 th – 16 th
Full System	System Testing and Debugging	Dec 16 th – 20 th
Stretch Goals	Color Mixing on LED Array	Completed
Stretch Goals	Saving of Current Painting	Ongoing – Dec 4 th

The milestones above are consistent with our estimated project timetable. We do not expect there to be any significant problems or setbacks in the final weeks of the prototype's creation.

Action Items

Currently, the items highlighted in Table 2 represent the know action items for the Dot Light Canvas team that pertain to the prototype. ArtTech also plans to hold a team meeting by December 14th and another on December 20th to plan, discuss and work on the presentation and post mortem.

Conclusion

The Dot Light Canvas is nearing the final stages of development. Progress is going well and is consistent with the timetables and deadlines outlined in previous ArtTech Documents. The project has gone slightly over budget, but remains within 10% of the original estimated cost. Overall ArtTech expects that the Dot Light Canvas will reach completion by the due date without any significant problems or delays.