

EE/Cpre 492 - sdmay21-1

Interactive Secure Headset

Week 1 Spring Semester Report

Jan 25th-Feb 8th

Client: Cornerstone Strategies, LLC

Faculty Advisor: Dr. Rover

Team Members:

Robert Barton - *Meeting Facilitator*

Morgan Ambourn - *Meeting Scribe*

Nathan Andersen - *Report Manager*

Ehren Fox - *Chief Software Engineer*

Asa Pauls - *Chief Electrical Engineer*

Zach Johnson - *Test Engineer*

Summary of Past 2 Weeks:

Over the past two weeks, we started working on our project after coming back from winter break. We have been working on getting the raspberry pi that we ordered over break running, and hooking up the screens to it through the GPIO pins. In addition we've been looking into locking the pi onto one application to prevent the user from accessing anything else. Finally we've been working on looking into specific parts to order for the controls of the device, and how to hook them up to the raspberry pi.

Past 2 Week Accomplishments:

- Rob
 - Found out Kiosk mode that locks the pi into one application
 - Figured out network connection issue
 - Uses a downloaded html page to select network and testing service
 - Bash script that functions for selecting
- Asa
 - Ordered parts (Pis, screens, power)
 - Screen connected to Pi and displaying an image
 - Simple images
- Morgan
 - Created visual for splash page
 - Created expense report, and filling in current expenses
- Ehren
 - Research into kiosk mode and headless mode setup for Pi

- Brainstormed with Rob a bit on approaches to solving network
- Nathan
 - Looked into controls
 - Looked online for different types of controls that we can order
 - Buttons
 - 5-way navigation stick
 - Looked into how to wire them up to the pi
 - Looked into how to program an input into a keyboard press
 - Done by others, needs to be looked into further
- Zach
 - Requested access to a server for hosting Tao

Pending Issues:

- Creating a place to track tasks
 - Trello is an option
 - Look into Git?
- Controls
 - Various different options
- Looking at price
 - Price is a key requirement to this device (students need to purchase this device)
 - Can we start creating a ballpark price for the product?

Individual Contributions:

Team Member	Contributions	Hours Worked	Total Hours (Sem. 2)
Robert Barton	Researched Kiosk mode and designed shell script to make kiosk mode work	6	6
Morgan Ambourn	Created budget report, brainstorming for button controls, presentation prep, created potential visual for UI	6	6
Nathan Andersen	Looked into controls, scouting for parts	6	6
Ehren Fox	Looked into kiosk and headless mode for pi	6	6
Asa Pauls	Ordering additional hardware/Working on screens	6	6
Zach Johnson	Looked into getting a server to host Tao	3	3

Plan for Upcoming 2 Weeks:

- Zach
 - Testing Rob's Bash script
 - Email about getting a server
 - Get TAO running on a server
 - Meeting with Rachel's clients
- Morgan
 - More research into controls (type of buttons, converting button input to keyboard strokes)
 - Time limitations for wearing a vr headset
 - Estimate of product price (with bulk factored in)
- Nathan
 - Setup github for tasks
 - Look into more potential controls, (rachel wanting touch options)
- Asa
 - Finish connecting single screens to the Pi, Screen displays desktop rather than an image
 - Connect both screens through a GPIO extender
- Ehren
 - Get new Pi configured for headless mode and kiosk mode so that we can move forward with Rob's idea for our chromium browser and splash screen for network setup
 - Updated diagrams if they'd be helpful