

EE/Cpre 492 - sdmay21-1

Interactive Secure Headset

3rd Spring Semester Report

Feb 22th-March 1th

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 Week:

This report only covers a week of progress instead of the other reports noting 2 weeks of progress. In the past week, we have progressed with working on the initial landing page. Now you can input the network credentials, then be stored in the correct format, and will boot you to the next page. Controls have been ordered and will be here shortly. We went with ordering a few different options because of the client's push for certain types of controls, such as a touchpad and on the headset controls. We plan on testing out these controls on criteria that we're writing out. Screens have been set up to mirror off of eachother. Some issues arose with input delay, so that is currently being investigated. Zach met with our client and a contact of theirs to discuss getting some test questions that we can use to generate some tests to test our device with. Additional work was put into getting the TAO server online, issues arose due to it not using latest libraries. Finally a quote got back from a manufacturer about the cost of 3D printing a shell for the headset. Cost is expected to be \$170. This seems a bit much, and a breakdown of that cost has been requested.

Past 2 Week Accomplishments:

- Rob
 - NodeJS now serves the webpages and records responses.
- Asa
 - Screens both operate off the same git library so current screens can operate after minor changes.
- Morgan
 - Ideas for comparison/testing of control types
- Ehren

- Got quote on 3D printing
- Nathan
 - Ordered parts for controls
 - A lot of our listed parts were unavailable, had to track down suitable replacements for similar prices
- Zach
 - Worked on Tao installation
 - Met with Rachel + testing industry people about acquiring mock data for testing. They will be giving us some testing content in Word document form.

Pending Issues:

- Rob
 - Linux integration
 - JS connection test
- Asa
 - Slow update on the screens from the Pi, current plan is to compare against similar HDMI screens meanwhile trying to speed up refresh by changing parameters in the git library.
- Nathan
 - Forgot to bring back the breadboard and wires to start working on the 5-way switch. Working with Asa to borrow materials to work on that
- Zach
 - Tao CE uses many old/deprecated software libraries, and sometimes is not compatible with new ones. It will require a lot of workarounds to get it running.

Individual Contributions:

Team Member	Contributions	Hours Worked	Total Hours (Sem. 2)
Robert Barton	NodeJS development	8	26
Morgan Ambourn	Ideas for comparison/testing of control types	2	14
Nathan Andersen	Found part replacements, Ordered control parts	5	17
Ehren Fox	Submitted file for quote for 3D printing		14
Asa Pauls	Got screens working of the same library	4	16
Zach Johnson	Deploying Tao, Meeting with testing people	6	14

Plan for Upcoming 2 Weeks:

- Rob
 - JS internet connection test
 - Begin work on tiles for different website selection
- Zach
 - Continue working on Tao server
 - Build out some testing content (if the industry contacts supply me with data in time)
- Morgan
 - Prep for upcoming presentation on the 18th
 - Get linux network configuration files working on raspberry pi and reboot on network config submission
- Nathan
 - Work on setting up the controls
 - Work on programing the 5 way switch
 - Test out the
- Asa
 - Further testing on improving screen refresh and ability to display information
- Ehren
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