**Statement Of Work**

Rob Colleran, Eric Hochendoner, Andrew Panzl

**Table Of Contents**

Introduction/Background…………………………………………………………………………...2

Scope Of Work……………………………………………………………………………………...

2

Deliverables………………………………………………………………………………………...3

Working Period………………………………………………………………………………….......

4

Milestones…………………………………………………………………………………………..4

Communications……………………………………………………………………………………4

Client Feedback……………………………………………………………………………………...

5

Acceptance Criteria………………………………………………………………………………….

5

**Introduction/Background**

The task for this project is to develop software that can interface with a hardware device consisting of a raspberry pi that controls various components. These components could include a gyroscope, temperature sensor, motors, or other peripherals. This hardware will not always be available for testing and its exact specifications may be changed by the POC over time, therefore hardware will need to be simulated during development. The software to be developed should include a web server/client interface to communicate with the software controlling the hardware, lower level software for the pi that controls the hardware, and a driver to simulate the hardware. As part of the server/client interface, networking code will be needed to handle communication over the bus between the server and client and handle problems such as communication errors and race conditions. In addition to the software, documentation will need to be done. This will include a system design document, system requirement specification, and a working agreement. It will also be necessary to do quality assurance (QA) work.

**Scope Of Work**

The scope for this project includes all development, testing, and documentation for the web server/client interface to communicate with the software controlling the hardware, the lower level software for the pi that controls the hardware, the driver to simulate the hardware, and the networking code to handle communication between the server and client. It does not include any development or work on the hardware itself.

**Deliverables**

The following is a list of tasks which will result in successful completion of this project:

Kickoff:

* Dev team will work with the POC to understand requirements of the project and develop documentation

Design Phase:

* Dev team will make detailed design decisions, make a working agreement, research the required hardware/libraries, and write skeleton code

Build Phase:

* Dev team will complete all coding of hardware drivers, and enough coding of an interface and communication software that testing on hardware is possible
* Hardware simulator will also be developed during this period to prepare for hardware testing
* All code will be thoroughly tested and a working beta will be available in the master branch of the repository
* A testing report will be compiled
* Team will meet weekly to give status updates to each other and to the POC

Implementation Phase:

* Software will be implemented on the pi and hardware-specific details will be worked out, including inverting of the wifi adapter etc
* The interface will be updated to handle hardware-specific details that the simulator couldn't provide, such as certain alerts etc
* Testing will be done in conjunction with the hardware

Finalization Phase:

* A user manual will be created
* Requirements checklist will be completed
* All previous documents will be updated to reflect the final status of the project
* Final report detailing development will be written

**Working Period**

Work on this project will take place from Jan 19th to April 20th 2018, with meetings every week and sprints every 2 weeks.

**Milestones**

First meeting and requirements discussion with POC Jan 25th

SRS, SDD, SOW drafts complete Feb 8th

Working agreement and project design done Feb 15th

Working driver code developed and working version in master branch of repo March 1st

Midterm update written March 2nd

Interface and communication code developed March 8th

Working beta in master branch of repo March 15th

Implementation and testing on hardware done March 29th

Completely functional version of software and user manual completed April 12th

Final project report and presentation completed April 20th

**Communications**

Slack will be used to communicate about development and with the POC. There will also be weekly in-person meetings with the POC to learn more about the system, present progress, get feedback, and update requirements. During development, every other meeting (every two weeks) can double as a sprint, where the dev team can discuss what they’ve accomplished, what they’re having difficulty with, and (if necessary) make adjustments to milestones for the future.

**Client Feedback**

TODO

**Acceptance Criteria**

The POC will be in charge of declaring if work is acceptable or not. At each meeting, the documentation and software in the master branch will be reviewed and he will declare if scheduled requirements and scope of work have been met.