

Weekly Status Report 8

Quadcopter Cameraman

sdmay19-42

October 30 - November 5

Aamid Ahabab (Lead Engineer) & Client

Zhengdao Wang (Team Advisor)

Alex Nicklaus (Lead Test Engineer)

Isaac Holtkamp (Web Manager)

Nate Allen (Report Manager)

Luke Rohl (Meeting Facilitator)

This week's accomplishments

Summary

- Nate
 - Created animation for testing tracking software
 - Attempted a setup guide of 'face_recognition' package on windows (unsuccessful)
 - Got face_recognition working on a different laptop
 - Working on getting python environment on pi
- Luke
 - Pair coding w/ Isaach working on Pi and Android bluetooth sockets.
 - Successfully paired Pi and Android phone
 - Create skeletal code for Android DB
- Isaac
 - Pair coding w/ Luke working on Pi and Android bluetooth sockets
 - Paired Pi and Android phone and managed base communication
 - Added and updated functionality
- Alex
 - Looked into ChibiOS, an Open Source Real Time Operating System
 - Found a tutorial that explains getting started and other basics for the OS
 - ChibiOS is still a developing OS, it has some flaws, and are it has some missing features that most operations systems already have figured out
 - Despite its flaws I believe that it is the better option for the OS as we need Real Time Operation which Raspbian does not provide
 - Mini Quad is still broken. Upon disassembly, I discovered that while attempting to replace a rotor the operator (who will remain unnamed) ripped the motor out of place and (cleanly) severed the wires attaching the motor to the board. They are going to need to soldered back together

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Planned to accomplish next week

- Nate
 - Get python environment setup on pi
 - Get facial recognition to detect a face
 - Get facial recognition to recognize a face
- Luke
 - Fill Android DB skeletal code
 - Work through roadblock w/ Nate
- Alex
 - Build the drone (schedules didn't meet up and we were not able to get together last week)
 - See if I can get a build of ChibiOS built, put onto a Micro-USB card, and flashed onto our Pi
 - Discovered that we will need additional parts for the drone such as a Micro USB to USB cord, Micro SD card (was not included with the Pi), a USB Bluetooth dongle, and maybe a power 5v to 3.3v power converter

Roadblocks

- Trouble getting environments working on windows and pi
- ChbiOS will require us to build the image using a cross compiler
 - Tutorial goes into the process of doing this and uploading it to the Pi; even recommends a cross compiler for Mac, Windows, and some Linux distributions
- ChibiOS doesn't have a shutdown API
 - The developer's site goes into how to write C code to perform shut down and restart operations

Hours Spend

Team member	Hours This Week	Hours Total
Nate Allen	4	47
Alex Nicklaus	4	38
Luke Rohl	6	40

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Mir Ahabab	--	24.5
Isaac	5	32