

# Weekly Status Report 2

9/10/2018 – 9/17/18

Team 42 – Quadcopter Cameraman  
Nate Allen - Report Manager  
MirAhbab - Chief Engineer  
Isaac Holtkamp - Test Engineer  
Alex Nicklaus - Test Engineer  
Luke Rohl - Meeting Facilitator/Scribe  
Faculty Advisor -Zhengdao Wang

---

## *This week's accomplishments*

- *Designate Webmaster*
  - *Isaac*
- *Determine Parameters*
  - *# of dancers : 2*
  - *Height from ground : 3meters*
  - *Distance from Dancers : 3meters*
  - *Flight Time: 5 minutes*
  - *Response time: < 1second*
  - *Angle from cameraman: 30-60 degrees?*
  - *Response speed: based on distance from dancer*
- *Set Milestones*
  - *Drone built*
    - *This means that no more wiring, or hardware updates. Software updates from this point on; excluding camera and camera mount*
  - *Base App*
    - *Android app built and sending commands to pi*
  - *Autonomous drone flight*
    - *Drone is able to receive commands from off device transmitter.*
  - *Target Tracking*
    - *Image recognition can receive stream input and track moving target. If face isn't within frame; track based on most recent human seen with that face.*
    - *Time of flight sensor*
  - *Drone able to follow target*
    - *Drone is able to follow target both in rotation, and distance*
  - *Drone able to track both dancers (final)*
    - *Both dancers should be kept in frame*
- *Documentation (Nate)*
  - *Planned out foundations for documentation to steer team toward setting and accomplishing goals*
    - *Hardware*
    - *Software*
    - *Android App*

- *Project whole*
- *Hardware (Alex and Aamid)*
  - *Determine hardware components to use for drone. Ensure compatibility*
  - *Pi will have its own power source*
  - *Opted to use a low KV rating motor so as to enable stable flight*
  - *Opted to use the largest two blade rotors that can be used on the motors for the drone with mild pitch for stable flight and minimal noise*
  - *Established total Drone size at 450mm on the diagonal (one motor to the one diagonally across*
  - *Set minimum full thrust requirements to 3200 g*

## *Planned to accomplish next week*

- *Create a dependency graph (Nate)*
- *Request funds to meet hardware requirements. (Aamid)*
- *Project Plan (Team)*
- *Application Communication Protocol (Luke and Isaac)*
- *Image recognition (Luke)*
- *Create templates and skeletons for documents to be filled in by individuals responsible for the corresponding component (Nate)*

## Roadblocks

- All is well

Hours Spend

<b>Team member</b>	<b>Hours This Week</b>	<b>Hours Total</b>
Nate Allen	4	10
Alex Nicklaus	11	17
Luke Rohl	5	11
Mir Ahbab	6	12
Isaac Holtkamp	4	9