CprE 388: Final Project Proposal

List Group Members:
Cal Fisher
Kaitlynn Kruse
Tien Tran

Application Name:
RC Quadcopter Interface

150 Point Rubric:
Assign points to major features and functionality (must total 150)

Requirements:

(40) Working Android Application
(20) Preferences implemented
(20) Two or more methods for controlling flight (Touch interface and accelerometer at a minimum – touch will still control thrust)
(40) Completed Arduino code
(30) Communication with the quadcopter

Optional:

Pre-program flight patterns for the quadcopter

3 Week Schedule:
A schedule of incremental events leading to a finished goal

Week 1:

- Get Android application built with an interactive user interface and general layout
- Research the Syma X11 and RC transmitters and receivers
    - Take apart Syma X11 controller
    - Figure out how to send PWMs via the RC transmitter with Arduino Mega ADK

Week 2:

- Start writing the Arduino code
- Test the output of the Android application's accelerometer data and virtual joystick values
- Figure out best way to send packets of information to Arduino
- Get a successful connection from Android → Arduino → RC Transmitter → Quadcopter
- Hopefully get a thrust signal recognized by the quadcopter

Week 3:

- Finish Android application
- Test and tweak the Arduino code for optimal interaction with the quadcopter