

# EE CprE SE 491 - MAY15-28

## MicroCART Senior Design Team

### Meeting Minutes - Week 14

December 9, 2014

#### Attendance:

##### Team Members: (All Present)

Paul Gerver  
Tyler Kurtz  
Joe Benedict  
Jacob Rigdon  
Matt Vitale  
Ravi Nagaraju  
Adam Campbell

##### Advisors: (All Present)

Dr. Phillip Jones  
Dr. Nicola Elia

#### Agenda Items and Discussion

- 1) Advisor reviewed the Milestone Presentation power point
  - Overall format change to match ISU CprE template
  - Add a problem statement slide
  - Identify issue with having current gyroscope as a "black box"
  - Include reasons why we are using the FPGA board
  - Identify: "present state", "end result" and "problems"
  - Add graphics to data analysis slide
  - Include information on 3-axis testing platform
  - Include information on OmniCoor collaboration
  - Add information on manual override switch
  - Add information on operating environment
  - Add "agricultural research" to project scope
  - Add bullet points to GUI slide
- 2) PID controls
  - Sensor data mixing with RC signal on Zybo
  - Yaw feedback needs to be switched from camera system to onboard gyroscope
  - Yaw PID control will reference velocity
  - Yaw manual control from transmitter will be velocity
  - Roll and pitch PID controls will reference vehicle angle

### 3) Semester-end goals

- Concentrate all efforts on tuning the PID controls for manual flight demonstration for the client

### **Deliverables for next week**

Joe

- Updated milestone presentation slides
- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Paul

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Matt

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Ravi

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Jacob

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Adam

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo

Tyler

- Attend Milestone Presentation
- Testing and troubleshooting PID controls for manual flight for client demo