

MEETING AGENDA

Topic: Research Conglomeration

Monday, September 18, 2018

Meeting called by: Team

Attendees: Michael Broyles, Ethan Smith, Brandon Beaudoin, Jonathan Hernandez, Nathan Zufelt, David Trevas

Please bring: Laptop, Notebook, Relevant research

Location: Engineering Room 120

Objective: Communicate individual findings and discuss how they will be implemented.

Notes:

Team members need to bring laptop chargers for the next meeting and meetings hereafter. Several computers died during the meeting.

5:15	Begin meeting: Call meeting to action, assign scribe, finalize one drive set up.	Engineering Room #323
5:30	Team members discuss their weekly task: Brandon – Material selection, charge controller Michael – Radio controller Nathan – Panel research Ethan – Contact Flagstaff Flyers, sponsor emails Johnathan – Flight software license	Engineering Room #323
Remaining minutes	Plan for next meeting -New Action Items -Material Purchasing -New contact options: <ul style="list-style-type: none">• Sunpower university sponsor• Venom Carbon• Nova Kinetics Aerosystems (Flagstaff)• Dragon Plate Carbon• NAU Green Fund	Engineering Room #323

Minutes 9-17-18

Team worked on finalizing one drive set up

Michael and Ethan work to professionally word and send emails to potential sponsors

Roles were assigned for the upcoming presentation

Project description – Michael

Background and benchmarking - Ethan/Brandon

Customer and engineering requirements – Johnathan
Schedule – Brandon
Budget – Nathan
Format – Mike

A new meeting was set up for Saturday Sept. 22 @ 8:00 am
Brandon – Lipo charge controllers
Michael – Manufacturing techniques
Johnathan – Get flight program running

Minutes 9-18-18

Jonathan – real flight program does not run, it will need some more work to get it open. Get with IT (Pete Gomersall). Ticket submitted during the meeting.

Mike – We have a controller that can be used for now.

Brandon – worked to make a ratio of strength vs density, evaluated carbon, balsa wood, and foam which is typically used.

Evaluated dollar per kg
Carbon - \$140 per kg
Foam - \$1.5 per kg
Balsa - \$3.75 per kg

Research on covering materials,
Monokote, profilm, solar film. Looking for minimal reflection and no wrinkles.

Nathan – looked into solar panels, can find solar cells. Pk of 50 is \$230 which 3.2W each
Can run each wing in series and the two wings in parallel.

Trevas asked how much over-voltage needs to be added to charge the battery. We may need to add additional panels to make sure we get the correct range of over-voltage.

Brandon found some reference data that contains fully built prototypes that could help.

Aria Mcartel would like to help out as she was involved in this project several years ago.

Isreal said that we can try several batteries before we buy.

We would like to use a foldable prop to allow gliding.

Need to order solar panels asap so we can begin to evaluate solar output.

Would it be worth buying more panels in conjunction with other teachers around the engineering building?

Jonathan to download a manual for the realflight.

Brandon to look more into charge controllers and is getting a book from **Trevas**.

Trevas – Understand all the hobby terms.

Brandon asked **Trevas** about a budget, work out a proposed budget, can be higher than \$2500 if needed.

Jonathan – Contact Schafer about a water jet or additional help.

Mike – if we use a folding prop we need to make sure the wings are far enough back that the prop can fold.

