

Meeting #5

Date: 9/24/19

Time: 5:30-7:00 PM

Location: EGR, SBS

Agenda:

- Discuss and set a timeline for the next few weeks
- Prepare for Oman meeting
- Oman meeting
 - Report our progress
 - Ask questions about budget and report format
- Discuss design ideas
- Plan for next meeting: design meeting

Pre-Meeting Notes:

- Wash-out? Chris has idea about just rounding wings
- Tasks
 - Figure out weight configuration
 - Pick airfoils
 - Come to next meeting with potential designs, and hash it out

Oman Meeting Notes:

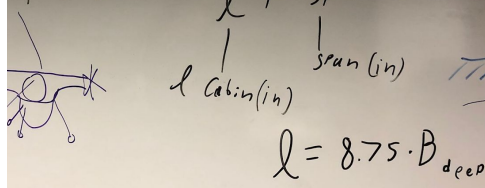
- “Keep in mind Computational Analysis is important to this class”
 - Fluid flow
 - Drag
 - Structural analysis
- How important are customer requirements: How do we score best?
 - Ex: Wing span target of 7ft plus/minus 1ft
 - Satisfy ER’s by creating “reach goals” with tolerances
- Look into programs that analyze aerodynamics
 - ANSYS?
- Pay for individual SAE by ourselves
 - See if this is actually a prerequisite to team registration

Team Meeting Notes:

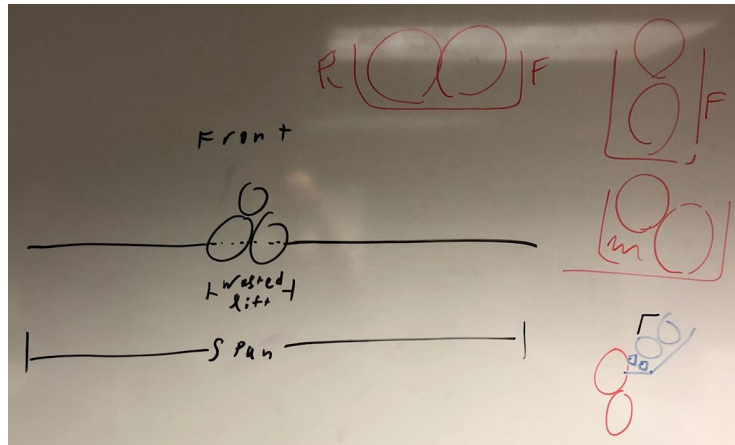
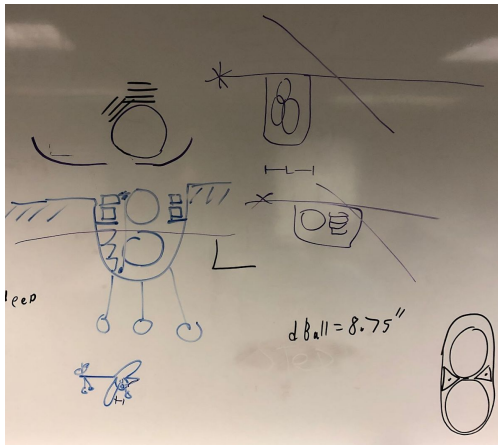
- Figure out what kind of payload we want
 - Look at the scoring

$$F.S. = \frac{2B + W_c}{l + S_p}$$

$l = 8.75 \cdot B_{dep}$



- Each soccer ball is worth ONE extra pound
- Each ball COSTS point reductions for cabin length and wingspan
- Each ball also makes it harder to design a controllable plane
- Design Ideas: minimize the amount of balls
 - One Ball
 - Two Balls



- *Design decision: ONE ball, max payload plates*
 - For now. If our "mule" prototype performs well, we can consider adding more
- Breakout teams (loose teams)
 - Chris: Airfoil
 - Alex: Prop, Landing Gear
 - Nate: Micro/internal structural
 - Jacob: Macro Structural

Action Items:

- Meet thursday 5:00 at shop, go thru cabinet
- Move to apt 1035 and cannabalize plane
- Come with design ideas
- Plan prop testing
- Iterative excel to prove that balls are bad

Next Meeting: 9/26/19, 5:00 @98C, Apt. 1035