AIAA Design/Build/Fly

Faculty Adviser: Professor Robert H. Liebeck
Advisers: Colin Sledge, Paul Parcell, Joseph Hsieh

What is Design/Build/Fly?

AIAA Design/Build/Fly is an annual international remote-controlled aircraft competition that allows teams to apply their analytical skills and showcase their cooperative efforts in building real-world aircrafts. Students must design, manufacture, and demonstrate the flight capabilities of an aircraft that can perform in a series of different flight scenarios.

Goals and Objectives

- Design an aircraft based on the given rules and constraints
- Develop and apply innovative, practical, and affordable fabrication techniques
- Document and compile design, manufacturing, and testing process into industry-standard written report

Requirements and Constraints

- Must have a minimum wingspan of 4 feet
- Aircraft must fit in a 3x2 foot box in stowed condition
- Takeoff within a 10 ft on a ramp
- Must be capable of carrying at least 4 stores

Competition Mission Objectives

- **Ground Mission**
  - Assemble the radome and stores onto the plane as fast as possible

- **Mission 1**
  - Fly 3 laps with no payload within 5 minutes.

- **Mission 2**
  - Fly 3 laps as fast as possible while carrying the radome within 5 minutes.

- **Mission 3**
  - Fly one lap for each store carried and drop one store per lap within 10 minutes.

Flight Course

- Hill Inlet Run
- Landing Run

Project Costs & Expenditures

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>28%</td>
</tr>
<tr>
<td>Transportation</td>
<td>10%</td>
</tr>
<tr>
<td>Off the Shelf Components</td>
<td>26%</td>
</tr>
<tr>
<td>Control &amp; Instrumentation</td>
<td>13%</td>
</tr>
<tr>
<td>Electronics</td>
<td>17%</td>
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</tbody>
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Grand Total: $4200

Timeline

- **October 31, 2018**
  - Submit Proposal

- **February 22, 2019**
  - Submit Design Report

- **April 11-14, 2019**
  - Contest Fly-Off

Team Structure

<table>
<thead>
<tr>
<th>Team Members</th>
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<tbody>
<tr>
<td>James Bechler</td>
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<tr>
<td>Brian Chen</td>
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<tr>
<td>Adrienne Dao</td>
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<tr>
<td>Erick Hernandez</td>
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<td>Sam Hince</td>
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For further inquiry, contact:
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For more information, visit [http://www.aiaadbf.org](http://www.aiaadbf.org)