Sae Micro Aero Client Meeting 3 10/04/18

Meeting time: 2:00 PM
Meeting Location: Engineering Building Room 323

CONCEPT DISCUSSION

1. Motors
    a. Ratio of thrust to weight
        i. Ratio decreases with 2 motors
            1. Adding complexity to building and controls
            2. Only a few seen before but that was in open class
    b. 2200 kV Motor (1 Motor)
        i. 9 ounces of thrust vs a 1.7 ounce motor
    c. Choose 1 motor that gives most thrust vs overall weight
        i. Some criteria to choose the motor

2. Control Surfaces
    a. 1 motor with elevator and rudder servos
        i. No ailerons
        ii. Any advantages in sacrificing servo and gaining payload weight
        iii. Problem with 1 rudder and no ailerons
            1. The heavier the weight, the more stably
                a. Less likely to bank with more weight

3. Payload
    a. Need to be able to get payload out
    b. Consider aerodynamics of the payload attachment
    c. Imbed support structures so it is not part of the aircraft weight
    d. Lots of analysis done on aerodynamics of a cylinder
        i. Try to focus on competition stuff
            1. Integration of payload

4. Manufacturing
    a. Nylon screws for attachments
    b. Styrofoam pellets are Amazon for casting
    c. Balsa wood with monocoat
    d. Worth it for the wings to be cast?
        i. Is it worth it to buy wire cut foam
            1. Can order wire cut wing shapes at different densities
                a. Eureka aircraft company