

# Welcome to the Drone Design Team!

Capacity (lb)

5

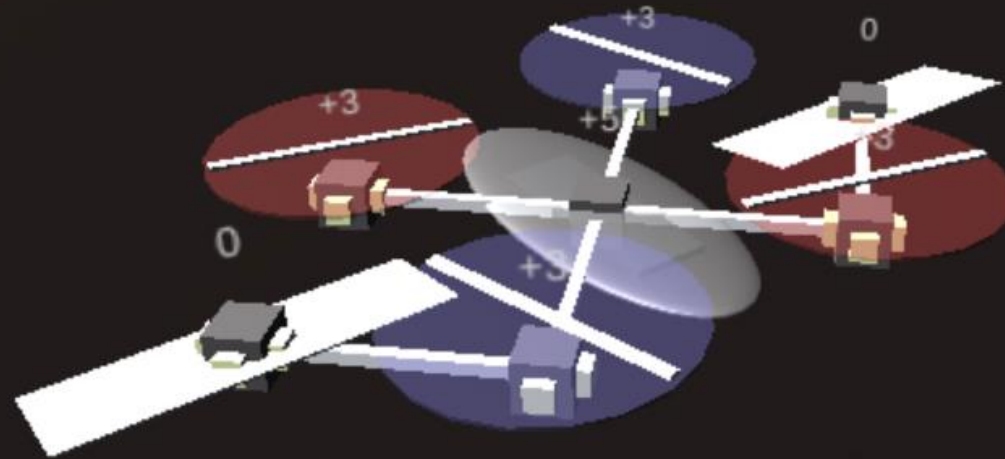
Evaluate

Team Designs

winged

base

Components /  
Hot Keys (1-5)



Forward

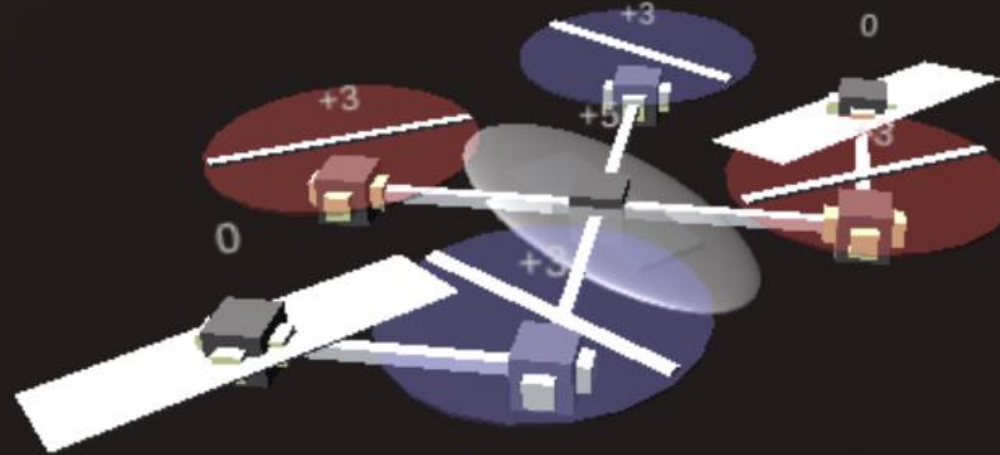
# Information Flow

Capacity (lb)

5

Your role is to develop drone configurations that satisfy the goals of the team's operation strategy

Components /  
Hot Keys (1-5)



Forward

Team Designs

winged

base

You will be receiving guidance from your team's operational planners to create drones that have a desired range, capacity, and/or cost performance

# General Guidance

1) Create a Drone Design Using Structures, Motors, Foils, and Connectors Using Mouse Clicks and Hot Keys. Also, Enter Desired Capacity in Pounds in the Upper Left Pane.

4) Load Plans from Your Team and Open/Edit

2) Evaluate a Design To Calculate its Performance Metrics

3) Submit a Design to Your Team in the Evaluation View, or Select 'OK' to Return to Design Mode

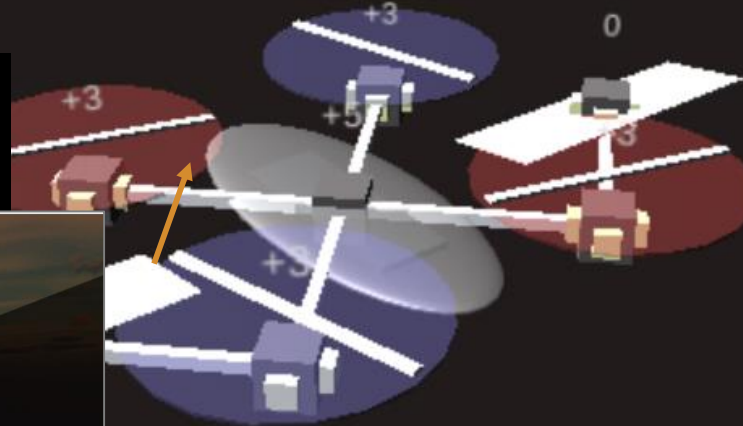
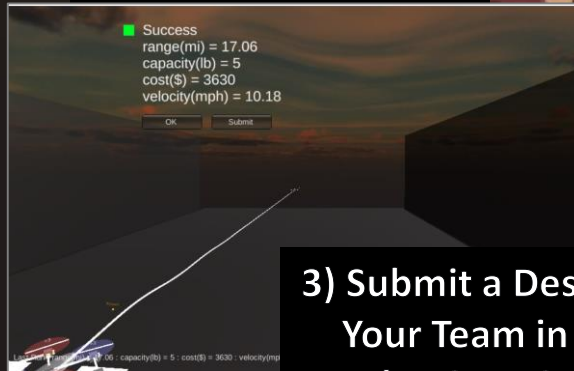


Capacity (lb)

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Evaluate

Components /  
Hot Keys (1-5)



Forward

# Components

## Hotkeys

1



Battery – provides energy proportional to its size

2



Motor – provides upward and forward thrust proportional to size

- Red motors spin clockwise
- Blue motors spin counter clockwise

3



4



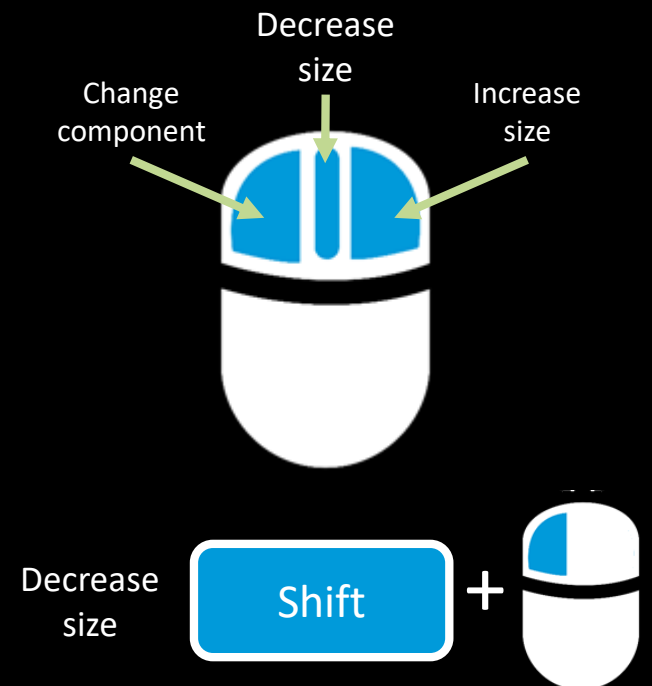
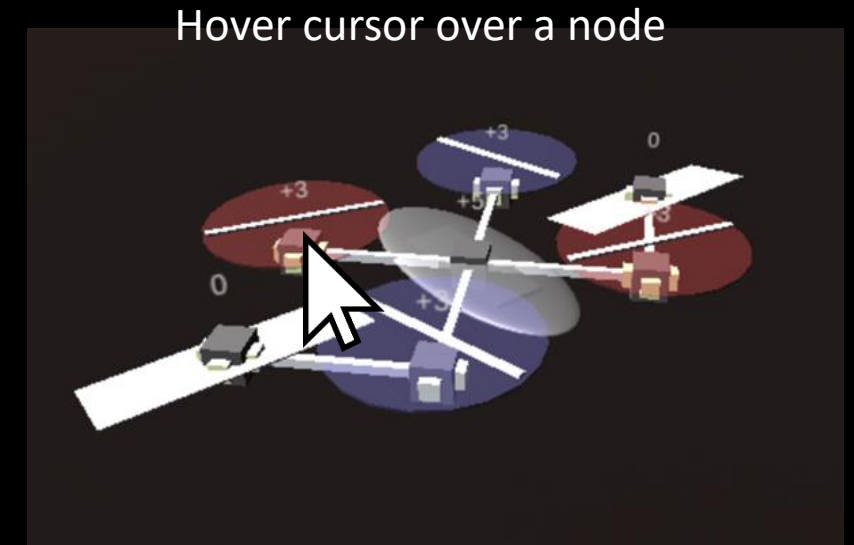
Airfoil – provides lift proportional to size and forward velocity<sup>2</sup>

5

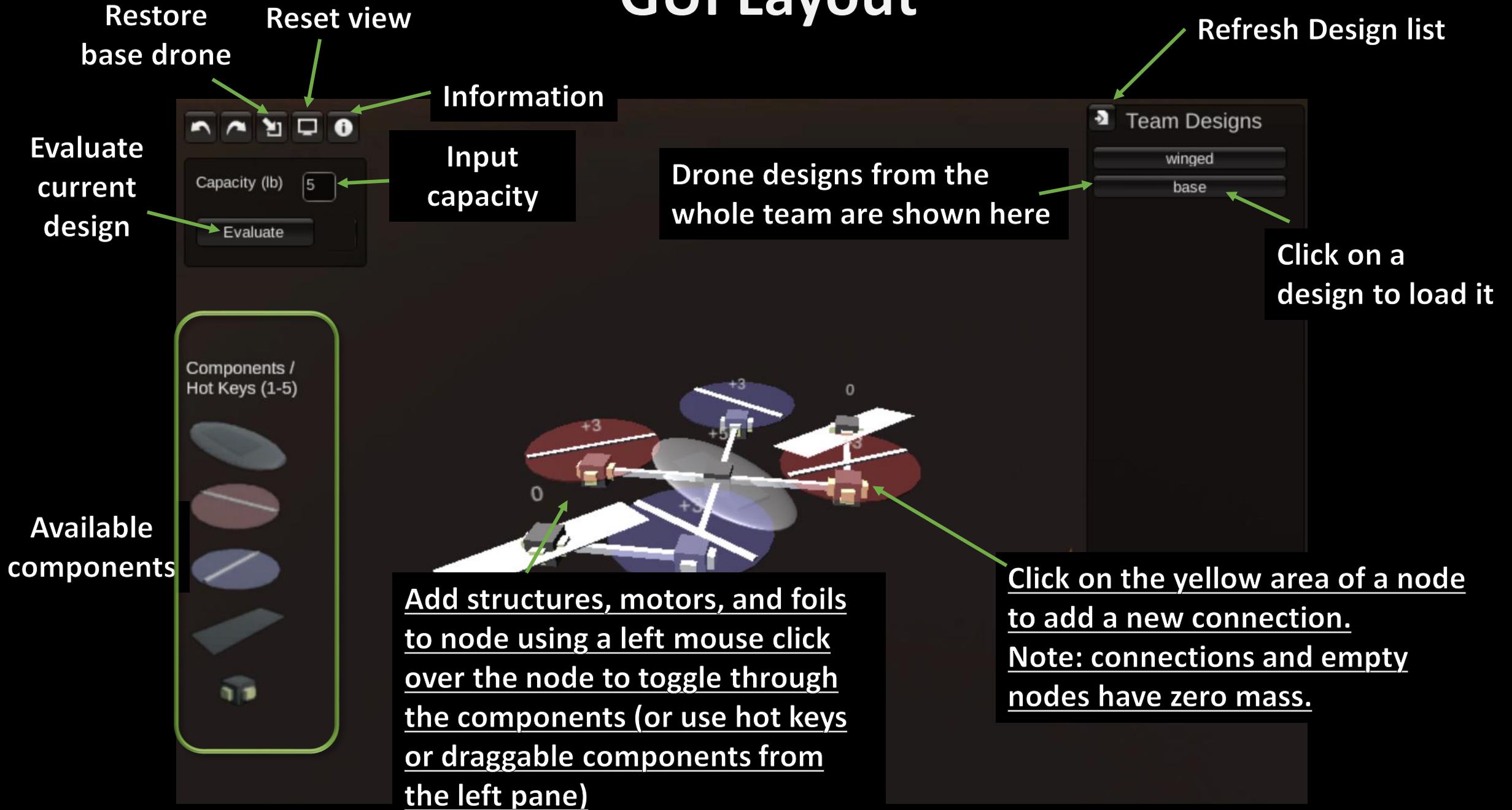


Node – provides mounting location for components, has zero mass

Note: Component hotkeys are active when the cursor hovers over a node



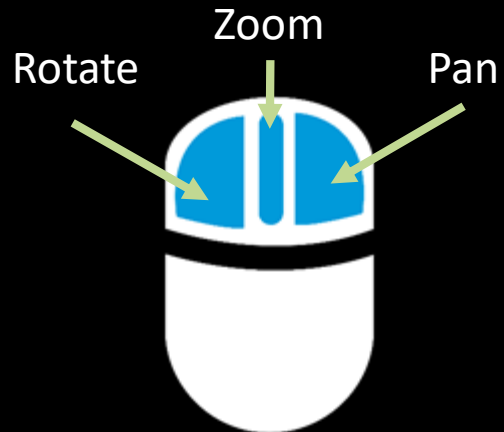
# GUI Layout



# 3D Scene Movement

## Mouse

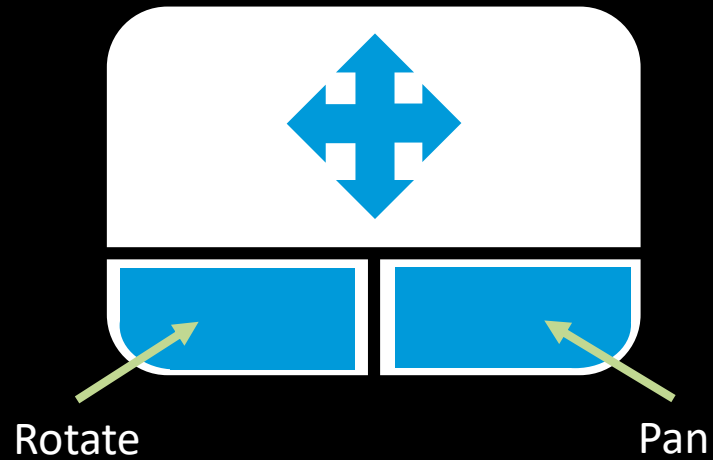
Click + drag



Zoom: Shift + drag

## Laptop Touchpad

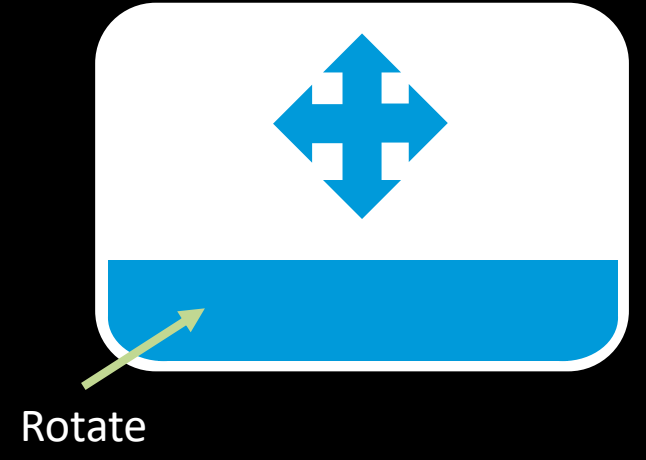
Click + drag



Zoom: Shift + drag

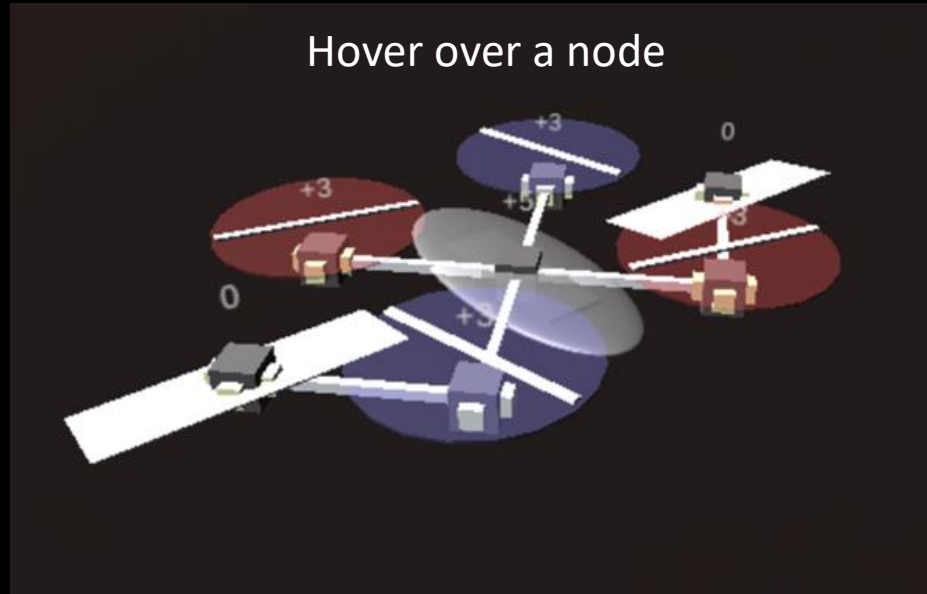
## Mac Tracpad

Click + drag

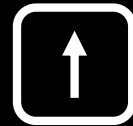


Zoom: Shift + drag

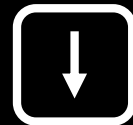
# Additional Hotkeys



Delete – remove the component or structure from the design



Increase Component Size



Decrease Component Size