Flight Test-Project Name

# Delete all blue text before final submission. File name: Flight Test -Project Name, Location: Phase 4 Box Folder

# Description:

One of the most effective ways to better communicate ideas and get feedback from the stakeholders is to create mock-ups and simple prototypes and conduct tests. According to Richard Eisermann, director of strategic design agency Prospect, “If a picture paints a thousand words, a prototype is worth a thousand pictures….For relatively little cost, they reveal issues you can never anticipate. Once steel is cut and a thousand lines of code generated, turning back becomes costly and time consuming. Paper, foam and wood can all be easily modified and replaced, for little money.” (Design Council website 2009). Eisermann has five basic rules for prototyping:

1. Begin early. The sooner you materialise ideas and get them in front of people, the richer your final design will be.
2. Beat it up. Make a modifiable prototype so you can easily adapt it, even on the spot.
3. Don’t bother with perfection. The prototype exists to get information, not to show how brilliant the design is.
4. Do just enough. A little data goes a long way. Figure what you need to test and focus on getting those answers.
5. Record the test. If you don’t have a record, it didn’t happen. (Design Council website)

# Instructions

1. State the purpose of prototype
2. Include method, pictures, data, summary, and conclusion
3. Write abstract for prototype document

# Abstract:

What did you do? How did you do it? How does this task help the project?

# Introduction/Purpose:

What is your prototype testing? Briefly describe how it was built. Include pictures of construction, sketches, or links to documents with this information.

# Method:

State the method for the test. Be sure to include what you are assessing

1. List step 1
2. List step 2

# Data:

What was the data from the test?

Insert data, this could be a table a list of things

# Summary:

What did the data say? What equations did you process the data with? Create charts and tables to summarize the data.

# Conclusion

Based on the summary of the data, what recommendations do you have?

# Example: Flight test

# Abstract:

The team conducted a flight test on April 2, 2016 to test the flight of the drone with a dummy payload. The flight test was a zigzag pattern at an altitude of 10 feet for 10 minutes. The data showed the flight path of the UAV and altitude. Test flights were conducted three times with success. The team recommends moving on to a test flight with the camera payload to test UAV flight with pictures.

# Introduction/Purpose

* UAV outfitted with “dummy payload” to simulates camera payload
* Dummy payload is measurements (4”x2”x2”) and weight as camera payload (102g)
* Specs and drawings found HERE[hyperlink to drawings and specs]
* Test if drone can carry dummy payload for 10 min

# Method

1. Preflight check
2. Set flight for 10 min no more than 10’ flight altitude
3. Zigzag pattern
4. Return to base(land)

# Data

Made up sample flight data

|  |  |  |
| --- | --- | --- |
| Time | Position (x,y; feet) | Altitude (feet) |
| 0 | 2,3 | 1 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

* UAV successfully flew without problem

# Summary

[sample flight data chart showing altitude and x,y postition]

# Conclusion

* Data showed position of UAV during test
* UAV flight test passed 3 times
* Move on to test flight with real payload