**Test Objective/Description:** Test to see what the maximum payload the system can carry for at least a 10 minute mission.

**Location:** Fleming VICON Cage

**Date:** 1/27/16

**Hardware Needed:** Quadcopter, timer, external payload mass.

**Procedure:**

Make sure quadcopter is assembled and ready for flight.

Make sure flight battery is fully charged.

Add payload to mimic all hardware that will be used in total FlyNet system.

Add additional payload to act as dead nonfunctional weight.

Clear VICON cage.

Start timer and start flight.

Fly quadcopter until the low battery signal.

Safely land quadcopter.

Stop timer and record flight time and total payload.

Add or subtract additional payload and repeat flight with new battery.

Repeat flights until flight duration is less than 10 minutes.

**Requirements Met**

|  |  |
| --- | --- |
| **5.1.1** |  |
| **1.3.1** |  |
| **4.3.1** |  |
|  |  |

**Test Anomalies**

|  |  |
| --- | --- |
| After about 10 minutes, the quad required full throttle to maintain flight. |  |
| Another test was conducted with the same results |  |
|  |  |
|  |  |

**Test Results:**

Quad flew for 13 min 20 seconds before the battery ran out.