|  |  |
| --- | --- |
| Project Name: | MailBird: An Autonomous Delivery System |
| Team #, Members: | Team 1, Ben Smith, Hugh Dillon, Hunter Thorington, Rick Holloway, Zac Hawkins |
| Report Date: | April 2, 2014 |
| Project Description: | A landing system that can guide a vehicle using IR LEDs within 1 inch of a target. |
| Cycle (1, or 2): | Cycle 2 |
| Cycle Intent: | Use working prototype of IR module to mimic loiter behavior over LED station |

**TASKS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Planned |  |  | Actual |  |
| Task # | Task Description (Add rows as needed) | Cycle planned for completion | Total planned hours | Planned hours this cycle | Status (% complete) | Actual hours this cycle | Total hours |
|
|
| 1 | Team management | 2 | 60 | 20 | 20.00% | 4 | 12 |
| 2 | IR land control method | 1 | 120 | 20 | 85.00% | 79 | 179 |
| 3 | IR camera implementation | 1 | 40 | 20 | 100.00% | 18 | 83 |
| 4 | Ground Station control method | 1 | 40 | 0 | 95.00% | 0 | 26 |
| 5 | Landing station | 2 | 20 | 10 | 60.00% | 9 | 10 |
| 6 | Reports | 2 | 180 | 100 | 30.00% | 1 | 67 |
| 7 | Marketing display | 2 | 40 | 40 | 3.00% | 0 | 2 |
| 8 | Integration of components | 1 | 100 | 0 | 100.00% | 6 | 113 |
|  |  | Planned Total1 | 600 | 210 | Actual Total | 117 | 492 |

1Planned Total should equal (# of team members) x (10 hrs. per week) x (Cycle 1 weeks 6) + Cycle 2 weeks (6) = 12 weeks).

2Assumes 5 hours per week for 12 weeks. Should be mainly team leader(s).

**TEAM MEMBER HOURS**

**Record # of hours each person spent on each task this week, then total by week, cycle, and project.**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  | Total Hours |  |
| Name | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Week | Cycle | Project |
| Dillon, Hugh | -- | 8.5 | -- | -- | -- | -- | -- | -- | 8.5 | 24.5 | 111 |
| Hawkins, Zac | -- | 5 | -- | -- | 3 | -- | -- | -- | 8 | 22 | 83 |
| Holloway, Rick | -- | 7.5 | -- | -- | -- | 1 | -- | -- | 8.5 | 24.5 | 118 |
| Smith, Ben | -- | 8.5 | -- | -- | -- | -- | -- | -- | 8.5 | 24 | 81 |
| Thorington, Hunter | -- | 2 | -- | -- | 6 | -- | -- | -- | 8 | 22 | 99 |
| TOTALS | 0 | 32.5 | 0 | 0 | 9 | 0 | 0 | 0 | 41.5 | 117 | 492 |

**Accomplishments since last status report:**

* Added Sonar to allow for constant height control.
* Tested the quadcopter in an indoor environment (the Coliseum) to mitigate wind interference.
* Began constructing a landing pad to be implemented in the final design.

**Obstacles encountered since last status report and actions to deal with same:**

* There are many different variables that are preventing the proper testing of the IR tracking system. (ie. LED connections, accelerometer calibration)
* The lack of user control when in IR mode causes tests to be short and hard to understand what is actually going on.

**Risks facing the project and actions to deal with same:**

* We have reached a point in the semester where activities outside of Senior Design have become very demanding and that is causing us to stall during our designated lab period.
* We are also going into week ten and the pressure is building to have the Mailbird operational in three weeks.
* We still do not have a cable for the compass, this requires a skip in the pre-arm safety check. The lack of the compass may cause yaw issues during flight.

**Objectives for the next week:**

* Continue working the kinks out of the quadcopter in general, so a controlled test can be designed to determine problems in the IR tracking system.
* Continue to test the quadcopter in indoor facilities.
* Take flight logs from the quadcopter so we can analyze its behavior during flight.