MN Space Grant 2014 – 2015

Community College Quadcopter Competition

Post-Competition Review

Team Name

[Insert a photo showing you and your quad on the competition day, posed or “in action”]

Written by: (full names of all students)

Advisor:

Institution:

Report Date:

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1. **Executive Summary** *(Remove all explanatory text before submission.)*

This report, documenting results from the competition date, is essentially as an Appendix to your earlier reports so you do not need to go over material that was covered in earlier reports. This Executive Summary should be 1 page (max) of text only briefly stating what happened on the competition date and, in general terms, how it went. If you suffered any crashes or other types of failures, mention them here (or below) and explain whether or not you were able to recover/continue.

1. **Vehicle Changes Since Earlier Reports**

Briefly explain here, with text and photographs, changes/additions (if any) made to your vehicle since the last report. If you didn’t make any changes between the CDR and the competition, say “None” but leave this section in place to preserve sequential numbering.

1. **Team Video**

Comment on how your video turned out and include a link to where it can be viewed on-line. Note – if you didn’t post your own video, all videos are linked from the Quadcopter Competition webpage.

1. **Oral Report (or “TCF Bank Stadium Events”)**

Give some general comments about how the Oral Report went and include at least one photo of the team delivering this report. Note that photos of every team giving their report are posted. This section can be brief and is not intended to cover the content of the oral report. Instead, it is included as evidence that an Oral Report was major part of the competition. Optional – you can mention going out on to the TCF Bank Stadium field and include a photo or two of that as well, if you like.

1. **Flying Overview (of “Armory Gymnasium Events”)**

Describe what you did in the gymnasium and include a few more photos, with captions of course, of your team “in action.” Perhaps describe activities in the order your team did them. Save discussion of actual results for the next sections (which you may present in any order – don’t forget to update the Table of Contents before submitting this report).

1. **Results: Multi-Pilot**

State (at least) which team members piloted, what vehicle(s) they flew, and how they did. Photos welcome, if any were taken.

1. **Results: Overview of Camera Mounting and Operation**

Remind the reader what camera(s) you flew for different parts of the competition, how cameras were mounted and switched between look-out and look-down views, and who watched the camera feed in real time (if you implemented a video telemetry system - optional). Give details about the quality of the actual photos in the sections below.

1. **Results: Close-up Imaging**

Briefly describe the close-up imaging course and how well your team did flying it. Include your best (raw) photos your best (processed) photos, for comparison. For example, photo processing might include zooming in, cropping, adjusting contrast and/or brightness, etc. What might you do differently if you were to try close-up imaging again?

1. **Results: Exploration – Mapping, Sensing, and Sample Return**

Briefly describe the course and how well your team did flying it, focusing mostly on what you got done rather than on what you didn’t accomplish. Include some representative still photos from your in-flight camera, your preliminary map, and a more-polished map (if you were able to make one). Explain how you put length units on your maps. List sensor values for ambient conditions and describe any anomalies you uncovered. Talk about sample return – which samples did you try to collect and how did that go? Talk about any fouls – vehicle exiting past scratch lines, the need for people to enter the course, etc. Describe what you might do differently if you had more time or were given another crack at an exploration course.

1. **Unique Capability**

Remind the reader what you implemented for your Unique Capability and explain how that worked out. Point out explicitly whether or not you used the unique capability in the competition and, if so, how well it worked.

1. **Lessons Learned**

State some things your team learned from the quadcopter competition. These might relate to hardware build/test/fly or else to team functioning/planning/operations or else to data analysis.