

SwarmPack: A Drone Fleet Package Delivery System or AirRoomba: A Flying Roomba That Works

Senior Design I Student Proposal
University of North Texas Department of Electrical Engineering
EENG 4910.001

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I. PROBLEM DEFINITION

Drone with deliverable qualities. Request options are still undetermined. There is always a need for more drones to do things to eliminate human error.

We are trying to make more jobs for drones to eliminate human error which hopefully will increase efficiency. This will create more time for brainstorming and idea creation to achieve more tasks per year. The specificity for the drone usage in our project is to create a path or job for a drone to either deliver objects/packages and or function as a vacuum/dusting service.

The closest implemented project for the design mentioned is Amazons Prime delivery drone. The project is new and is being implemented either now or soon.

II. RESEARCHING AND GENERATING IDEAS

We need to research the basic knowledge on the design of our project with concepts and procedures to help define the rules for construction of our project. We created a criteria that will define the basic performance needs of our drone (delivery service). A list of constraints and standards will help with implementation of the project.

III. CONCEPTION, REQUIREMENTS, AND SPECIFICATIONS

The design conception is still under discussion. The schematic is in the works and should be a diagram of well thought out drone parts and what each section/part will function as or its job will be. Once we decide on a parts list and a time restraint on building/constructing drone to test/program, then our preliminary design will become complete.

IV. CONSTRAINTS

The list of constraints should be a large list. We need to discuss among the group on how we will implement and hurdle some of these constraints with a potential budget.

V. ETHICAL, PROFESSIONAL, AND CONTEMPORARY ISSUES

This a potential section that is on its own and not listed within the requirements of the proposal but is definitely a discussion that must be considered. These issues may be a restraint and or a part of the standards conversation that will help us implement our projects design with zero road blocks.

VI. ENGINEERING STANDARDS

Another section that is a part of the problem definition that will be brought out to be its own section. Standards could become a

VII. DESIGN

VIII. PARTS LIST

IX. PROTOTYPE AND SYSTEM INTEGRATION

X. DELIVERABLES

XI. TIMELINE

REFERENCES

[1] [Online].Available: <https://github.com/NickChiapputo/SeniorDesign>