Aerial sensor platform

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TFG UPF / YEAR 2014

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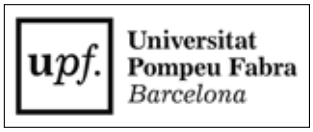

To my family.

Acknowledgments

I would like to thank to

Also, to

At last,

Abstract

This work addresses the gathering of data in areas of difficult access or which are potentially dangerous. Examples include high tension power lines, collapsed buildings and fire areas. We build a flying platform with the ability of carrying light sensors (e.g., small cameras or infrared cameras) and transmit the sensed data wirelessly to a control point. The platform is a highly manoeuvrable multicopter that uses the Arduino microcontroller and the multiwii software.

Resum

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Chapter 1

INTRODUCTION

The streaming solution we propose, perfectly fits those networks and specially a scenario with the mobile node where we may want to share the content we are watching at that moment.

Chapter 2

PLANNING REPORT

The following sections explain the tasks that I will do in the course of this project.

2.1 Pieces adquisition

This item includes the estimate time to plan which pieces are needed, how many of each, the purchase of them and the average waiting time until them arribe.

2.2 Assembling infraestructure device

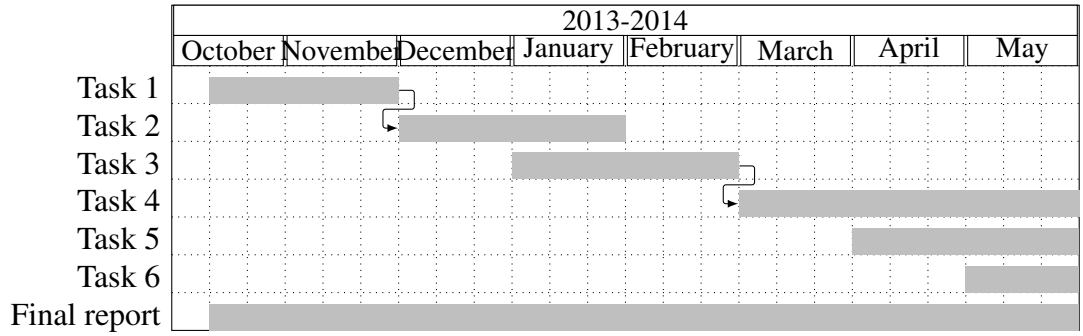
This item includes the required time to assembling the device once the pieces have arribed and we have all the needed tools.

2.3 Software Implementation

This item includes the required time to install the different software on the arduinos: the transmissor, the receptor and the controller; plus all the required software to be able to configure the arduinos through the PC.

2.4 Flight Tests

This item includes the required time to do the flight tests itself and the time to calibrate the device based on the results obtained on the tests and their interpretation.



2.5 Camera incorporation

This item includes the time needed to incorporate a camera to the device in order to take video images and transmitt it on live.

2.6 Device improvements

This item includes the required time to incorporate a bluetooth module to facilitate the connection between the arduino and the PC on a wireless mode, plus the incorporation of a GPS module, in order to extend the device possibilities.

2.7 Final report

The wording of the report is performed in parallel with the tasks that are being performed.

2.8 Gantt chart