The Desktop Quad

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Abstract

The Desktop Quad is an effort to allow an inexpensive quadrotor to be used as a case study in controls, vision processing, and autopilot design scenarios. It features an 8cm x 8cm quadrotor with an upward-facing camera for localization. The (really) micro air vehicle (MAV) is tethered using silicone wire for communications and power, allowing indefinite flight. This report describes the progress of the Desktop Quad achieving fully autonomous flight.

1 Introduction

2 Hardware Selection

3 Flight Controller

4 Building the System

5 Visual Localization

6 Simulation

7 Control Architecture

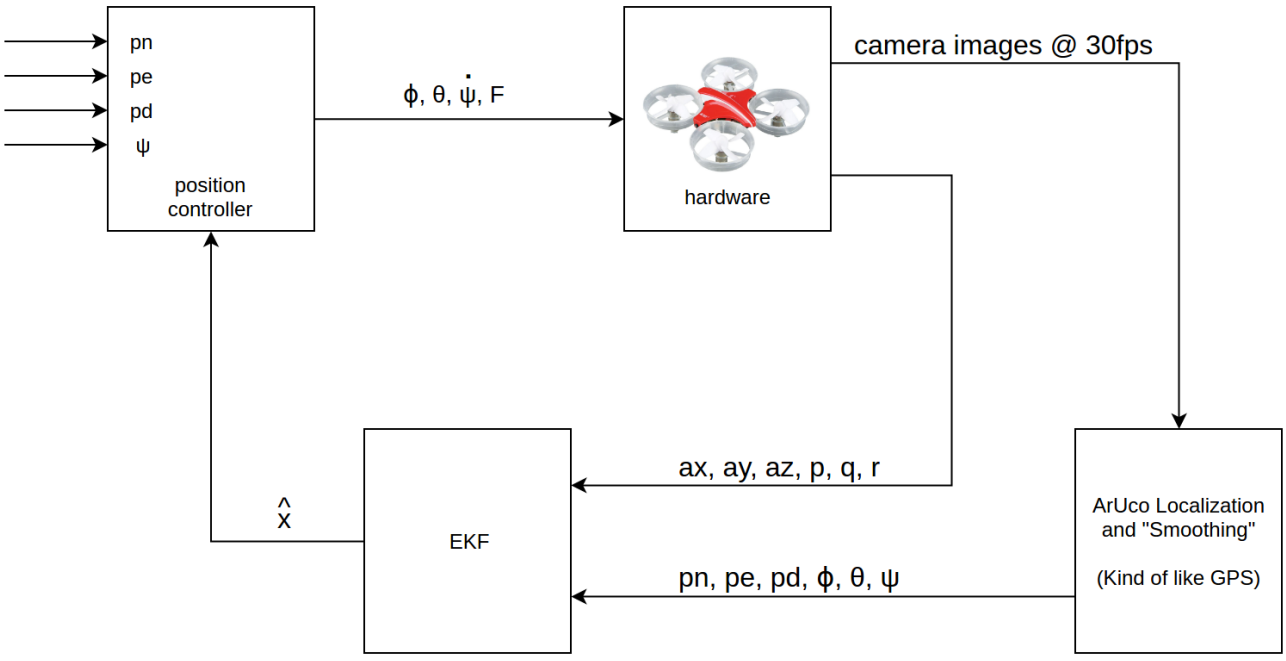

Figure 1: Control architecture of the Desktop Quad system.

References

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