Surveillance quadcopter

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Overview

Quadcopters are very mobile and capable vehicles ,which is a necessary condition for surveillance vehicle .but lacks in stealth, range and duration .with this project we aim to make our quadcopter mobile yet make it duration high with stealth by the means of sticking it to rooftops .

Goals

1. Making a controllable reusable flying drone
2. Making drone as thin as possible for mobility
3. Tolerance toward impact
4. A sticking mechanism (must be easily reusable)
5. A rotating camera module to get video feed
6. A mechanism to transfer the video feed to ground station (optional).
7. Making it fairly autonomous (optional).

Things required

- A material for light weight frame
- Motors, propellers and speed controllers
- Camera module
- Servo motors
- Battery
- Control unit
- Microsuction tape
- Wire mesh
- Others

Initial thoughts

Main purpose of the drone is to stick to roof. We will cover the top of drone with wire mash (to protect propellers) and in center a elevated part with microsucution tape on it it will stick as rotors will essentially clean of dust by air. To remove it we will twist the copter. Camera module is secondary goal. We plan to use arduino to rotate it. Third goal is achieving video feed live. We have to research on that topic.

Cost:

- Quadcopter (Rs 5000)/can find old one
- Microsuction tape (rs ~900)/have to import
- Wire mash (rs 50)
- Camera module (rs 1000)

total~7000Rs

Timeline

Week 1 : designing and material buying

Week 2 : Assembling

Week 3 : Test flight and debugging

Team members

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3. Chandu soren

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