Drone project

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# PROJECT

Our idea is to use a drone to find, and fly through rings. There will be two modes, manual and auto. Manual mode will be used to stop the drone from destroying the school’s property and guiding it to the area where the rings are set up. In auto mode the drone will be autonomous to find and go through rings. The rings will be hula-hoops in a single color. This is because it will demand less from the onboard camera, and computer witch will be processing the images, and less from us to find the pattern that it has to recognize.

In autonomous mode, the drone will communicate via a router with a computer, the drone will send the real-time video and other information to the computer. The computer will then process the image to try to find the hula-hoops. From this data, we will find a way to move the drone directly in front of the ring and move it through the ring.

For this project we will be using the AR-Drone 2.0, this has a built in camera and hight sensor. There are some existing java libraries that we will use to make an interface. We will be using our own computers to calculate the data. The only thing we need is the rings, the cheapest we found are at toys R Us. We will be needing two rings at 76cm or larger.