



**DEVELOP A REMOTE CONTROLLED AIRCRAFT FOR HIGH TENSION
CABLE INSPECTION**

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ABSTRACT

The goal of this project is as stated in the topic, is to inspect the high tension cables by using a remote controlled aircraft. The high tension cables here include the live cables and the electric transmission tower. The problems faced and the maintenance of high tension cables that is used to transmit electricity was studied in order to design the most suitable aircraft for the job. We have purchased and assembled a rotary wing aircraft and equip it with a wireless camera that will transmit the pictures taken during the flight to a receiver which will be connected to a laptop. We can see the picture in real time through the laptop that is installed with programs to receive the data, and will be able to inspect the cables. The data that was obtained were compared with the traditional way of inspecting the cables and it is concluded that by using our method, it is safer and convenient. In terms of effectiveness we can say that this method is slightly more effective because we can actually go closer to the cables we want to inspect. Although the transmitted picture looks blurry and interrupted, this can be solved by using a higher resolution camera, a better receiver and by using a damper to reduce the vibration of the camera.

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CHAPTER I

Figure 1.1: Types and methods of control of UAV (Unmanned Aerial Vehicle)

INTRODUCTION

The UAV (unmanned aerial vehicle) is versatile equipment that has been used in the military for spying purposes. Until recently, the applications of the UAV are used in public service. The UAV, like a normal aircraft can be categorized as two types, which is fixed and rotating wing aircraft. The way the UAV is controlled can even be divided into two methods, RPV (remotely piloted vehicle) and autonomous. However, the UAV used in the military are the autonomous type and is very expensive because it uses sophisticated devices such as GPS (global positioning satellite), latest materials, and some on board sensors. In this project, we will use a remote control aircraft that is an RPV.

