ABSTRACT

Quadcopter (drone) is a multicopter that has four rotor (blades) which the control system using the Flight Controller who already have the algorithms and sensors inside it. An autonomous system today developed on quadcopter, particularly in terms of observing physical objects in the universe using quadcopter. From the advantage there's shortage, which is generally quadcopter is still controlled by a person with a remote control.

In this thesis, the autonomous quadcopter was designed with the ability to move in accordance pathbuild specified on the Android screen. Quadcopter can be controlled via an Android application that communicated using 3DR Wireless modules with 433MHz frequency, which quadcopter will move without using the remote control and move in accordance with the path that has been addressed via Android.

The results of this thesis is an autonomous motion control system that allows users to control quadcopter in mobilizing via a smartphone device based on Android. With performance percentage result that accomplished on trial is 83%.

Keywords: autonomous, UAV, quadcopter, drones, waypoint, Android, gesture, GPS