ABSTRACT

An Unmanned Aerial Vehicle (UAV) or drone that can be controlled with a navigation system is very suitable for logistics purposes. In a large area, fixed wing aircraft are very suitable for cargo transportation logistics purposes. However, fixed wing aircraft have a fairly large size and high flying speed if used in a small area. While the quadcopter has a compact size and low flight speed so that it can fly in a small area. However, quadcopters have a short flight duration and range.

One of the alternative UAV options for cargo transportation logistics is the blimp (air balloon). Blimp is very suitable for the logistics needs of transporting cargo at low speed and altitude. The lift generated by the blimp allows the drone to fly longer and with a wider range. In this final project, designing a hybrid blimp drone navigation system using GPS so that it can navigate on autopilot from home location to waypoint.

With that hybrid blimp drone has a long flight duration, wide range with a compact size. With a smaller accuracy error rate than drones without blimp, which is around 0,31m—1,53m error of waypoint. So that it can facilitate the need for transporting cargo in even a small area and can be arranged with the autopilot from the starting point to a predetermined point and back at the starting point of the flight again.

Keywords: *Hybrid Blimp Drone, Quadcopter, GPS, Path Planning.*