ABSTRACT

With the development of Aero-robotic technology at the present time, many new things that have been created by people with a variety of reasons and purposes. One of purposel in developing this technology is able to perform monitoring and surveillance of the air. So we get the information needed. The process of sending this information using the tx-rx telemetry system between the aero-robot and the ground segment. That information is sent to the ground segment to be processed and displayed so that it can be analyzed and understood by users.

Ground segment program that designed in this final project is a GUI (Graphical User Interface) for receiving data information from multiple parameter sensor mounted on the aero-robotic The process of sending and receiving data is done by the ground segment by sending a telecommand to the aero-robot. This data bytes received in realtime during the telemetry process takes. This GUI also serves as navigation for the user to control the aero-robot from a distance. In order to perform telemetry, data is sent through the integrated X-bee on the ground segment and aero-robot. In addition to sensors, ground segment can also see a direct picture of the situation of the sender through the air with a video camera mounted on the aero-robot.

With this GUI the user can be use it to control the aero-robot from a distance and conduct monitoring and surveillance from the air.

Key words: ground segment, telemetry, monitoring and surveillance