ABSTRACT

Nusantara Aircraft 219 (N219) is a two-engine aircraft designed by PT. Dirgantara Indonesia (PT. DI). *This N219 aircraft has 2 flight steering control systems namely the Primary Flight Control System & Secondary Flight Control System. The Secondary Flight Control System consists of 4 secondary components which are Flaps System, Flight Director, Trim Tab, Gust Lock System. Flap System on N219 aircraft plays an important role in the take-off and landing phase. Flap is a cross section of the rear wing of an aircraft whose function is to increase the lift force of the aircraft during takeoff and braking when landing. To monitor the movement of aircraft flaps when taking off and landing requires a user interface device or what is called a user interface.*

This final project research will be designed a graphical user interface using Microsoft Visual Studio application to monitor the flap conditions on the prototype N219 aircraft during takeoff and landing simulations and integrate the 433 MHz telemetry module as a wireless communication device.

Based on the results of tests, the GUI can display data received by 433 MHz telemetry devices with an average accuracy of receiving data at 99.8% at a delay time of 0.2 seconds. GUI can also be understood by the user with an average value of user understanding of 92.9% for Real Stream mode, and 92.2% for Recorded Stream mode.

Keyword : *Flap, Graphical User Interface, telemetry 433 MHz.*