

ABSTRACT

The exchange of information between avionics subsystem on the aircraft is a very crucial thing. Aircraft Full Duplex Switched Ethernet (AFDX), a communication standard based on ARINC 664 specification with a Commercial-Off-The-Shelf (COTS) component is used to obtain a reliable and a high speed information exchange. However it needs an expensive cost to do a research and development on AFDX . One of the issues that are critical in the exchange of information are the dropping of packet. To solve this problem redundancy of data which make a reliable and fault tolerance information exchange is needed.

In this final project, to make the sistem cost-efficient the ARINC 664 standard redundancy of data is implemented on End-system using COTS component PC with Linux as the operating system and network programming library (libpcap) to make a simulation of the information exchange. Testing is required to check the performance of the system and to ensure the system is built as fault tolerance system. The result proved that the system is fault tolerance and can handle a redundancy of data even if there is a hardware error, although the delay (2,65) is still exceed the specified limit and the redundant system is different from the AFDX.

Key Words : *Data Redundancy, AFDX, dropping of packet, fault tolerance*