

## ABSTRACT

A study of reconfigurable antennas has made great progress in recent years. Compared with conventional antennas, reconfigurable antennas have more advantages and better prospects. This reconfigurable antenna is lighter in weight, smaller in dimension and lower in price. Reconfigurable antenna is also providing diversity feature frequency, polarization and radiation pattern. One of the challenges is how reconfigurable antenna can vary the characteristics of an antenna which had been characteristic of the antenna has a fix.

In this final project has been designed and realized microstrip antenna that can be reconfigured frequency and polarization. Reconfiguration microstrip square patch antenna has an adjustable switch combinations. Switch this antenna is an antenna technology to manage/reconfigurable characteristics of the antenna. Switch can be on and off to obtain the frequency and different polarization in a single antenna. Reconfigurable antenna is simulated using Ansoft High Frequency Structure Simulator with experimental or experimental systems.

Simulation, design, and realization of this final project produces an antenna that has a different frequency and polarization in some conditions. Microstrip antenna switch has the 4 pieces and consists of 6 states. From the simulation results and measurement of this antenna can work at a frequency of 1.4GHz, 2.1GHz, 2.2 GHz, 2.3GHz and 2.4GHz while the antenna polarization measurement is based on the results of elliptical and circular, and for the radiation pattern reconfigurable antenna does not change the characteristics of the antenna radiation pattern . Research reconfigurable antenna is analyzed and summarized in this final.

***Keywords:*** *reconfigurable frequency and polarization, switches, microstrip antenna*