ABSTRACT

Polarization mismatches caused by the propagation mechanism in the textit multipath path can reduce the received power. When the capability of an antenna has polarization textit reconfigurable capability,the polarization match can be maintained and produce optimal power performance. The development of the antenna with the ability of textit reconfigurable polarization was carried out in response to the fact that reflections on the textit multipath path affect the polarization of the antena with electromagnetic waves.

This research aims to develop a reconfigurable polarization method on the ability of the antenna to support the received power gain in overcoming problems of polarization mismatch that may occur. The reconfigurable circular polarization method on an antenna. In this final project research is conducted a study of the concept of polarization regulation on the ability of antennas to anticipate polarization mismatches. The proposed microstrip antenna is expected to have the ability of reconfigurable to the changes in polarization that can occur so as to be able to maintain optimal power performance.

The results showed that by setting the polarization on the square one element antenna with RHCP polarization on port 1 produced a value of S_{11} of -10.978021 dB with axial ratio of 1 , 9745821, while the LHCP polarization on port 2 yields a value of S_{22} of -11,258469 dB with axial ratio of 1,85375. Meanwhile, for the measurement results of spectral efficiency on the antenna, the value of axial ratio is 1,054406 while the result of return loss on the measurement is -10,884 dB.

keywords: antenna, reconfigurable, polarization