ABSTRACT

One of the important components that can form a radio communication is antenna. The antenna used in radio communications as the release of electromagnetic energy into space propagation and as a recipient of propagation of electromagnetic energy from space. Along with the growing needs of the rapidly growing technology that is needed now is an antenna with wide bandwidth that could be used for a variety of applications.

The antenna is designed in this Final is "*Design and Realization of 300 MHz – 3000 MHz Unidirectional Chebyshev Tricula Antenna with Monotriangular Feed & SMA Terminal*". This antenna is an antenna that consists of two plates or conductors are inserted dielectric materials, ration triangular monopole (monotriangular) and SMA Female connectors 50 Ω. While the types Chebyshev $\lambda/4$ multilevel channel so wide band antenna. Results of antenna design, and then software simulated using MATLAB.

From the data obtained by MATLAB simulation results of 2278.39 MHz bandwidth, unidirectional radiation pattern and gain of 25.2355 dBi. From the results obtained by measuring the amount of 2059.2 MHz bandwidth, unidirectional radiation pattern, polarization ellipse and the gain of 6.44 dBi at 1650MHz frequency, 7.107 dBi at 2400MHz frequency, 7.273 dBi at 2700MHz frequency. To improve the performance of the antenna needs to be reviewed dielectric value antennas. To improve the accuracy of measurement required a room without echoes.

Keyword : tricula, chebyshev, monotriangular, MATLAB