

ABSTRACT

At this time, the need for wireless communication technology is increasing rapidly. Many people are already using internet data services offered by providers or using Wi-Fi (Wireless Fidelity) services. One of the things that must be considered in Wi-Fi technology is that it requires antenna characteristics that have a relatively small shape and light mass. The microstrip antenna is one of the antennas that has these characteristics. Microstrip antennas also have the advantage, namely that they do not cost a lot of money in the manufacturing process. In this research, an Octagon Microstrip Yagi (OMYA) antenna will be designed using a single superstrate layer method at a frequency of 5.8 GHz for Wi-Fi applications.

Antenna design and antenna simulation were carried out using Computer Simulation Technology (CST) Microwave Studio software. After the antenna has been simulated, the simulation results of the parameters that have been obtained will then be analyzed.

The proposed antenna has parameters obtained, namely a return loss of -23.24dB, a gain of 11.80 dB, and a bandwidth of up to 800 MHz with total dimensions of 70x75mm.

Keywords: Antena Octagon Microstrip Yagi (OMYA), *single superstrate layer, Wi-Fi, return loss, gain.*