

## ABSTRACT

At this time, the need for wireless communication technology is growing rapidly. Many people have used Wi-Fi (Wireless Fidelity) services. One of the characteristics of Wifi is that it has a relatively small size and light mass. The antenna has a small size and light mass, because it is suitable for wifi. Microstrip antennas also have the advantage, namely that they do not cost a lot of money in the manufacturing process. In this research, a double octagon Yagi microstrip antenna will be designed using the fractal method at a frequency of 5.8 GHz.

Antenna design and antenna simulation are carried out using CST Studio 2019 software. After the antenna has been simulated, then analysis of the simulation results of the parameters obtained will be carried out.

The antenna is expected to have the following parameter results, namely return loss  $\leq -14,35\text{dB}$ , VSWR  $\leq 2$ , gain  $\geq 14.81\text{dB}$  and widen the bandwidth to reach  $\geq 235\text{MHz}$ .

**Keywords:** *Double Octagon Microstrip Yagi Antenna (D-OFMYA), Bandwidth, Gain.*