ABSTRACT

Telecommunications technologies being developed today is LTE technology, this technology offers better communication quality than previous technologies. One of the devices is needed on these technologies is the antenna. MIMO antenna techniques are techniques that can improve the quality of the performance and capacity of LTE systems. This system uses multiantena both sides of the transmitter and the receiver side.

In this final project will be designed and realized Microstrip antenna for LTE MIMO triangular patch on the center frequency of 2.3 GHz, the frequency range of 2.2647 GHz - 2.3336 GHz with achieving ≥ 2 dBi gain and bandwidth up to 60 MHz.

From the results of simulation using CST software, available bandwidth is already eligible ≤ 1.5 VSWR and gain of around 1.02 dBi. On the results of the measurement antenna VSWR ≤ 1.5 is obtained with a bandwidth of 60 MHz on the first antenna, the second antenna 60 MHz, and approximately 1.02 dB Gain on the first antenna, 1.02 dB at the second antenna. Bi-directional radiation pattern shape obtained when the simulation and measurement. Linear polarization is obtained. From the design frequency, bandwidth and gain, then this antenna can be used as an indoor antenna on LTE technology.

Keyword: **Antena Mikrostrip, MIMO,LTE, Triangle Patch**