

ABSTRACT

The development of wireless mobile communication technology in the modern world is getting faster and diverse , so many new emerging technology standards and increasingly sophisticated . The technology one of them is WIMAX (Worldwide Interoperability for Microwave Access) which operates at a frequency of 2.3 GHz , 2.5 GHz , and 3.5 GHz . The antenna is an intermediary device between the transmission line and the air , the antenna must have the appropriate properties (match) with supply channels . Therefore , the antenna keep an important role in long range wireless communication system, meanwhile in satellite communication system or terrestrial communication systems.

One of the technique that can improve the performance of WIMAX communication system is by using Multiple Input Multiple Output (MIMO). MIMO system is a communication system that uses both multi - antenna transmitter side and the receiver side . This survey also developed a method of development of a dipole antenna , it is diamond dipole antenna that uses a triangular patch, so it is shaped like a diamond , with the distance (gap) that determined using the software simulator.

The obtain result of simulation , implemented using materials , namely brass. The measurement results for the 2300-2390 MHz frequency is 1.5 to VSWR . For the measured radiation pattern of the antenna is unidirectional , and linear -shaped polarization. Gain that can be achieved by this antenna is about 3 dBi.

Keywords : Antenna , MIMO , WIMAX , Diamond antenna