ABSTRACT

Antenna is a device that has very important benefit in the system communication without cable (wireless). Generally antenna has a function as a modifier guide wave passed in transmission line become free space wave and reverse. The characteristics of single microstrip antenna in between it have a narrow bandwidth, small efficiency, and small gain becomes it more popular to be designed to array antenna.

In the principal, microstrip antenna has characteristic with a narrow bandwidth. One of technique to make a wide bandwidth is by using array technique. Beside width bandwidth, array technique can also increase gain of antenna.

Antenna will designed has application W-LAN (Wireless-Local Area Network) has range frequency 2.300 MHz – 2.483,5 MHz. This antenna is also hoped will work well for frequency BWA (Broadband Wireless Access), one of the application is for WiMAX (Worldwide Interoperability for Microwave Access). For WiMAX, this antenna is hoped can work in dual band frequency 2,4 GHz and 3,3 GHz with range frequency 2.300 MHz-2.483,5 MHz. and 3,3 GHz-3,5 GHz.

In this Final Task will be designed an array linear microstrip antenna 6 elements with circular polarization and works in dual band frequency 2,4 GHz and 3,3 GHz. In this antenna, all elements will be distributed by microstrip line by using microstrip line technique where the ration is done by connecting ration line with patches, where patches and ration line use the same material. To get the parameter of design result so used Ansoft HFSS 9.2 software then gotten right modification in order to work in range frequency wanted.

Key word: microstrip, array, dual-band, BWA