

ABSTRACT

The further growth and enhanced technology of wireless communication are able to motivate the development of the extended technology standard. Antennas, in this case as a device which directly related to the transmission media are urgently needed. They play some important role in wireless communications. In addition, Antenna is generally defined the conversion of the guided wave in which those wave is passed through the transmission line into free space wave and vice versa.

The antenna which support W-LAN (Wireless-Local Area Network) is designed. According to the 802.11 b & g standard, W-LAN defined the range of 2,300 MHz – 2,390 MHz frequency spectrum which is divided into 6 frequency channel. On the other side, the 2.5 GHz BWA operates at the range of 2,500 MHz – 2,520 MHz and 2,670 MHz – 2,690 MHz of frequency spectrum. For the single user who try to apply both of technology or each of them, the antenna which support the above range of frequency is needed at their terminal equipment.

In this final project, the broadband antenna with the modification of the microstrip foursquare antenna into fourpoint antenna are designed such that it can obtain the wideband frequency. The antenna invoke the power divider to obtain circular polarization. From the modification using Ansoft ansamble 7.0 computer program, the accurate modification is achieved. Then, the desired frequency operation are obtained as well.

Key word : Microstrip Antenna, W-LAN, WiMAX, BWA 2.5 GHz, Power Divider