

## ***Abstract***

*In the current information age, people need communication to exchange information anywhere, anytime, and with anyone. And one of the communication system that can be used so that the telecommunication system can be integrated globally is WiMAX communication system. WIMAX (Worldwide Interoperability for Microwave Access) is a wireless broadband access technology (Broadband Wireless Access) with a speed of data access is very high and also has a wide reach.*

*One of the important tools you have in any wireless communication is an antenna. So in this final arrangement will be designed circular microstrip antenna for WiMAX applications. This antenna is designed to work on two frequencies (dual-band) by way of an antenna design and simulation will be performed using CST Microwave Studio software. So that the antenna can work on multiple frequencies (dualband) then it will use the slot loaded method. Type of feeding that will be used is eletromagnetically coupled.*

*Simulation results which is performed in software by the author produces the antenna dimensions that are used as antenna size for realization. Results obtained from measurements is VSWR = 1.5 at two frequency range (2.27- 2.52 GHz and 3.19-3.55 GHz). Gain at the working frequency of 2.45 GHz and 3, 35 GHz is more than 9dBi, 13.24 dBi at resonant frequency of 2.45 GHz and 10.47 dBi at the resonant frequency of 3.35 GHz. The radiation pattern is unidirectional on both the operating frequency.*

*Keyword: microstrip antenna, WIMAX, Electromagnatically Coupled, Slot Loaded*