

## ABSTRACT

*Data access is increasing every year. WiMAX is the solution for that problem. WiMAX (Worldwide Interoperability for Microwave access) is the new generation of wireless telecommunication developed by America. The standard for WiMAX is released by IEEE 802.16a at 2003. WiMAX technology was developed from fixed to mobile. But for mobile technology is not released in Indonesia so the development for WiMAX is just on fixed. The antenna is one of the important components for mobile user service.*

*In this final project, it has been designed and simulation bow tie antenna at center frequency 3.3 GHz. In designing this antenna, literature study is needed to get dimensions for the antenna which can work at 3.3GHz and can be employed at WiMAX system. In this design, the implementation of this antenna is for receiver. This final project research discusses influence of the simulation and the implementation and the performance of the antenna at the analysis of this research. Parameters to be discerned are VSWR, impedance, radiation pattern and gain. Simulation of the antenna is done in CST Microwave Studio software.*

*Design and simulation bow tie antenna that can work at WiMAX telecommunication and have 3.3 GHz. The result in this final project is  $VSWR < 2$ , gain  $> 2dB$ , impedance near  $50 \Omega$ , radiation pattern omnidirectional and bandwidth  $\geq 300 MHz$ .*

**keyword:** bow tie antenna, WiMAX