

## **ABSTRACT**

*WiMAX is the right choice at this time to meet community needs for telecommunications services are quick and easy access anytime anywhere. WiMAX (Worldwide Interoperability for Microwave Access) is a broadband wireless access technologies (Broadband Wireless Access BWA for short) which has a high-speed access to a wide range. In realization, WiMAX technology requires support device on the transmission side of the antenna. This antenna must be able to adapt to the needs of users. One suitable type of antenna on the user is a microstrip because it has several advantages, especially in the design of the antenna is thin, small, lightweight, and easy in fabrication.*

*By looking at some of the literature from previous Final Project that also realized the microstrip antenna for WiMAX application and refer to the reference journal about bandwidth enhancement, the authors designed and realized antenna receiver that is a rectangular microstrip antenna with inset feed rationing method and the air gap for WiMAX applications at frequencies from 2.3 to 2.4 GHz. Antenna radiation pattern is unidirectional. With the percentage of bandwidth is generated by 3.51% for  $VSWR \leq 1.5$  and 6.8% for  $VSWR \leq 2$ .*

**Keywords:** *WiMAX, microstrip rectangular, inset feed, the air gap*