

ABSTRACT

Wireless technology has developed very rapidly in line with the development needs of the community will need a more efficient technology considering the mobility of users of telecommunications technology is also higher. Performance of wireless networks can not be separated from the role of the antenna, the higher the level of mobilization of users of wireless technology makes the need for an antenna are also getting bigger. Antenna needs to be increasingly important when the user is outside of the coverage antenna. It basically functions as the antenna is electromagnetic energy release to the air / free space electromagnetic or as recipients of free space. Quality wireless communication system also depends on the type and quality of the antennas used.

Final project titled "Design and Implementation of Turnstile Antenna in the 2.3 - 2.4 GHz frequencies (WiMAX)" discusses the turnstile antenna design. And here is the analysis of the changes made to the dimensions of antenna parameters to be measured. Antenna designed a turnstile antenna made from a cross between 2 pieces dipole, where the dipole is made of small cylindrical copper. Initial design of antennas using statistical software simulator CST Studio Suite 2010.

Antenna has been realized in this final project is the turnstile antenna. Basically turnstile antenna is a dipole cross between 2 pieces which were given distinguishing between the two dipole phase by 90 degrees. Made turnstile antenna has $VSWR \leq 2$ with a working frequency of 2.3 GHz-2.4 GHz, the antenna has a gain $> 3dBi$, the realized antenna polarization is elliptical circular approach.

Keywords: *Turnstile, VSWR, WiMAX*