

ABSTRACT

Standard 802.16 developed by Institute of Electrical and Electronics Engineers (IEEE), that called *WirelessMANTM*, giving in perspective in accessing internet high-speedly without depend on network of cable or modem. On 2002 formed forum of Worldwide Interoperability for Microwave Access (WiMAX) which relate at standard 802.16 and undertake interconnection of various technical standard having the character of global become one unity. WiMAX technology cheaper than other broadband technology such as Digital Subscriber Line (DSL) or cable modem. According to 802.16d, the WiMAX will be provided with three especial frequencies: 2.5 Ghz; 3.5 Ghz; and 5.8 Ghz.

Antenna is necessary peripheral in transmission wireless. This final paper describes a brief explanation about antenna design for WiMAX used.

The designed antenna is a biconic antenna with 3.4 GHz – 3.6 GHz working frequency. Antenna's impedance is $49.87 - 8.81j \Omega$ at $VSWR \leq 2$, which is approached transmission line impedance of 50Ω . Antenna's gain from the measurement is 15.58 dBi, which is suitable to linear antenna array. Antenna's polarization pattern is elliptic, which is unavoidable because of elevation HPBW transmits antenna $\gg 2^\circ$. Reflector of antenna is causing antenna's unidirectional radiation pattern which is suitable for WiMax sectoral communication is achieved through reflector adding.