

ABSTRACT

Nowadays Worldwide Interoperability for Microwave Access (WIMAX) has been used in many telecommunication services. To support that services, it is needed to use antenna which has a lot of eminence especially in its design. One of them is microstrip antenna. Microstrip antenna has a lot of advantage, such as it has a thin design, small, light, and simple construction. In this case, it will make a microstrip antenna patch square.

This final project begins with calculating the dimension of antenna using function that define antenna dimension. The calculation result will be the input of simulation. The best result of some modification on antenna simulation will be used as dimension value on antenna fabrication. After fabrication, VSWR, polarization, gain, bandwidth will be calculated. The result of calculation will be analyzed.

In this final project has successfully created a microstrip antenna which has 8,329 dBi gain, 131,5 MHz bandwidth at $VSWR \leq 2$ with working frequency in 2,5 GHz. By using 8 array method, this antenna produces a large bandwidth enough which can be applied on WIMAX technology.

Keyword: Microstrip Slot Antenna, Patch Square, WIMAX