

ABSTRACT

Antenna is one of electronic device that has important role in wireless telecommunication world. For now on had been developed an antenna that have ability to be beamforming. Research has been doing to switch beam antenna which have fractal square form to support beamforming. This form has very compact structure and easy in manufacturing. High Frequency Structure Simulator (HFSS) 12.0. is Simulation Software that used to create fractal antenna.

Based on simulation and realization, this fractal antenna work on frequency 2.4 GHz which that WLAN application. Feedline has been used to ration antenna fractal square. position, length, width and number of feedline will affect radiation pattern.

Antenna that has been realized is antenna that have 4 feedline with 2 combination active ration. This antenna also have value VSWR 1.75 with different radiation pattern. So that, this switch beam antenna can support single antenna beamforming which the radiation pattern can be directed to desired user.

Keywords: Feedline, Radiation Pattern, Square Fractal, Switch Beam Antenna, Beamforming, HFSS 12