Chapter 4

Objective

The objective of my work is to modify the simple Rectangular Microstrip patch Antenna as such to minimize its drawback like narrow bandwidth. Also work will be done on reduction of its size. The techniques like Slotting and Tapering will be used here as such to improve its parameters. Using transmission line model, a rectangular microstrip patch antenna will be designed first by selecting its essential parameters- frequency of operation, dielectric constant of the substrate, height of dielectric substrate. Next, a Slot will be inserted. Slot in the ground plane or patch are generally used to increase the BW and enhance antenna performance of patch antennas. For Slotting, simulation will be done for each feed location and results will be checked for each feed location where the parameters (bandwidth and gain) will be improved. And for size reduction, Tapering will be done. After that results will be seen for both Slotting and Tapering on the parameters of rectangular microstrip patch antenna. Later on different techniques for obtaining wideband like using EBG structures making fractals, using shorting pins etc will be done to obtain high gain and broad band characteristics.