

ABSTRACT

CCTV or Closed Circuit Television is an ICT technology that is currently needed. CCTV is a recording device with more than one video camera to create video or audio data. In this study the authors made, "Design of a Triangular Microstrip Antenna with the DGS Method for CCTV Applications with a Frequency of 2.4 GHz". The purpose of this study is to design a triangular microstrip antenna using the DGS method which can increase the bandwidth and gain values so that it can be used for CCTV and to simulate and analyze the results of the microstrip antenna parameter values with the DGS method for CCTV. The Defected Ground Structure (DGS) method is one of the methods used in microstrip antennas by damaging the structure on the ground plane of the antenna. The purpose of using the DGS method is to increase the gain value on the antenna so that it can work on CCTV. The design of this antenna uses Ansoft HFSS V15 software. The simulation shows that the triangular antenna design with a side (a) 38 mm and a U-Slot with dimensions of width (F) 2 mm, vertical length (E) 13 mm, horizontal length (D) 7 mm on the ground using the DGS method produces a return loss value of - 47.74 dB, 1.00 VSWR, 169.2 MHz bandwidth, and 3.34 dB gain. From the simulation results, it was found that the use of the DGS method by making slots on the ground plane succeeded in improving the quality of the gain parameter value compared to the design of a microstrip antenna without DGS.

Keyword : *Defected Ground Structure, Microstrip antenna, CCTV*