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## ABSTRACT

Various configurations and characteristics of the radar provoke the emergence of new technologies that will support it. One of the supporters in terms of transmission. Radar will need a transmission device according to the characteristics of the radar itself. The transmitting device is an antenna. The issues are how to create an efficient radar antennas, small dimension and easy to configure the order.

At this final project entitled " Design and Realization Of Array Rectangular Patch Microstrip Antenna in X-Band ( 9,37-9,43 Ghz) for Surveillance Radar Application " to discuss the making proses of antenna using a coaxial probe technique with a form of rationing rectangular patch. This final project will use the software CST Microwave Studio 2010.

The expected results of this study, namely, is the implementation of two array elements antenna design with a rectangular patch that works on X-band radar applications. This antenna is expected to work in the frequency range from 9.37 to 9.43 GHz, has VSWR <1.5, and gain> 6 dBi.

**Key Words : Radar, Array of microstrip Antena, rectangular patch, X-band**