

DESIGN AND DEVELOPMENT OF A DIRECTIONAL ANTENNA
FOR 802.11b WIRELESS APPLICATION

VENUGOPAL PONNAMPALAM

ENGINEERING PROJECT
SCHOOL OF ENGINEERING
UNIVERSITY COLLEGE SEDAYA INTERNATIONAL
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ABSTRACT

Antenna is the fundamental components used in the transmission or reception of electromagnetic waves carrying signals and interfaces the transmitter or the receiver to free space element. In this project, an indoor directional antenna is designed and developed for 802.11b wireless networking equipment which operates at a range of frequencies from 2.412 GHz to 2.462 GHz. The designed directional antenna will increase the wireless network accessing range up to 1000 feet indoor and 7 miles outdoor. The antenna will help to boost the signal strength of the network. Measurement of gain, bandwidth, and the signal strength of the developed directional antenna will be recorded and compared theoretically to a commercial antenna.