

A

Report on

WIRELESS DETECTING MOBILE PHONES IN RESTRICTED AREAS AN
EXAM HALL

A report submitted for the partial fulfillment of the requirements for Mini Project of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

Submitted by

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MINI PROJECT

(WIRELESS DETECTING MOBILE PHONES IN RESTRICTED AREAS AN EXAM HALL)

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DETECTION OF ACTIVE MOBILE PHONE IN EXAM HALL

ABSTRACT

The use of mobile phone as a cheating tool in the examination hall among students have considerably increased a burden to invigilators to ensure integrity in examination hall. Many active mobile phone detection schemes had been proposed as the solution to this problem. However, the detection system function in a small detection range of 1.5 to 2 meters from the detection circuit and does not distinguish various frequency bands of radio frequency signals. In order to have diverse range of RF mobile phone signals detection for alerting the invigilators of their specified monitoring region, antenna is proposed to be used. This is done by antenna design simulation using Computer Simulation Technology (CST) software. Two types of antenna; single-dipole antenna and multi-band dipole antenna are simulated to know the characteristics of VSWR, gain and total efficiency. From the simulation results, multi-band dipole antenna shows acceptable VSWR value which are approximate to 2 V, gain is equal to 2.85 dB and total efficiency is equal to 2.484 dB for 2.4 GHz signal. The results imply positive event that multi-band antenna can be a preferable tool in elaborating accurate RF signal detection of active mobile phone in examination hall.