

# **UNIVERSITI TEKNOLOGI MARA**

**FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE  
SCIENCE**

**ITT 580**

**Data Communication and Networking Project**

**LINUX CUSTOM WIRELESS ACCESS POINT WITH  
AUTEHNTICATION SYSTEM**

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Bsc.(Hons) Data Communication and Networking**

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Thesis submitted in fulfillment of the requirements for  
**Bachelor of Science (Hons) Data Communication and Networking**  
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## **ABSTRACT**

The main goal of this thesis is to setup a custom wireless access point that can also perform a reliable authentication and encryption system. These are made possible by using the D-Link DWL-G520 108 Mbps PCI adapter which uses an Atheros ar5212 chipset. The authentication part uses the WPA-EAP authentication protocol which is implemented using FreeRadius server. This thesis involve configuring and testing the wireless access point making it a secure wireless device, and the effect of encryption on effective network bandwidth

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