

**Universiti Teknologi MARA**

**Power over Ethernet: Measuring  
Network Performance for Home  
Network**

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Thesis submitted in fulfillment of the requirements for  
**Bachelor of Science (Hons) Data Communication  
And Networking**  
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**Title: POWER OVER ETHERNET: MEASURING NETWORK PERFORMANCE  
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## DECLARATION

This is to certify that I am responsible for the work submitted in this project that the original work is my own except as specified in the reference and acknowledgement and that the original work contained herein have not been taken or done by unspecified sources or persons.



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(JULIANA BINTI JUFFREE)

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## **ABSTRACT**

This research project serves as a reference on measuring and determining the network performance upon the Power over Ethernet (PoE) connection. With the emerging evolution of network devices compatible with Power over Ethernet technology, PoE had become the main choice for powering access points, IP phones, network camera and mobile kiosk as PoE technology enables data and power supply being sent through the same Ethernet cable. There are three different experiments conducted through this research paper which are default testing, environment testing and range testing. The data transmission behavior is observed and recorded before and after the adoption of Power over Ethernet technology. For conclusion, the Power over Ethernet technology does not degrade the network performance for home environment. This important finding is revealed through all experiments conducted through the thesis project.