

**Universiti Teknologi MARA**

**Performance analysis based on DDoS attack at MAC  
layer in WLAN**

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**Thesis submitted in fulfilment of the requirements for Bachelor of  
Computer Science (Hons.)  
Data Communication and Networking  
Faculty of Computer and Mathematical Science**

**Dec 2018**

## **STUDENT DECLARATION**

I certify that this thesis and the project to which it refers is the product of my own and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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DEC 6, 2018

## **ABSTRACT**

Wireless Local Area Network (WLAN) is an advance of technology that brought important changes to human life. Now, it is an integral part of everyday life, creature increasingly affordable and easier to build. But WLAN suffer from several security threats and one of that is Distributed Denial of Service (DDoS) attack which is jamming attack. Almost 81% of jamming attacks are initiated at the MAC layer due to the nature of wireless networks that lead to this project. Main objectives of this paper are to configure jamming attack at MAC layer in WLAN and to evaluate the performance of WLAN by using three types of metrics which is Bit Error Rate (BER), Throughput and Signal to Noise Ratio (SNR). For this purpose, jammer sending the maximum packets to the network to avoid legitimate nodes from sending their packets through wireless environment. OPNET Modeler 14.5 is used to configure and Microsoft Excel 2016 to analyze the performance of the network. A comparison of two scenarios which is network without attack and network with attack was conducted. It concluded that Throughput is a best metric to detect the attack compared to others.

# TABLE OF CONTENTS

<b>CONTENTS</b>	<b>PAGE</b>
<b>SUPERVISOR APPROVAL</b>	i
<b>STUDENT DECLARATION</b>	ii
<b>ACKNOWLEDGEMENT</b>	iii
<b>ABSTRACT</b>	iv
<b>TABLE OF CONTENTS</b>	v
<b>LIST OF FIGURES</b>	vii
<b>LIST OF TABLES</b>	viii
<b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background	1
1.2 Problem Statement	2
1.3 Research Objectives	3
1.4 Research Scope	3
1.5 Significance of Research	4
<b>CHAPTER TWO: LITERATURE REVIEW</b>	
2.1 Introduction	5
2.2 Category of Wireless Networks	5
2.2.1 Wireless Mesh Networks	6
2.2.2 Wireless Sensor Networks	6
2.2.3 Mobile Ad Hoc Networks	7
2.2.4 Vehicle Ad Hoc Networks	7
2.2.5 Intelligent Vehicle Ad Hoc Networks	7
2.2.6 Wireless Local Area Networks	8
2.3 MAC Layer	8
2.4 Intelligent Jammer	9

2.4.1	NAV attack	10
2.4.2	Spurious RTS / CTS	10
2.5	Random Waypoint Model	13
2.6	Attack at MAC Layer in Wireless LAN	13
2.7	Conclusion	18

### **CHAPTER THREE: METHODOLOGY**

3.1	Introduction	19
3.2	Research Methodology	19
3.2.1	Information Gathering	21
3.2.2	Project Requirement	21
3.2.3	Design and Development	23
3.2.4	Testing / Experimentation	26
3.2.5	Analysis	27
3.2.6	Documentation	27

### **CHAPTER FOUR: RESULT AND FINDINGS**

4.1	Performance Test for Jamming Attack	28
4.1.1	Signal-to-Noise Ratio (SNR)	28
4.1.2	Bit Error Rate (BER)	32
4.1.3	Throughput	37

### **CHAPTER FIVE: CONCLUSION AND RECOMMENDATION**

5.1	Conclusion	42
5.2	Recommendation	43

<b>REFERENCES</b>		44
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