

**CONGESTION ANALYSIS IN WI-FI NETWORK OF
ENGINEERING TOWER (2) DUE TO OVERLOADING OF
TRAFFIC**

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ABSTRACT

This project researched on the congestion analysis in Wi-Fi network of Engineering Tower 2 due to overloading of traffic. The objectives proposed by the project are to study and understand the concept of Wi-Fi network, congestion and overloading in Wi-Fi network. The project also discussed about the factors that led to congestion in Wi-Fi networks and solutions to overcome them. Wi-Fi mapping tool 'Ekahau HeatMapper' and network scanner software named 'inSSIDer' were used to collect the data. Data collecting process were done at Level 11, Engineering Tower 2 for three selected Access Points (APs) at selected locations during noon, evening and night for five days. It was then analyzed and results were plotted using MATLAB and Microsoft Excel for better illustration and understanding. The research and analyzing process only covers and concentrate on congestion of Wi-Fi network in Engineering Tower 2 within the use of the 2.4GHz frequency that were deployed for wireless networks in Malaysia because most devices can operate on that band.

TABLE OF CONTENTS

APPROVAL	i
DECLARATION BY CANDIDATED	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF FIGURES	vii
LIST OF TABLES	viii
LIST OF ABBREVIATIONS	x
CHAPTER 1	1
1.1 INTRODUCTION	1
1.2 OVERVIEW OF THE STUDY	1
1.3 PROBLEM STATEMENT	2
1.4 OBJECTIVES	3
1.5 SCOPE OF PROJECT.....	3
1.6 THESIS ORGANIZATION	4
CHAPTER 2	5
2.1 INTRODUCTION	5
2.2 CONGESTION IN WI-FI NETWORK	5
CHAPTER 3	9
3.1 INTRODUCTION	9
3.2 FLOW CHART.....	9
3.3 inSSIDer	11
3.4 EKAHAU HEATMAPPER	12
3.5 STEPS AND PROCEDURES.....	14
CHAPTER 4	18
4.1 INTRODUCTION	18
4.2 DATA	18
4.3 FACTORS CONTRIBUTED TO CONGESTION	20

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This chapter discussed on the overview of the study done on the proposed title, the problem statement encountered including the issues regarding the study and solutions suggested by most researchers. Besides that, the objective that will be the main focus of the study and lastly the scope of the study made.

1.2 OVERVIEW OF THE STUDY

The wireless communication revolution is bringing fundamental changes to data networking, telecommunication, and is making integrated networks a reality. With wireless network, users are certainly freed from the cord or wired, personal communications networks, wireless (Local Area Network) LAN's, mobile radio networks and cellular systems, enable the communications anywhere and everywhere at any time [1]. A wireless network is any type of computer network that uses wireless data connections for connecting network nodes. It is a method by which homes, telecommunications networks and enterprise installations avoid the costly process of introducing cables into a building, or as a connection between various equipment locations. Generally, wireless telecommunications networks are implemented and