

## TABLE OF CONTENTS

<b>COVER .....</b>	<b>i</b>
<b>APPROVAL PAGE .....</b>	<b>ii</b>
<b>SELF DECLARATION AGAINST PLAGIARISM .....</b>	<b>iii</b>
<b>ABSTRACT .....</b>	<b>iv</b>
<b>PREFACE .....</b>	<b>v</b>
<b>DEDICATION.....</b>	<b>vi</b>
<b>TABLE OF CONTENTS.....</b>	<b>vii</b>
<b>TABLE OF FIGURE .....</b>	<b>ix</b>

### **CHAPTER I INTRODUCTION**

I.1 Background .....	1
I.2 Problem Formulation .....	3
I.3 Objective .....	3
I.4 Hypotheses .....	3
1.5 Scope of Work .....	3
1.6 Research Metodology .....	4

### **CHAPTER II LITERATURE REVIEW**

II.1 Neural Network Theory .....	5
II.1.1 Basic Concept of ANN .....	6
II.1.2 Architecture of ANN .....	8
II.1.3 Activation Function of ANN .....	10
II.1.4 Training Methods of ANN .....	14
II.1.5 Radial Basis Function Network .....	15

II.2 Data Communication Theory .....	19
II.2.1 Data Communication Network.....	20
II.3 Theory Of Traffic .....	21
II.3.1 Traffic Units .....	22
II.3.2 Traffic Flow.....	23
II.3.3 Traffic Variation.....	23
II.4 Multi router Traffic Grapher (MRTG) .....	25

### **CHAPTER III NETWORK IMPLEMENTATION AND SIMULATION**

III.1 Data Collection .....	28
III.2 Learning Method of Radial Basis Function Neural Network .....	28
III.2.1 Input Data Processing .....	30
III.2.2 Training Method of RBFNN.....	31
III.3 Data Traffic Prediction and Validation using Radial Basis Function Neural Network Method .....	34

### **CHAPTER IV SIMULATION RESULTS ANALYSIS**

IV.1. Analysis of Input and Target data Variable Processing on Radial Basis Function Neural Network .....	38
IV.2. Analysis of Radial Basis Function Neural Network Training Output Result .....	40
IV.3 Analysis of data traffic prediction for the Second Week of December 2014 by using Radial Basis Function Neural Network Methode .....	41

## **CHAPTER V CONCLUSION**

V.1 Conclusion .....	63
V.2 Suggestion .....	63

## **BIBLIOGRAPHY**

## **ATTACHMENT**