UNIVERSITI TEKNOLOGI MARA

A NETWORK AWARE BASED RECOMMENDER SYSTEM FOR VOIP APPLICATION SERVICE IN ELEARNING ENVIRONMENT

NAZDIANA BINTI AB.WAHAB

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TABLE OF CONTENT

ACKNOWLEDGEMENT ii

TABLE OF CONTENTS iii

LIST OF TABLES iv

LIST OF FIGURES vi

CANDIDATE'S DECLARATION vii

ABSTRACT viii

CHAPTER I
INTRODUCTION

1.0 Background 1
1.1 Problem Statement 3
1.2 Motivation and Objectives 5
1.3 Scope of Thesis 6
1.4 Thesis Contribution 7
1.5 Thesis Organization 8

CHAPTER II
LITERATURE REVIEW

2.1 VOICE OVER IP 9
2.1.1 General Architecture 10
2.1.2 VOIP Network Protocol 11
2.1.3 Voice Compression and Encoding 13
2.1.4 VOIP Application Software 13
2.1.5 Challenges and Issues for IP-based Voice and Video 14
- End to End Latency 15
- Packet Loss 16
- Jitter or Variable Delay 17

2.1.6 Characteristic of Voice and Data in VOIP 18
2.1.7 Bandwidth Measurement 19
2.1.8 Bandwidth Measurement and Monitoring Tools 20
- Pathload 20
- MRTG 21
- Netpeeker 22

2.2 eLEARNING 23
2.2.1 Education Evolution and Trend 24
2.2.2 Mobile Device as elearning Access Media 24
2.2.3 WIFI and Cellular Network Technology as Medium for Internet Access 25
- WIFI 25
- GPRS 25

- 3G.....26

2.2.4 Advantages of eLearning.....26

2.3 SKYPE.....27

2.4 INTEGRATION OF VOIP IN ELEARNING.....28

CHAPTER III

METHODOLOGY

3.1 RESEARCH METHOD OVERVIEW.....29

3.2 INITIATION PHASE.....32

3.2.1 Scope and Area of Project.....32

3.2.2 Gathering Information and Identify Problem Statement.....32

3.3 PLANNING PHASE.....32

3.3.1 eLearning Prototype System with VOIP Application Integration.....32

3.3.2 Recommender System Algorithm for VOIP Services.....34

3.3.3 Bandwidth estimation Process.....35

3.4 EXPERIMENTAL PHASE.....37

3.4.1 Integration and Implementation of Pathload and MRTG.....37

3.4.2 Network Aware based Recommender System testing.....43

a. Algorithm data range POC.....43

b. Algorithm Testing and Commissioning in eLearning prototype system....46

3.5 ANALYSIS PHASE.....47

3.6 HARDWARE SPECIFICATION.....48

CHAPTER IV

RESULT ANALYSIS AND DISCUSSION

4.1 Bandwidth Estimation using Pathload and MRTG.....49

4.1.1 Experiment 1: GPRS Scenario.....51

4.1.2 Experiment 2: 3G Scenario.....53

4.1.3 Experiment 3: ADSL Scenario.....54

4.2 Network Aware based Recommender Testing.....55

4.2.1 Algorithm Data Range Proof of Concept.....56

4.2.2 Algorithm Testing and Commissioning in eLearning prototype system.....58

CHAPTER V

CONCLUSION.....61

5.1 Recommendation.....62

ABSTRACT

The varying bandwidth availability of a network path, has contributed to the unstable performance when running audio and video services over the internet network. VOIP application integration in eLearning system, which offers voice and video services, is one example of applications that has been affected by this varying network availability. To minimize this impact, a network based algorithm that could provide current network status on bandwidth availability, and then do the recommendation accordingly is needed. Therefore, this dissertation work, proposed a network based recommender that could be used in the application of VOIP services in eLearning environment. This paper showed the integration of VOIP in a simple eLearning prototype system. A network aware based algorithm is used to recommend users the best VOIP services available at that point of time (whether audio, video or data) based on the real time data obtained from bandwidth measurement tool. Pathload has been chosen as a measurement tool that estimates the available bandwidth of a network path.