PERFORMANCE OF ADSL

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ABSTRACT

Digital Subscriber Line (DSL) is a new technology that uses the existing telecommunication networks such as the local loop telephone line to accomplish high-speed delivery of voice, video and multimedia. Asymmetric Digital Subscriber Line (ADSL) is asymmetrical, which means it provides higher bit rates in downstream direction (from the telephone central office to the subscriber's site) than the upstream direction (from the subscriber site to the telephone central office).

This thesis presents the performance analysis of ADSL. The factors being investigated are the downstream speed and upstream speed of an ADSL signal in various distances. The obtained data are displayed in graphical form and bar chart using Microsoft Excel program. Microsoft Visual Basic Version 6.0 being used as simulation software to display the graphs and charts.

The result that were obtained through the testing and data evaluation showed that there are three factors influencing the speed performance of ADSL, which are the copper quality, wire gauge and distance.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Introduction

Asymmetric Digital Subscriber Line (ADSL), a new modem technology, converts existing twisted-pair telephone lines into access paths for multimedia and high-speed data communications [1]. ADSL transmits maximum 8 Mbps to a subscriber, and as much as 640 kbps more in both directions. Such rates expand existing access capacity by a factor of 50 or more without new cabling. ADSL can literally transform the existing public information network from one limited to voice, text and low resolution graphics to a powerful, ubiquitous system capable of bringing multimedia, including full motion video, to everyone's home this century.

ADSL will play a crucial role over the next ten or more years as telephone companies enter new markets for delivering information in video and multimedia formats [1]. New broadband cabling will take decades to reach all prospective subscribers. But success of these new services will depend upon reaching as many subscribers as possible during the first few years. By bringing movies, television, video catalogs, remote CD-ROMs, corporate LANs, and the Internet into homes and small businesses, ADSL will make these markets viable, and profitable, for telephone companies and application suppliers alike.

1.2 Objectives

There are a few objectives to be accomplished when doing this final project.

a) To understand about ADSL technology

b) To study the characteristic of downstream speed