

**BANDWIDTH ALLOCATION FOR WIRED AND  
WIRELESS CONNECTIONS**

**BY**

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## ABSTRACT

This project is a systematic study of “Bandwidth Allocation” in networks. IT comprises of two main strategies of networking namely wired networks and wireless networks. The problem of bandwidth allocation has been extensively studied for wired and wireless domain. But very little attention has been paid for wired-cum-wireless network topologies. This paper focuses on issues that make a wireless scenario different from a wired one. In the project the various algorithm that are used in wireless networks have been discussed and simulation approaches have been done to simulate a communications throughput. Examples of graphical results have been illustrated and compared. A comparison of the important features of wired and wireless networks have been tabulated. The technique of bandwidth allocation is an ever evolving problem, thus many attempts have been made to make bandwidth allocation fair and justifiable. This study will give a good idea about these attempts as well as highlight the issues involved.

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# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

Technology in this world is getting better and better nowadays by improving and upgrading the existence of technology, especially in communication system. The word communication is derived from Latin *communicare*, which means “to share”. Communication is a process of representing, transforming, interpreting, or processing information among people, places or machines. This process involves a sender, receiver, and transmission medium over which the information flows. The basic conversation between two people occurs when a message transferring when they are communicating. Once the two persons move away from each other, there is no information flows. Thus, for a better transmission medium and also to make sure this communication happens, they must be a proper network system which provides connection from one location to another location.

There are two major categories of technologies in communication, wired and wireless communication. Wired technology means using physical wires to transmit electronic signals over a metal conductor. Wired technology has more reliable ways to transmit and receive the signals and is not affected by other wireless signals. However, wireless technology uses electromagnetic waves to transmit and receive the signals without using physical wires or cordless systems. Thus, wireless technology is growing very fast because of convenient usage.