

**ANALYSIS OF PEER-TO-PEER (P2P) SWARMING CONTENT
DELIVERY SYSTEMS**

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ABSTRACT

Due to the high cost of a Content Distribution Network, most Internet users are not able to scalably deliver content to large audiences. In this paper present a study swarming, a scalable and economic content delivery mechanism that combines peer-to-peer networking with parallel download. First, it is define a swarming architecture that generalizes the basic delivery mechanism in popular swarming protocols such as Gnutella [7] and BitTorrent [1]. That can conduct a comprehensive performance study of swarming delivery, using a variety of workloads. The results show that swarming scales with offered load up to several orders of magnitude beyond what a basic web server can manage. Most impressively, swarming enables a web server. The outcomes of the project are to illustrate the benefits and limitations of a basic swarming protocol and to identify several key opportunities for performance improvements on the system that has been analysed. The analysis for P2P swarming is performed using software OMNeT++. [2]

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CHAPTER 1

PROJECT BACKGROUND

1.0 OBJECTIVES OF THE PROJECT

The main objectives of this project are:

- To be familiar with OMNeT ++ Software.
- To investigate P2P performance analysis P2P Swarming content delivery systems traffic category using simulation tool.
- To understand the concept and the application P2P network topology.
- To analyze the performance P2P application comparing the traditional download method.

1.1 INTRODUCTION

1.1.1 Content Distribution and Sharing

Content distribution is a generic term, used to describe any network communication which uses a one-to-many distribution model. The specific type of content is not important, it can be anything from binary data to audio, video or a combination of all of these. The most important distinction that needs to be made is that the content is not real-time sensitive. This project aims to make recommendations to modify the protocol to enable it to be more real-time capable, but due to the nature of P2P systems, it is very difficult to provide the QoS guarantees necessary for real-time applications. Sharing (or more commonly file sharing) is used to describe users publishing data, freely accessible to others using a similar sharing protocol. In recent times sharing applications such as Napster and Kazaa have gained a great deal of media attention due to the large amount of copyrighted material being illegally distributed via these networks. Currently swarming protocols such as BitTorrent are not used for file sharing in the same manner as it is specifically designed to share single large blocks of data. However as the protocol becomes better known, web applications are being developed to enable the use of