TRIBHUVAN UNIVERSITY

INSTITUTE OF SCIENCE AND TECHNOLOGY

ANALYSIS OF QUERIES ROUTING IN SUPER-SUPER-PEER BASED P2P ARCHITECTURE USING NBTree: THE HYBRID ALGORITHM

Thesis

Submitted to:

Central Department of Computer Science and Information Technology

Kirtipur, Kathmandu, Nepal

In Partial Fulfillment of the Requirements for

Master's Degree in Computer Science & Information Technology

Submitted by:

Mr. Abhishek Dewan

September, 2014

Under the Guidance of

Prof. Dr. Subarna Shakya

Departmeent of Electronics and Computer Engineering

Institute of Engineering, Pulchowk, Nepal

ACKNOWLEDGEMENT

ABSTRACT

The Internet is converging to a more dynamic, huge, fully distributed peer-to-peer (P2P) overlay networks containing millions of nodes typically for the purpose of information distribution and file sharing as the increase in the number of computers connected to the Internet are increasing rapidly. Because of which a challenging problem in unstructured P2P system is how to locate peers that are relevant with respect to a given query with minimum query processing and minimum answering time. Connected peers can leave the overlay network any time and new peers can join it any time. To achieve our goal we suggest an unstructured P2P system which is based on an organization of peers around super-peers that is connected to super-super-peer according to their semantic domains and also uses NBTree: The Hybrid Algorithm to extract Super-Peer that contains peers with relevant data respect to a given query.

Keywords: Decision Tree, Machine Learning, NBTree, P2P, P2P Queries Answering, P2P Queries Routing, Super-Super-Peer, Weka

TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURE

LIST OF ABBREVIATION

API	:	Application Programming Interface
ARFF	:	Attribute-Relation File Format
ARPANET	:	Advanced Research Projects Agency Network
CART	:	Classification and Regression Tree
DHT	:	Distributed Hash Table
GAs	:	Genetic Algorithms
GATree	:	Genetically Evolved Decision Tree
GNU	:	General Public License
HTTP	:	Hyper Text Transfer Protocol
ID3	:	Iterative Dichotomiser
IP	:	Internet Protocol
MANETs	:	Mobile Ad hoc Networks
P2P	:	Peer-to-Peer
QoS	:	Quality of Service
SIP	:	Single Inline Package
TTBM	:	Time Tiken to Build Model
TTL	:	Time-to-Live
URL	:	Uniform Resource Locator
WEKA	:	Waikato Environment for Knowledge Analysis