



**UNIVERSITI PUTRA MALAYSIA**

**DEVELOPMENT OF AN INTERNET BASED RATING  
SYSTEM FOR ECOTOURISM SITES**

**MOHAMMAD SHOKOUHI**

**FK 2003 9**

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**By**

**MOHAMMAD SHOKOUHI**

**Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in  
Fulfillment of the Requirement for the Degree of Master of Science**

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**To my beloved father, mother, wife and sisters**

***I dedicate this work with great love and appreciation for their kindness,  
encouragement and strong support***

Abstract of thesis submitted to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

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**March 2003**

**Chairman: Professor Mohamed Daud, Ph.D.**

**Faculty: Engineering**

In recent years, engineers, economists, and industry professional have placed an increasing emphasis on rating product, to know their quality. The Internet based rating system is an informative system, which is designed to inform visitors about the current state of rated object, which is related to a selected scenario for rating. To help users in making decision on the choice of objects that users are going to use, buy, visit etc, the Internet based rating system is designed to provide complete information on objects within its website. There are three types of entries allowed in the system such as site visitors, moderators and appointed auditors. As a testing system, the Malaysian ecotourism site has been selected for rating. The adapted rating system will be helpful for people and Malaysian government, especially ecotourism operator to know more about ecotourism site in Malaysia. Other countries can use the developed system as well. The

system is flexible such that it can be used to rate a wide variety of objects on multiple levels.

Abstrak tesis ini dihantar kepada Senat Universiti Putra Malaysia bagi memenuhi keperluan untuk mendapatkan ijazah Master Sains

**PEMBANGUNAN SISTEM PENILAIAN BERASASKAN INTERNET UNTUK  
LAMAM EKO-PELANCONGAN**

Oleh

**MOHAMMAD SHOKOUHI**

**Mac 2003**

**Pengerusi: Profesor Mohamed Daud, Ph.D.**

**Fakulti: Kejuruteraan**

Di dalam tahun-tahun kebelakangan ini, jurutera-jurutera, ahli-ahli ekonomi dan para professional dalam industri telah meletakkan peningkatkan menitikberatkan terhadap penilaian produk, untuk mengetahui kualiti mereka. Sistem penilaian berasaskan internet adalah merupakan sistem yang bermaklumat, yang mana direka untuk memberitahu pelawat mengenai keadaan semasa sesuatu objek yang dinilai, yang mana dikaitkan kepada senario yang dipilih untuk penilaian. Untuk membantu para pengguna dalam membuat keputusan terhadap pemilihan objek yang mereka akan guna, beli, lawat dsb, sistem penilaian berasaskan internet ini juga direka untuk menyediakan maklumat yang lengkap terhadap objek-objek di dalam laman webnya. Terdapat 3 jenis laluan yang dibenarkan di dalam sistem ini seperti laman pelawat, moderator dan juruaudit yang dibenarkan. Sebagai sistem percubaan kawasan eko-pelancongan di Malaysia telah dipilih untuk penilaian. Ia akan banyak membantu orang ramai, kerajaan Malaysia dan eko-pelancongan untuk mengetahui lebih banyak maklumat mengenai kesemua kawasan

eko-pelancongan. Secara ketaranya, pembangunan sistem boleh digunakan untuk kawasan eko-pelancongan di negara lain. Sistem ini adalah fleksibel, dengan ini ia boleh digunakan untuk menilai pelbagai objek dengan lebih luas pada pelbagai tahap.



## ACKNOWLEDGEMENTS

In the name of Allah the Merciful the Compassionate. To him do I entrust myself; to Him be praise and grace, and with him is success and immunity.

I would like to express my gratitude to my supervisory committee chairman, Professor Dr. Ir. Mohamed Daud for his constant guidance and strong support throughout my study.

My deep appreciation and sincere gratitude are also due to Professor Dato' Mohd Zohadie Bardaie and Dr. Veraraghavan Prakash, member of supervisory committee for their kind co-operation and suggestion.

Last but not least, I am thankful to my parents, wife and sisters for their understanding, patience and strong support, which have been always been a source of inspiration and strength throughout my life. However, it was their subtle encouragement that kept me going.

## **DECLARATION**

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

---

**(Mohammad Shokouhi)**

Date:

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## **LIST OF ABBREVIATION**

<b>WWW</b>	<b>World Wide Web</b>
<b>HTML</b>	<b>Hyper Text Markup Language</b>
<b>TCP</b>	<b>Transport Control Protocol</b>
<b>IP</b>	<b>Internet Protocol</b>
<b>FTP</b>	<b>File Transfer Protocol</b>
<b>EQ</b>	<b>Expert Questionnaire</b>
<b>PICS</b>	<b>Platform Internet Control Section</b>
<b>ASP</b>	<b>Active Server Pages</b>
<b>PHP</b>	<b>PHP Hypertext Preprocessor</b>
<b>MP3</b>	<b>Media Player 3</b>
<b>CGI</b>	<b>Common Gateway Interface</b>
<b>DBMS</b>	<b>DataBase Management System</b>
<b>SQL</b>	<b>Standard Query Language</b>
<b>RDBMS</b>	<b>Relational DataBase Management System</b>
<b>DB2</b>	<b>DataBase2</b>
<b>SDLC</b>	<b>System Development Life Cycle</b>
<b>CST</b>	<b>Certificate Sustainable Tourism</b>



# CHAPTER I

## INTRODUCTION

### 1.1 Prologue

There is no doubt that rating systems play a major role on human decision making. Ratings for products and services are increasingly important on the Internet, as they allow users to harvest the wisdom of the community in making decisions. A way to choose the best objects based upon a few expert opinions and its embodiment as a rating algorithm for an end-user personnel qualification system is described.

In recent years, engineers, economists, and industry professional have placed an increasing emphasis on rating products to know the quality of the product. As is well known, much of life involves comparing multiple sets of alternatives in comparison to each other. That is, choosing from some set of alternative courses of action in situations where we are uncertain about the actual consequences that will occur for each course of action being considered. Rating systems are very useful way to help make decisions easier and more trustworthy. Therefore rating systems are based on the collaboration support points. Decision-making is a cognitive activity involving the interplay of environmental cues and human cognitive processes, culminating in the selection of one or more possible choices of action.

People use individual criterion to rate objects or to do draw comparisons. Making better decisions is the cause of doing a comparative study, or what it called rating. In most cases, people use an experimental or general criterion, which can be used for multiple objects and changed to satisfy the different criteria. The proposed system will involve three groups of people to attend to rating. Visitor, moderator, and author are the people, which should attend to rating. Further to this, the general rating system will be tested for an ecotourism system incorporate with a comprehensive ecotourism evaluation system.

## **1.2 Problem Statement**

As use of computers in communication and data processing is becoming more essential for the effective conduct of most business, the number of informative web sites is increasing on the Internet, which is creating confusion and mistrust. User's votes can be seen in alternative web sites, which tell people of others ideas. Posting the overall of votes is became a popular way to get user's idea. Users have the option of vote in verity of subjects such as food, actor, movie, music, animals and so on as it is one of the way to inform the people about another's idea. People do not need misleading and unpleasant information, as although it is a simple way of giving information, it's not enough to gain the trust from site visitors.

One of the simplest ways of rating is totally the vote of site visitors. Most of the times voting systems are not considered about the given data by users as there is no reference of people's vote to make it trustworthy by the site visitors.

One problem is that, these are specific rating system and cannot be used for other subjects. Secondly, some of these systems are working on certain weights for each object. It means that they cannot be used, even for their own system, if any weights of the parameter need to be altered in the future. One of most important objectives in designing any system is the ability to maintain and keep an up to date system.

### **1.3 Objective of the Study**

The objective of this project is to investigate the problem of using a rating system, which is capable of supporting any scenario. The system can be developed on any website to make the site more informative for the user and to isolate the weak and strong points of the site's object, which is based on the user's reply. The system is related to the method of weight propagation that is used to rank pages in some search engines. The system can accept maintenance via the Internet, and will be tested with Eco-Tourism registration site in Malaysia. The specific objectives of this project are:

- To produce a rating system, which is flexible
- To process the idea of three group people about the site, i.e. visitor, moderator and an author
- System will be used for ecotourism rating

### **1.4 Significance of the Study**

The growing usage of Internet programming on e-Learning and e-Commerce sites require the system to judge intelligently and efficiently on a site's performance. One of the judgment tools is online voting, which have the majority of usage on the Internet.

The rating system will be built on this aim, as the performance of this system would obviously increase the capacity of managing Internet sites to give information in a simple and informative way. For there more, the usage of this rating system will enable the user to isolate strong points of the object, which will present options for enhancement.

### **1.5 Expected Outcome**

The system will be built comprising of three layers i.e. 1.visitor, 2.Moderator, 3.Author. There should be some storage tools such as a database, which later will be used as a data warehouse for references of involved data for the system. Also it will use a Internet programming language to handle the Internet and do the calculations. First layer will handle visitors' evaluation. Users in this level can vote straight away but cannot access the system database. Those who vote with technical detail and questions for rating the objects will use the second layer, known operator layer. The operator will be design on two kinds of people.

1. Moderator
2. Auditor

The third layer is for the system maintenance. People in this mode might be an administrator, which already have the authority to modify the system. The system should have a facility to obtain the knowledge from the online domain expert, as computing the input of any scenario based on the given weight to the objects. The system will also be flexible to configure itself with user's demand. As a test on an ecotourism site, it can give information to the people about the site, which they want to

visit. It can help them in case of trust and integrity to support their decision about the ecotourism site.

### **1.6 Scope and Limitation**

Scope will be on rating criterion to make a flexible system, which can accept and can be used for any scenario given by system administrator by checking the qualification of objects and getting raters' ideas via the Internet. The system can keep track of each user and will know the IP address for any coming user to the site. Obviously administrator people must login in such a full privilege mode, which requires special passwords and username.

In order to make an open rating system, which will be tested on ecotourism sites on the Internet, incoming data cannot be tested and verified by the system. Meaning, it is the users responsibility to input the right information to the system.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The Internet is a computation of networks, linking computers to computers sharing TCP/IP protocols. Each software runs to provide or serve information and/or to access and view information. The Internet is the transport vehicle for the information stored in files or documents on another computer. It can be compared to an international communications utility servicing computers. It is sometimes compared to a giant international plumbing system. The Internet itself does not contain information. It is a slight misstatement to say a "document was found *on* the Internet." It would be more correct to say it was found *through* or *using* the Internet. What it was found in (or on) is one of the computers linked to the Internet (Barker, 2001).

Computers on the Internet may use one or all of the following Internet services: Electronic mail (e-mail), permits you to send and receive mail, and provides access discussion groups, often called Listservs® after the software they operate under. Telnet or remote login permits your computer to log onto another computer and use it as if you were there.

File Transfer Protocol (FTP) allows your computer to rapidly retrieve complex files intact from a remote computer and view or save them on your computer.

Gopher is an early, text-only method for accessing Internet documents. Gopher has been almost entirely subsumed in the World Wide Web, but users may still find gopher documents linked to the web pages. The World Wide Web (WWW) is the largest and the fastest growing activity on the Internet (Barker, 2001).

The World Wide Web incorporates all of the explained Internet services. Users can retrieve documents, view images, animations, and video, listen to sound files, speak and hear voice, and view programs that run on practically any software in the world, providing your computer has the hardware and software to do these things.

When users log into the Internet using Netscape or Microsoft's Internet Explorer or some other browser, users are viewing documents on the World Wide Web. The current foundation on which the WWW functions are the programming language called HTML. It is HTML and other programming imbedded within HTML that make possible Hypertext. Hypertext is the ability to have web pages containing links, which are areas in a page or buttons or graphics on which you can click your mouse button to retrieve another document into our computer. This click ability using Hypertext links is the feature, which is unique and revolutionary about the Web (Barker, 2001). Figure 2.1 has shown the growth of Internet frame and Figure 2.2 has shown the growth of WWW (Zakon, 2002).