MARA UNIVERSITY OF TECHNOLOGY

THE DEVELOPMENT EMAIL NOTIFICATION VIA SHOUTBOX

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BACHELOR OF SCIENCE (Hons.)
IN DATA COMMUNICATION AND NETWORKING

FACULTY OF
INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCE

NOVEMBER 2007

Title: **DEVELOPMENT EMAIL NOTIFICATION VIA SHOUTBOX**

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A project paper submitted to
FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCES
MARA UNIVERSITY OF TECHNOLOGY

In partial Fulfillment of required for the
BACHELOR OF SCIENCE (Hons) IN DATA COMMUNICATION AND NETWORKING

Major Area: Data Communication

Approved by Examining Committee:

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MARA UNIVERSITY OF TECHNOLOGY
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CERTIFICATION OF ORIGINALITY

I declare that the work in this thesis was carried out in accordance with the regulations of MARA University of Technology. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This topic has not been submitted to any other academic institution or non-academic institution for any other degree of qualification.

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ACKNOWLEDGEMENT

Alhamdulillah, with gratitude and blessed from Allah S.W.T, finally I have completed my project without having major problems within the period given.

Firstly, I am so grateful that I have been given the strength by Allah S.W.T to complete this project. I would like to take this space of opportunity to express my gratitude to my Supervisor, Pn Nor Adora Endut for her guidance, encouragement and support that really helps me a lot in completing this project. I feel so luck for being under her supervision. Moreover, I am so thankful to Encik Mohd Faisal bin Ibrahim for helping me to accomplish this project successfully.

Lastly, thank you to all my friends for their cooperation in helping me to complete this project. Thank you.

ABSTRACT

In UiTM, information delivery is one of the most important elements to make lecturers and students become a better information society. Information must be quickly delivered and received by lecturers and students in a timely manner. Nowadays, in the Faculty of Information of Technology and Quantitative Sciences (FTMSK), an ineffective communication approach is still being used to deliver information to students and lecturers such as using notice board, sms and phone call. Therefore, email notification via shoutbox has developed and can be considered as a potential approach to achieve this objective. Shoutbox is use to display the information that we need to inform quickly but in this project the shoutbox can be able to send the information to certain people via their email simultaneously. Email notification via shoutbox allow user especially lecturer and students to communicate, make announcement and give information easily, provident and reduce their time. The function of this project is to make user sending the information very convenient and in a timely way.

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LIST OF ABBREVIATIONS

NBPL	Network Base Project Learning
SMS	Short Message Service
CTN	Computer Technology and Networking
SQL	Structured Query Language

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CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

At the moment, information technology is the most important tool used to connecting people around the world. There are many ways to connect people through information technology. One of the ways is using email which is through the internet connection. The first type of email system is MAILBOX, used at Massachusetts Institute of Technology from 1965. Another early program to send messages on the same computer was called SNDMSG. (Ian Peter's, 2004).

The development of email notification via shoutbox is one of the examples that use the email application. A Network Based Project Learning (NBPL), is one of the platform uses email notification to make users getting connected each other. NBPL is developed to facilitate the process and teaching and learning process via the use of Internet and advanced communication technologies (Mohd Zalisham, 2004).

In earlier of implementation of NBPL, it focuses on students that registered for the subject of Network Design and Management (ITT550) and Networking (ITT713) which is offered by Faculty of Information Technology and Quantitative Science (FTMSK) at MARA University of Technology (UiTM), Shah Alam. NBPL enhances the shoutbox application to broadcast any information among students and lecturers that registered to NBPL via email notification.

Email notification will be used to send message from the shoutbox application to people. It will make communication process between users become easier. It will be used to send message from the shoutbox to the email using the email system. The

benefit of Email Notification via the shoutbox is it will make communication process between users become easier.

1.2 PROBLEM STATEMENT

In FTMSK, announcements normally may pertain to upcoming events, deadlines, or changes in faculty operations or activities. Information must be quickly delivered and received by lecturers and students in a timely way. Notice board at the hallway is one way of delivering information in the faculty. By using the notice boards, everyone periodically have to check the notice posted for latest information or announcement.

The other way to deliver information in faculty is using mobile phone like SMS (Short Message Service) and through a call. Through this way information is delivered in timely manner to lecturer or students but it incurs higher cost.

Therefore, a system that can effectively broadcast any information or announcement is needed to overcome this problem. Email notification via shoutbox is developed to allow lecturers to broadcast any messages to students by informing them of upcoming deadlines, conventions, notification, and so on in timely manner and without incurring much of cost by using the existing internet infrastructure. By using this system it is hoped that, the latest information will be sent effectively and accurately.

1.3 PROJECT SCOPE

This project is using Network Based Project Learning (NBPL) and modification is done to suit with the features offered for email notification via shoutbox. The system is developed using PHP language and MySQL as a database of the system. The implementation focuses only on NBPL community, which only involves students and lecturer under the department of Computer Technology and Networking (CTN). The integration of the application program and NBPL community is done via Email.

1.4 PROJECT OBJECTIVE

The objectives of this project are as follows:

1. To design, develop and implement email notification via shoutbox to broadcast any information or announcement directly between students and lecturers.

2. To modify the existing NBPL by integrating the functionality of using the shoutbox to send information via email.

1.5 PROJECT SIGNIFICANT

By doing this study, lecturer and students can easily compose and send their information because this system is using broadcast shoutbox message and can disseminate information to all of them. Lecturer and students can using NBPL, put announcement in shoutbox and sends the announcement via email they also can receive announcement either looks at NBPL shoutbox or their email.

This project explores the possibility of utilizing the shoutbox available in the NBPL project to send information in timely and more importantly, low cost manner. The NBPL project has long been a method for close collaboration and communication within educational communities. By doing this study, more enhancements to NBPL specifically and efficient communication generally is achieved. This platform can be further tweaked in future researcher so that it can be utilized to include cellular networks or the transfer of file using the sockets.

1.6 OUTLINED THESIS

This report consists of six chapters which are Introduction, Literature Review, Methodology, System Overview, Results and Findings and Conclusions and Recommendations.

Chapter 1: Introduction

The first chapter highlights the background of the research, and statement of the problem. It also discusses the scope, objective and significant of the study.

Chapter 2: Literature Review

The second chapter of this thesis gives a comprehensive description of email, the technology has being used and discusses the similar research or study that related to the project.

Chapter 3: Methodology

The third chapter will outline the research approach and methodology of the study. This chapter explains an accurate description of the requirement gathering and methodology phases of the project. The functional, non-functional, software and hardware requirements are all described in this chapter.

Chapter 4: System Overview

This chapter gives an overview of the system which will help the users with some guidelines in how to use the Email notification via shoutbox. This chapter also includes some screenshots of the system.

Chapter 5: Results and Findings.

This fifth chapter presents the results and findings of the study. The results will be formulated and illustrated in table and graph.

Chapter 6: Conclusions and Recommendations

The last chapter will conclude the outcomes of the study. Also discuss in this chapter some recommendations for future research.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

With the advance of science and technology, most of company today involve in communication through the internet. Email notification via the shoutbox is developed to improve that communication. Email stands for electronic mail. While it originated as an after thought to the beginnings of the Internet (ARPANET - 1960'S), it is currently one of the most popular services of the Internet. Email does not have to be Internet based. It can be an in-house service that reaches only a certain population. Internet email can be sent to anyone in the world who has an Internet email address. While shoutox is a chat-like feature of some websites that allows people to quickly leave messages on the website, generally without any form of user registration. The first shoutbox was a relatively simple Perl script. (Dan Lewis, 2001.). In their simplest form, shoutboxes are simply lists of short messages, possibly with information about their authors. The page may be automatically refreshed after a certain interval, or polled dynamically in order to keep new messages visible. Older posts are often deleted after a certain number of messages have been written in order to preserve space on the server. Many Internet forum and weblog software packages can be modified to add shoutboxes in sidebars on site pages.

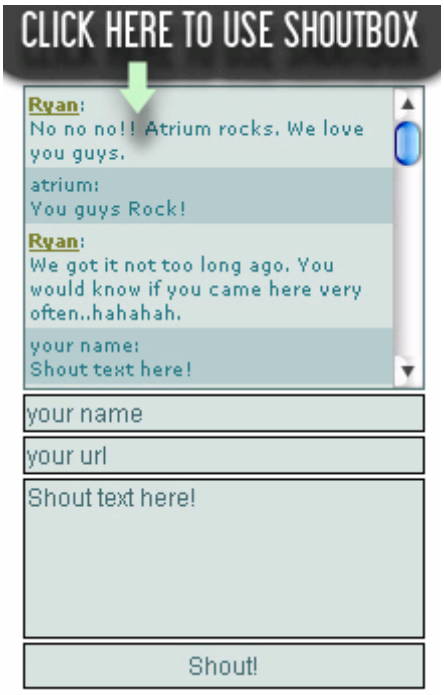

Figure 1.1: Example of shoutbox

2.2 HOW DOES EMAIL WORK?

Email addresses are similar to regular mail in that the addresses are unique. In regular mail, each street and city address has its own specific zip code. That combination of street address, city, state and zip code must be unique and determines what post office the mail gets sent to for delivery. Email is delivered to the email server almost immediately. That means that you can send a message and the person you emailed can pick it up within seconds (depending on his or her email server).

2.3 TECHNOLOGY

2.3.1 Network Based Project Learning (NBPL)

NBPL is an open source content management system written with PHP for publishing content on the World Wide Web and intranets, using the Mysql database. The features of NBPL includes page caching to improve performance, RSS feeds, printable versions of pages, news flashes, blogs, polls, website searching, and language internationalization.

2.3.2 Tikiwiki

TikiWiki, is an open source (LGPL) Content Management System (CMS) / Geospatial Content Management System (GeoCMS) / Groupware web application enabling websites and portals on the internet and on intranets and extranets. TikiWiki is a customizable modular multi-feature package; each component can be enabled / disabled and customized by the TikiWiki administrator. TikiWiki extends the customization to the user with selectable skins / themes (http://en.wikipedia.org/wiki/TikiWiki)

2.3.3 Apache as a web server

Apache is the most popular Web server on the planet. Netcraft places it as having more than 60% of the market in December 2000, as the most popular server since mid-1995, and as being more popular than all other servers combined since the beginning of 1999.

Apache is written with robustness, performance, security, and standards-conformance in mind. Apache is also extensible - its capabilities can be augmented

through the inclusion of other modules that are not part of the core server. Apache's behavior can be tailored to the requirements of individual sites, allowing it to serve the needs of sites small and large.

Administrators for modest sites often find the base server perfectly adequate with no modification whatsoever. Larger or more complex sites require individual customization; Apache gives the webmaster the flexibility needed to achieve this.

Two popular extensions for Apache are the mod_perl and mod_php modules that, in effect, embed the Perl and PHP interpreters into Apache so that it can execute scripts written in these languages directly rather than starting up a separate Perl or PHP interpreter to process them. The immediate result is a dramatic increase in script execution efficiency. Also, your scripts gain access to Apache internal information, allowing you to perform request-handling operations not otherwise possible.

When Apache is coupled with web scripts that have the ability to tap into a database, you gain the ability to make your site highly interactive and display on demand the information your visitors want to see. Conversely, you can use the Web to obtain the information you're interested in collecting. Polls, surveys, shopping carts, reader response forms, and product registrations are common applications you can use to make your Web site act as an automated information-gathering engine.

2.3.4 PHP as an interface of the system

PHP is a server-side scripting language for creating dynamic Web pages. You create pages with PHP and HTML. When a visitor opens the page, the server processes the PHP commands and then sends the results to the visitor's browser, just as with ASP or ColdFusion. Unlike ASP or ColdFusion, however, PHP is Open

Source and cross-platform. PHP runs on Windows NT and many UNIX versions, and it can be built as an Apache module and as a binary that can run as a CGI. When built as an Apache module, PHP is especially lightweight and speedy. Without any process creation overhead, it can return results quickly, but it doesn't require the tuning of mod_perl to keep your server's memory image small.

In addition to manipulating the content of your pages, PHP can also send HTTP headers. You can set cookies, manage authentication, and redirect users. It offers excellent connectivity to many databases (and ODBC), and integration with various external libraries that let you do everything from generating PDF documents to parsing XML.

PHP goes right into your Web pages, so there's no need for a special development environment or IDE. You start a block of PHP code with <?php and end it with ?>. (You can also configure PHP to use ASP-style <% %> tags or even <SCRIPT LANGUAGE="php"></SCRIPT>.) The PHP engine processes everything between those tags.

PHP's language syntax is similar to C's and Perl's. You don't have to declare variables before you use them, and it's easy to create arrays and hashes (associative arrays). PHP even has some rudimentary object-oriented features, providing a helpful way to organize and encapsulate your code.
Although PHP runs fastest embedded in Apache, there are instructions on the PHP Web site for seamless setup with Microsoft IIS and Netscape Enterprise Server.

2.3.5 MySQL as a Database

MySQL is a relational database management system (RDBMS) based on SQL (Structured Query Language). First released in January, 1998, MySQL is now one component of parent company MySQL AB's product line of database servers and development tools.

Many Internet startups became interested in the original open source version of MySQL as an alternative to the proprietary database systems from Oracle, IBM, and Informix. MySQL is currently available under two different licensing agreements: free of charge, under the GNU General Public License (GPL) open source system or through subscription to MySQL Network for business applications.

MySQL runs on virtually all platforms, including Linux, Unix, and Windows. It is fully multi-threaded using kernel threads, and provides application program interfaces (APIs) for many programming languages, including C, C++, Eiffel, Java, Perl, PHP, Python, and Tcl.

MySQL is used in a wide range of applications, including data warehousing, e-commerce, Web databases, logging applications and distributed applications. It is also increasingly embedded in third-party software and other technologies. According to MySQL AB, their flagship product has over six million active MySQL installations worldwide. Customers include Cisco, Dun & Bradstreet, Google, NASA, Lufthansa, Hyperion, and Suzuki.

2.4 PREVIOUS RESEARCH AND STUDY

There are a lot of previous researches that had been studied to make a comparison from this system.

2.4.1 Sendmail Problem Analysis and Migrating to Qmail by Stephen Benjamin(2002)

This study is about the intense growth of usage of email in recent decades, a simple but significant problem in security affects the usage of electronic mail or e-mail. In this paper we explore the problem in mail service and mitigate the problem by studying the problem. This report contributes toward the goal of identifying the vulnerability in mail service. Qmail and Sendmail are used in this project and by comparing the capability of both applications; this project can determine the best mail service to suit the requirement of the mail service in the network.

This study is significant to the proposed system as it highlights the vulnerabilities of email service and comes up with a suggestion for the best mail service.

2.4.2 How to make secure email easier to use by Simson L. Garfinkel (2005)

According to Simson L. Garfinkel in this study, cryptographically protected email has a justly deserved reputation of being difficult to use. Based on an analysis of the PEM, PGP and S/MIME standards and a survey of 470 merchants who sell products on Amazon.com, this study argue that the vast majority of Internet users can start enjoying digitally signed email today. The researcher's present suggestion for the use of digitally signed mail in e-commerce and simple modifications to webmail