Web Based Call Tracking System

By

Jeff McCord

Submitted to
the Faculty of the Information Engineering Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Engineering Technology

University of Cincinnati
College of Applied Science

March 2001

Web Based Call Tracking System

By

Jeff McCord

Submitted to
the Faculty of the Information Engineering Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Engineering Technology

_____	_____
Author: Jeff McCord	Date
_____	_____
Faculty Project Advisor	Date
_____	_____
Department Head: Larry Gilligan	Date

Acknowledgment

I would like to thank my advisor, Professor Robert Schlemmer and the other faculty members who work for the University of Cincinnati.

I would also like to thank a my friend Jason Benson, who helped with resources and support though all stages of my project. I would also like to acknowledge my friends and coworkers at Cintas, without them this project would have not be conceived and completed.

Finally, I would like to thank my family for the continued support in my education.

Table of Contents

List of Figures

Abstract

The McCord Management System has been designed to improve a company's ability to provide high quality support and service to their customers. Customers call when they find they cannot proceed with their work until they receive a response regarding a problem, question, or broken piece of equipment. No matter what the issue is, a customer's productivity becomes dependent upon the capacity to resolve it.

The McCord Management System is a fully self-sufficient plan. It is a full-featured program that simplifies the gathering of information. More importantly, it manages and tracks all troubleshooting aspects needed to resolve the issue in question.

MMS customers may be external clients, other employees in an organization, or outside contractors. When customers contact you for assistance, they expect you to be knowledgeable, responsive and accurate.

Web Based Call Tracking System

1. Statement of the Problem

Cintas Corporation, which has its corporate headquarters in Mason, Ohio, has 300 locations around the United States. Currently when an employee has a problem with a desktop computer, printer, handheld scanner, AS/400 or telephone system they call the Cintas Hotline. The Hotline personnel then enter the call into a system called Call Tracking. Call Tracking is a simple but outdated program that was created by a former Cintas employee to log and route calls. The current database is written in Access 95, and is inefficient in scalability and availability.

1.1 Definition of the Need

Because the database was created in Access 95 it cannot be upgraded to Access 2000. This creates another problem because Office 97 is no longer being distributed. When the upgrade to Office 2000 is complete the Access 95 database will not work. In order to open the database, Office 97 Professional must be installed on each computer. This creates a problem when a technician is out on a call and needs access to the database. Most employees only have Office 97 Standard installed on their computers, which will not open the database. Database unavailability costs the company time and money.

In addition to the incompatibility with Office 2000, the database performs below par in several other areas including reports, knowledge base, call monitoring, and call routing. Because of the old technology and programming, the current Call Tracking system has an inadequate reporting package. This is the result of changing demands and business growth. As requirements changed, database fields were added and modified to

meet them. As a result ,the reports are inaccurate and contain extraneous or useless information. Also, there is no way to track common problems or possible solutions for incorporation with a knowledge base for faster troubleshooting. If an employee needs to track an open call they must erratically search and hope they retrieve it successfully. After a call has been opened for an individual or a group, they may not know about it until they reopen the database because there is no notification of a new call.

After reviewing the Current Call Tracking system by current Cintas employees, it suggests that there is a genuine need for a new SQL database that will improve productivity and manage the data in an efficient way. The results of the review suggests that the SQL database should have the following characteristics at a minimum:

- Scalability
- Efficiency
- Real time performance
- Maximize Productivity
- Maintain service levels
- Access from any computer
- Simple user interface
- Reduce cost

2. Review of the Literature

During my research on the call tracking system, I found that most companies did not have an up to date application to track and log help desk calls. This was due to the fact that many of the solutions were too big for the company or did not fall within their budget. Many of these current solutions were put in place before the surge in web

development. The programs were proprietary systems that could not be integrated with others. Due to the large scale of these solutions, many companies looked within their own organization for a possible cost efficient solution. These solutions were often written in outdated programs that lacked support and documentation.

The heart of the call tracking system has always been controlling the flow of tickets to ensure timely and accurate delivery of customer support. Whatever the size of a company and whatever organization model they follow they need to develop a process to keep the help desk running smoothly and enable fast solutions for customers whether they are internal or external users. Today, help desks are generally challenged with:

- Adressing increasing call volumes and delivering quick responses to users
- Enabling users to help themselves and submit communications
- Tracking issues to ensure that they all get resolved
- Reporting to Management on help desk costs and activity levels
- Recording and sharing information about common problems and their solutions
- Assigning issues to internal or external help desk agents

With the increase in web based applications, powerful and cost efficient programs are now available for everyone. The average cost for these programs range from 700 to 4000 dollars per workstation. This is a significant decrease from previous resolutions.

3. Description of The Solution

The McCord Management System (MMS) is a complete web-based call tracking system for internal and external support. Combining an HTML and ASP user interface with a sophisticated relational Microsoft SQL 7.0 database, the MMS system gives a

company's employees 24-hour access to support staff from any computer with an Internet/Intranet connection.

The heart of the MMS is the ASP Pages. I have chosen to use ASP Pages for the following reasons:

- Active Server Pages are browser independent. The browser only sees pure HTML pages; no vendor proprietary programs or extensions are needed.
- ASP hides the code from the user.
- ASP gives an efficient link to the many databases that comply with the Open Database Connection (ODBC) standards.
- ASP provides an efficient means to View, Add, Delete, Edit and Search Databases.

3.1 User Profile

The intended users for the McCord Management System will be at three levels of IT literacy. The three levels are Help Desk Support Partners, Level Three Support Groups, and Managers.

3.1.1 Help Desk Support Partners

- Provide support to end users on a variety of issues including identifying, researching, and resolving technical problems.
- Tracks and monitors the problem to insure a timely resolution.
- May require an associate's degree in a related area and less than two years of experience in the field or in a related area.
- Has knowledge of commonly used concepts, practices, and procedures within a particular field.
- Relies on instructions and pre-established guidelines to perform the functions of the job.

3.1.2 Level Three Support Groups

- Supports, monitors, tests, and troubleshoots hardware and software problems.
- Recommends and schedules repairs.
- Provides end users support for all applications.
- May require an associate's degree in a related area and at least four years of experience in the field or in a related area.
- Familiar with a variety of the field's concepts, practices, and procedures. Relies on experience and judgment to plan and accomplish goals.
- Performs a variety of complicated tasks. May lead and direct the work of others.
- Typically reports to a project leader or manager. A wide degree of creativity and latitude is expected.

3.1.3 Management

- Develops, plans, and implements the overall strategic goals of an organization's network system.
- Evaluates and recommends changes to current and future network requirements to meet the organization's needs.
- Requires a bachelor's degree in a related area and at least eight years of experience in the field.
- Generally manages a group of network analysts.
- Relies on experience and judgment to plan and accomplish goals.
- Typically reports to an executive.

3.2 Design Protocols

I plan to use all four computing areas within the Information Engineering Technology program to complete this project. The main focus will be on database and programming. Multimedia and networking will be used to support the other areas. Below I have listed the different areas and how they are used in my project.

3.2.1 Microsoft SQL 7.0 Database

The database was created so that it shows many to many relationships and a high level of sophistication. The database will be accessed by an Intranet or Internet, which will also address possible security issues.

3.2.2 Networking

Networking will play a key role in the success of this project. I built a web server using Windows NT 4.0 to host my HTML and ASP pages. As I moved through my Networking II and III classes I gained knowledgeable of how to use Microsoft Internet Information Server. I will also need to secure the Web server as well as give access to both LAN and WAN users.

3.2.3 Multimedia

The Multimedia section of the project will be addressed by the layout of the Web page and how the user interacts with the database. Simple and fast loading pages are the key to success. This program serves one purpose, to open and close the call in a fast and efficient manner. The site does not need to be flashy and high tech.

3.2.4 Programming

The programming will be simple and user friendly. I will use programming to communicate with the database. I have decided to use ASP Pages, which will work the best with my design. A good portion of HTML code will be used to create the user interface.

4. Deliverables

1. A Web Based Call Management System that manages and tracks customer calls.
2. The user interface is written in HTML, which allows simple user navigation.
3. The MMS uses ASP Pages to communicate between the client and database.
4. Users of the MMS will have a secure login that is authenticated by the database.
5. Users of the MSS will be able to complete the following tasks:
    - Create a new account
    - Secure login authenticated by the Microsoft SQL 7.0 database
    - Learn to navigate the MMS through a tutorial and online help
    - Manage their open and closed call queue
    - Create a new call
    - Edit an existing call
    - Close an existing call once the problem is resolved
    - Assign a call to another user
    - Search for existing calls by ID, Users, Platform, Problem, and Contact
    - Link to internal and outside resources to help identify and solve a problem

5. Design and Development

5.1 Budget

Item	Cost
Development Budget	
Microsoft Office 2000 Premium **	$500.00
Paint Shop Pro 7 **	92.00
Reference Material	200.00
Developmental Total	**792.00**
Production Budget	
Dell Web Server Windows NT 4.0 *	12,220.00
Dell Microsoft Windows NT 4.0 Server *	8,945.00
Microsoft SQL 25 Users **	7,629.00
Internet Explorer 4.0	Free
Microsoft Internet Information Server	Free
Hub	Existing
Production Total	**28,794.00**
Developmental Total	**792.00**
PROJECT TOTAL	**$29,586.00**
* Prices found at www.Dell.com	
** Prices found at www.CDW.com	

Figure 1. Project budget

5.2 Timeline

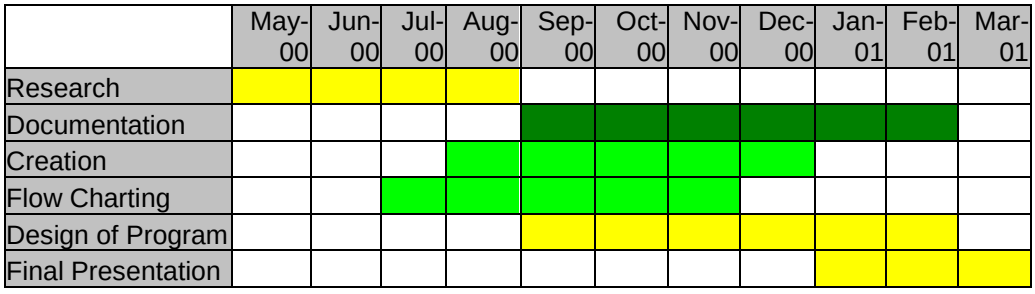

Figure 2. Project timeline.

5.2.1 Senior Design I

- Research the problem
- Research possible solutions using ASP and web pages
- Research different database applications
- Plan the scope of the project

5.2.2 Senior Design II

- Finalized database design using Access 2000
- Finalized interface design using ASP pages and HTLM
- Built skeleton of the project
- Demonstrated Working Quick Prototype

5.2.3 Senior Design III

- Completed debugging
- Completed testing and troubleshooting
- Completed documentation
- Completed online tutorial
- Summit final project and documentation
- Demonstrate final project

5.3 Software

The software requirements for the project are:

- Access 2000
- FrontPage 2000
- MS SQL Server 7

5.4 Hardware

The hardware requirements for the project are:

- Web Server
- Database Server
- Client computer with Internet access

6. Proof of Design

The MMS project design is based on the three tiered client server model which is comprised of the client, web server, and database server. This relationship can be seen below in figure 3.

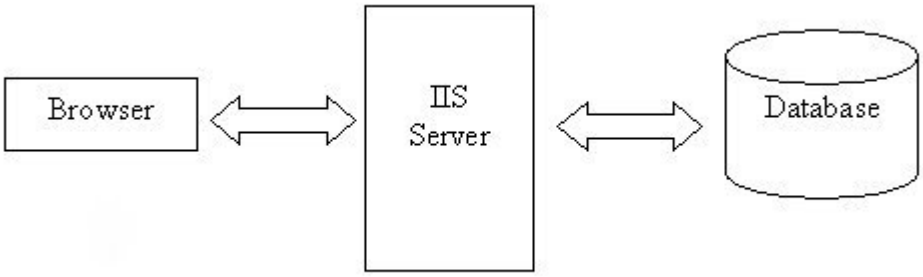

Figure 3. Client Server Database model.

The MMS is best viewed at 800X600 pixels using Internet Explorer 4.0 or greater running Microsoft Windows 98/NT/2000. The web server is Internet Information Server (IIS) 4.0. IIS is a Microsoft product that integrates itself with the NT Server environment. IIS is a effective way to manage and host web pages. The database for the MMS is Microsoft SQL 7.0 which is hosted on a NT 4.0 server along with the IIS.

Within the MMS SQL 7.0 server there are six tables which will store the data that is related to the MMS. Primary and secondary keys are used to help enforce referential integrity using normalization rules:

- Each field in a table contains different information
- No field values can be derived from another field
- No duplicate information is permitted

The tables that were created for the MMS are the following:

Call	**Contacts**
Callid Dateopen Paltform Problem Schedule Status Contid Userid	Contid Lname Fname Phone Ext Location Department E-Mail
Users	**Passwords**
Userid Lname Fname Phone Ext Location Department E-Mail	Userid Password
Platform	**Solution**
Platform Description Service Level	Callid Solutionid Solution Date Userid

Figure 4. Project SQL tables

- Call table- Used to store information that is unique to each call in the MMS
- Contacts table- Used to store information about the customer that is calling with the problem
- Users table- Used to store information about he users of the MMS
- Password table- stores the user password
- Platform- Provides both the user and the contact information on when the problem needs to be resolved
- Solution- Provides information on action steps taken to fix the current problem

The following are screen shots that shows the interface, layout, and navigation:

This is the main page that contains a member login and a new member signup. If the correct user information is supplied the user will be authenticated by the database and allowed to proceed to the members area. If the user incorrectly enters their User ID or Password, they will be redirected to an error page.

Figure 5. Shows the main page.

To create a new account the user must supply the following information:

- Last name
- First name
- Phone
- Extension
- Location

- Department
- E-Mail
- Userid will be automatically assigned

Once the user has entered the above information correctly they are added to the database and allowed to login. If the user enters incorrect data or leaves a required field blank an error message will prompt the users to correct their mistake before proceeding.

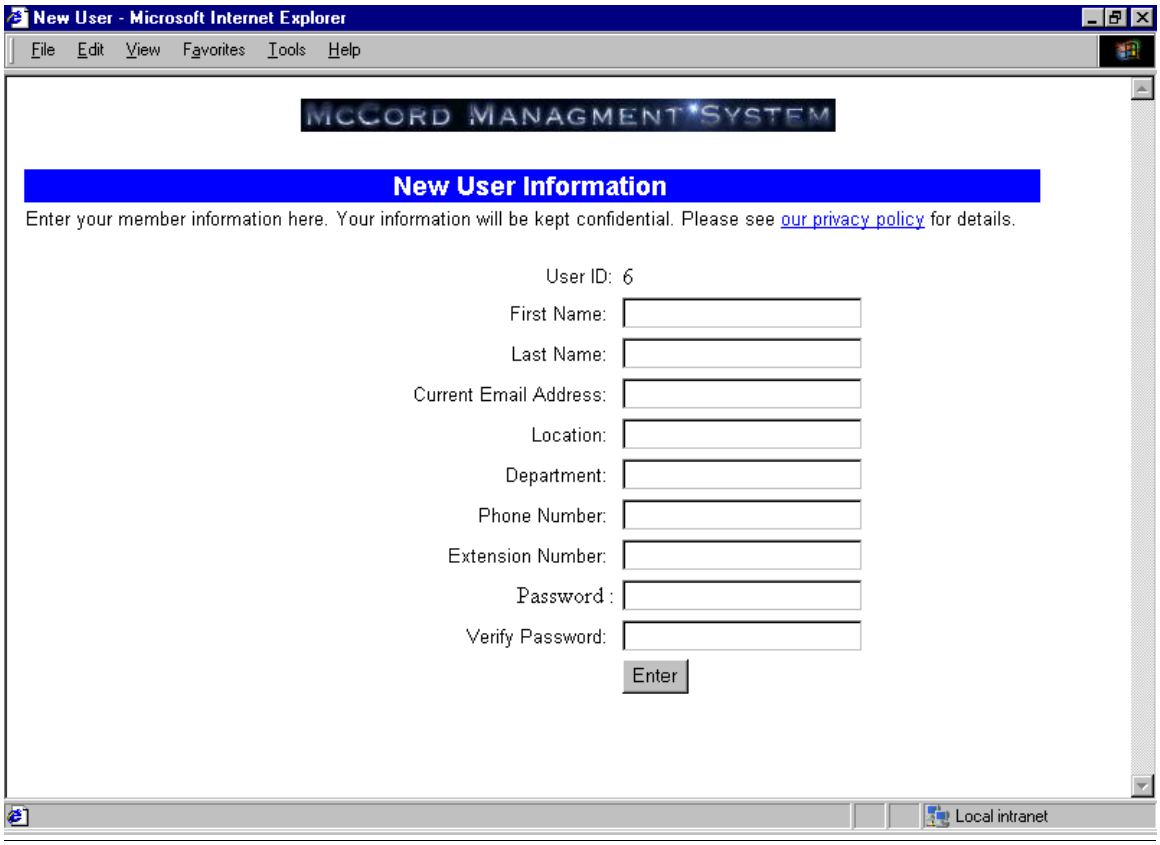

Figure 6. New user information.

This is the user's homepage, from here they can view their current calls, search for calls, create a new call, access help and tutorials, and logout.

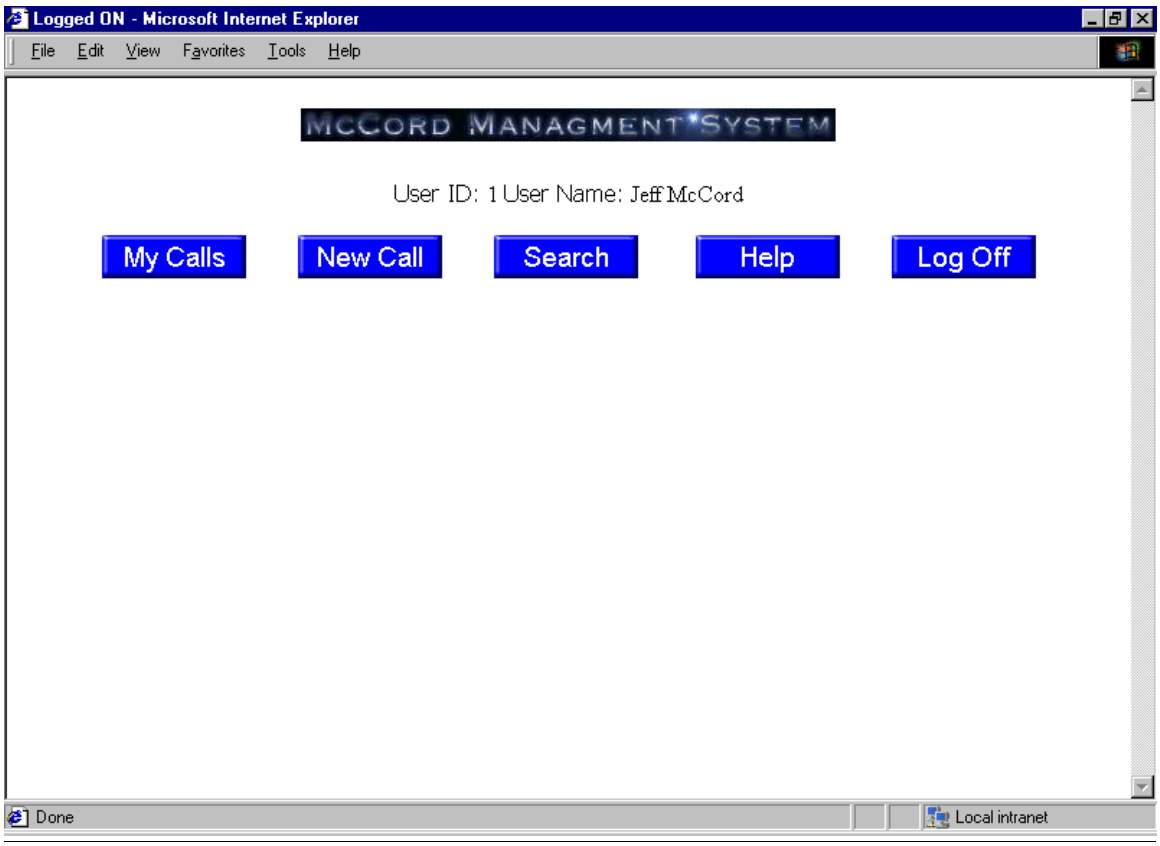

Figure 7. Users main page.

When the user selects the "My Calls" link they will see a current list of all open calls in their queue. The user can see the following about each call:

- Callid
- Date Opened
- Contact the called in the problem
- Service Level
- Problem Description

Figure 8. My Calls screen.

If the user needs more information or needs to update a call they can select on "call details". Here the user can modify the call, add solution steps, close the call, or assign the call to another user.

Figure 9. Call Details screen.

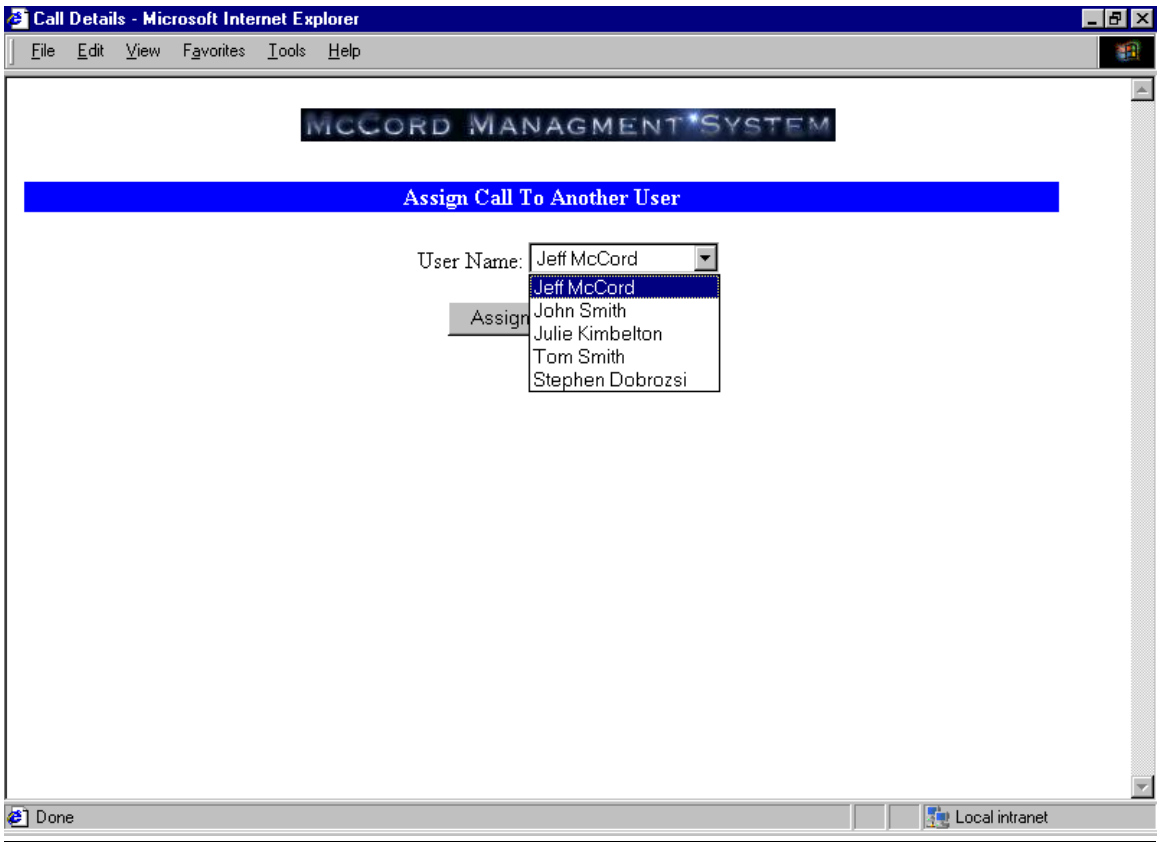

Figure 10. Assign a current call to a new user.

When the user selects on the “Search” link they will be able to search for a Call Id, Contact Name, Location, Department, User Name, Date and Service Levels.

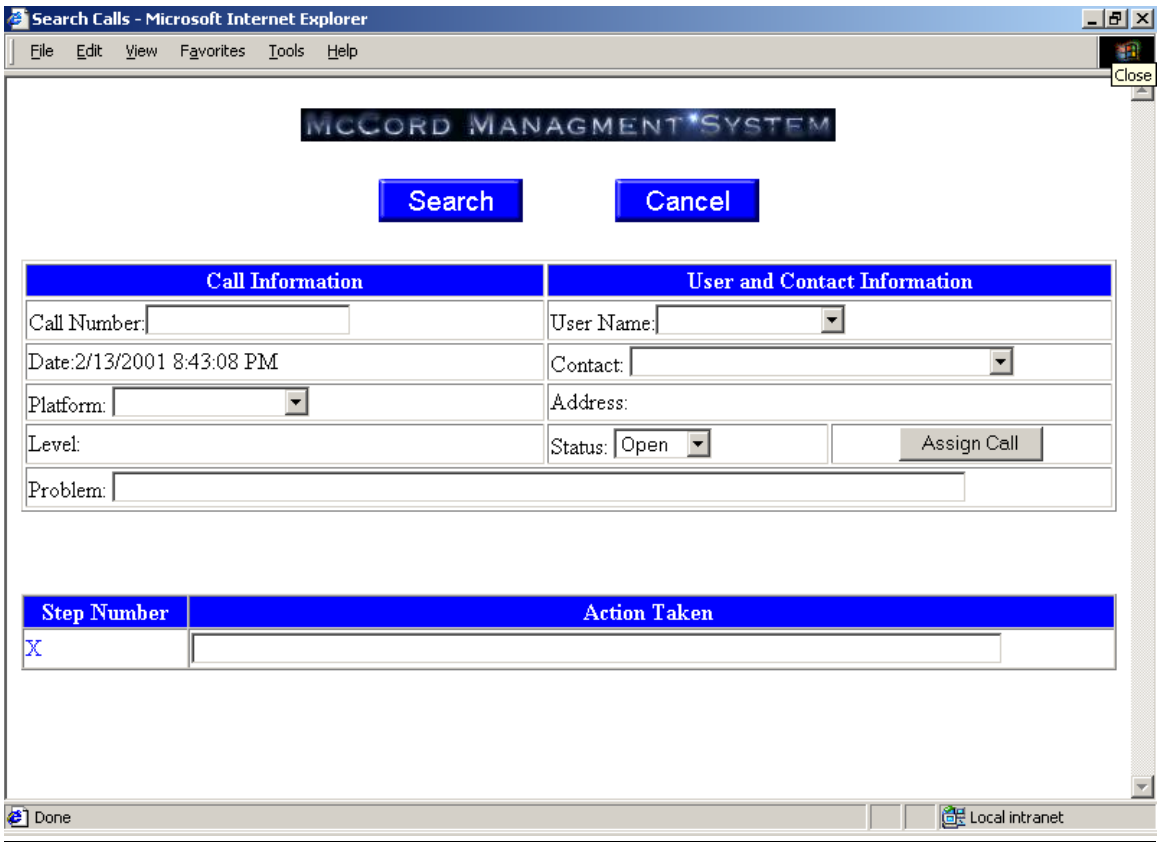

Figure 11. Search screen.

Figure 12. Search Results.

The user can access online help and professional links buy selecting the “help” option from anywhere in the MMS.

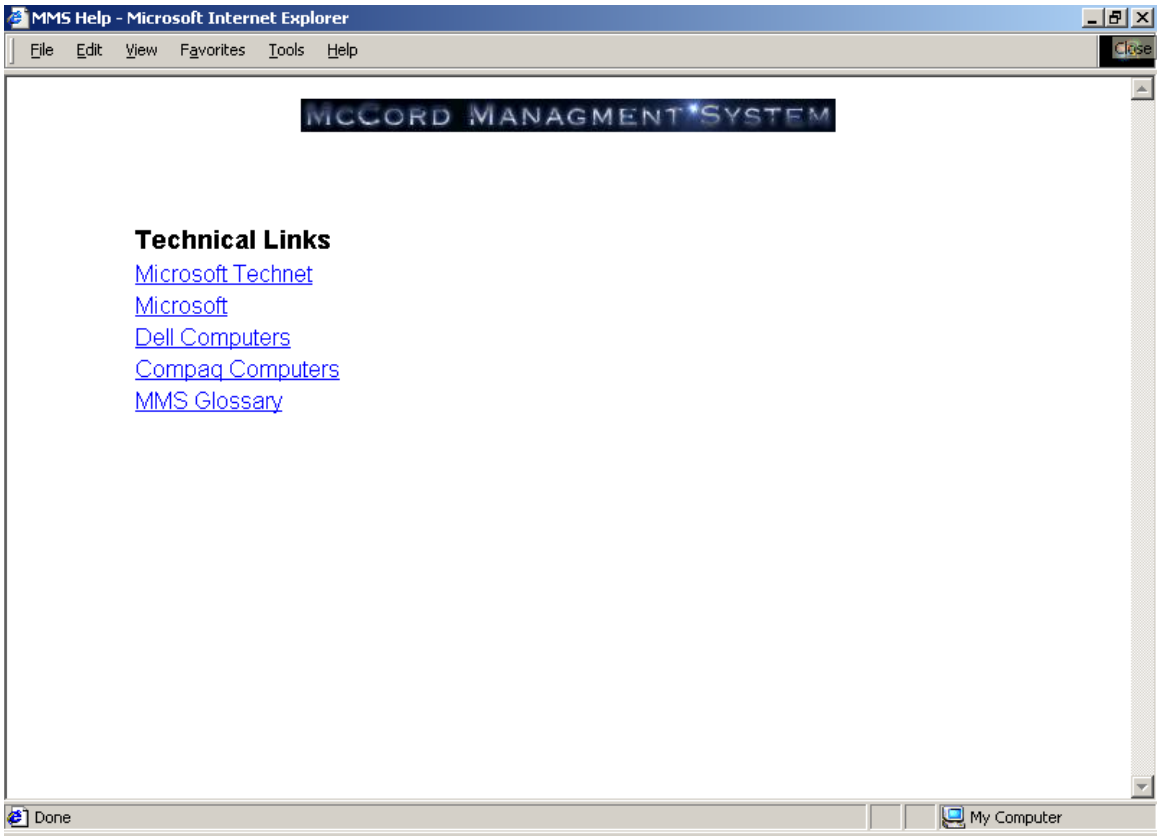

Figure 13. Help Screen.

7. Conclusion and Recommendations

I choose to do a web based call tracking system based on the need I saw at Cintas, my co-op company. This project helped me develop in all four areas of the Information Engineering Technology program. This project also helped me solve a question regarding my future employment. After hours of learning ASP and VB script, I decided that programming was not my forte. I began to set my goals on becoming a network administrator and have accepted a position at Cintas in that role.

Although the MMS is a fully functional call tracking system that is designed to improve a company’s ability to provide high quality support and service to their

customers, there are several improvements and added features that should be addressed. Like any good program there should be proper administration. The development for on the fly additions of users, contacts and platforms is key to make the MMS fully functional and user friendly. As it stands now, these changes and additions must be made though the SQL database itself. This would kill productivity of both the help desk and the DBA. Having the administration real time and available using the MMS would give it a the MMS user and DBA flexibility and better time management.

The second area that needs to be addressed reporting. When using a tool to track calls, time and resources the ability to track and record the results are essential. Using crystal reports I would be able to create customizable reports to that managers and supervisors could review for common trends, amount of time, resources spent to solve one problem. These reports are also used to set benchmarks for the hotline support staff.

Overall this project was challenging and forced me to use both my technical skills that were developed at the College of Applied Science along with my own research and problem solving skills outside of class. The knowledge that I gained while working on this project helped me to determine my future as well as improve my skills in Information Engineering Technology.

Appendix A.
SQL Scripts

The following code was used to create these six tables:

```
	CREATE TABLE [dbo].[call] (
	[callid] [int] NOT NULL ,
	[dateopen] [smalldatetime] NULL ,
	[platform] [varchar] (50) NULL ,
	[problem] [varchar] (255) NULL ,
	[schedule] [varchar] (20) NULL ,
	[status] [varchar] (1) NULL ,
	[contid] [int] NULL ,
	[userid] [int] NULL
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[contacts] (
	[contid] [int] NOT NULL ,
	[lname] [varchar] (20) NULL ,
	[fname] [varchar] (18) NULL ,
	[phone] [varchar] (20) NULL ,
	[ext] [varchar] (15) NULL ,
	[location] [varchar] (30) NULL ,
	[dept] [varchar] (30) NULL ,
	[email] [varchar] (50) NULL
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[password] (
	[userid] [int] NULL ,
	[password] [varchar] (50) NULL
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[platform] (
	[platform] [varchar] (50) NULL ,
	[description] [varchar] (50) NULL ,
	[servicelevel] [varchar] (50) NULL
) ON [PRIMARY]
GO

CREATE TABLE [dbo].[solution] (
	[callid] [int] NULL ,
	[solutionid] [int] NULL ,
	[solution] [varchar] (255) NULL ,
```

```
        [date] [smalldatetime] NULL ,
        [userid] [int] NULL
    ) ON [PRIMARY]
    GO

    CREATE TABLE [dbo].[users] (
        [userid] [int] NOT NULL ,
        [username] [varchar] (50) NULL ,
        [lname] [varchar] (50) NULL ,
        [fname] [varchar] (50) NULL ,
        [phone] [varchar] (50) NULL ,
        [ext] [varchar] (50) NULL ,
        [location] [varchar] (50) NULL ,
        [dept] [varchar] (50) NULL ,
        [email] [varchar] (50) NULL ,
        [admin] [varchar] (1) NULL
    ) ON [PRIMARY]
GO
```

Appendix B.
HTML Code Login.html

```
<html><head><title>Login</title></head>
<body bgcolor="#FFFFFF">
<H1 align="center"><img border="0" src="../images/Logo/mms2.jpg" width="368"
height="95"></H1>
<p align="center"><img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23"></p>
<p align="center"><font face="Comic Sans MS" color="#0000FF"
size="4"><i>Restricted
Area</i></font></p>

<div align="center">
  <input type="hidden" name="frompage" value="login">
  <a href="Help/HelpMain.html" target="_blank"><img
src="file:///C|/InetPub/wwwroot/IET/images/navigation/Help.png" width="100"
height="30" border="0"></a>
</div>
<p align="center"><strong><b><font face="Tahoma" color="#000000">Please enter a
valid user ID and password to continue</font></b></strong></p>
<Form Method="post" action="login.asp">
<!-- start input table -->
  <table width="95%">
    <tr>
      <td width="50%">
        <div align="right"><font face="Microsoft Sans Serif"><b>Enter your
UserID:</b></font></div>
      </td>
      <td width="50%">
        <input type="text" name="UserID" size="16">
      </td>
    </tr>
    <tr>
      <td width="50%">
        <div align="right"><font face="Microsoft Sans Serif"><b>Enter your
Password:</b></font> </div>
      </td>
      <td width="50%">
        <input type="password" name="Password" size="16">
      </td>
    </tr>
    <tr>
      <td>
        <div align="center"> </div>
      </td>
```

```
      <td>
        <input type="submit" value="Submit" name="B12">
      </td>
    </tr>
  </table>
</Form>
<table border="0" width="97%" height="86">
  <tr>
    <td width="100%" height="80" align="center">
      <hr size="10" color="#0000FF">
      <p><font face="Comic Sans MS" size="4">I'm a New User</font></p>
      <p><font face="Arial" size="5"><b>  </b></font><a
href="newuser.asp"><font face="Arial" size="5"><b>Sign
      me up!</b></font></a></td>
  </tr>
</table>
<p> </p>
</body>
```

Appendix B.
HTML Code Glossary.html

```
<html>
<head>
<title>Untitled Document</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#FFFFFF">
<div align="center">
  <p><img src="../images/Logo/Logo.jpg" width="371" height="23"> </p>
  <table width="90%" border="1">
    <tr>
      <td width="29%">
        <div align="center"><font face="Arial, Helvetica, sans-serif"
color="#0000FF"><b>Terms</b></font></div>
      </td>
      <td width="71%">
        <div align="center"><font face="Arial, Helvetica, sans-serif"
color="#0000FF"><b>Description</b></font></div>
      </td>
    </tr>
    <tr>
      <td width="29%">Call ID</td>
      <td width="71%"><font face="Arial, Helvetica, sans-serif">Auto Number Assigned
        By MMS, Used To Identify A Call</font></td>
    </tr>
    <tr>
      <td width="29%"><font face="Arial, Helvetica, sans-serif">Date</font></td>
      <td width="71%"><font face="Arial, Helvetica, sans-serif">Date Stamp When
        the Call is Created</font></td>
    </tr>
    <tr>
      <td width="29%"><font face="Arial, Helvetica, sans-serif">Contact</font></td>
      <td width="71%"><font face="Arial, Helvetica, sans-serif">Person Whom Called
        In The Problem</font></td>
    </tr>
    <tr>
      <td width="29%"><font face="Arial, Helvetica, sans-serif">Level</font></td>
      <td width="71%"><font face="Arial, Helvetica, sans-serif">Number Of Days
        To Correct The Problem</font></td>
    </tr>
    <tr>
      <td width="29%"><font face="Arial, Helvetica, sans-serif">Problem
Description</font></td>
```

```
    <td width="71%"><font face="Arial, Helvetica, sans-serif">Reason For the
      Call</font></td>
   </tr>
   <tr>
    <td width="29%"><font face="Arial, Helvetica, sans-serif">Details</font></td>
    <td width="71%"><font face="Arial, Helvetica, sans-serif">Contains Detailed
      Information About The Call</font></td>
   </tr>
   <tr>
    <td width="29%"><font face="Arial, Helvetica, sans-serif">Close Call</font></td>
    <td width="71%"><font face="Arial, Helvetica, sans-serif"> The Call Is Removed
      From Their Queue</font> </td>
   </tr>
   <tr>
    <td width="29%"><font face="Arial, Helvetica, sans-serif">Assign Call</font></td>
    <td width="71%"><font face="Arial, Helvetica, sans-serif">Sends The Current
      Call to Another Users Call Queue</font></td>
   </tr>
  </table>
  <p align="left">  </p>
</div>
</body>
</html>
```

Appendix B.
HTML Code Help.html

```
<html>
<head>
<title>MMS Help</title>
</head>
<body bgcolor="#FFFFFF">
<div align="center">
  <p><img src="../images/Logo/Logo.jpg" width="371" height="23"> </p>
  <p align="left"> </p>
  <table width="80%">
    <tr>
      <td><font face="Arial, Helvetica, sans-serif" size="4"><b>Technical
Links</b></font></td>
    </tr>
    <tr>
      <td><a href="http://www.mircosoft.com/technet/default.asp" target="_blank"><font
face="Arial, Helvetica, sans-serif">Microsoft
        Technet</font></a></td>
    </tr>
    <tr>
      <td><font face="Arial, Helvetica, sans-serif"><a href="http://www.microsoft.com"
target="_blank">Microsoft</a></font></td>
    </tr>
    <tr>
      <td><font face="Arial, Helvetica, sans-serif"><a href="http://www.dell.com"
target="_blank">Dell
        Computers</a></font></td>
    </tr>
    <tr>
      <td><a href="http://www.compaq.com" target="_blank"><font face="Arial,
Helvetica, sans-serif">Compaq
        Computers</font></a></td>
    </tr>
    <tr>
      <td><font face="Arial, Helvetica, sans-serif"><a href="glossary.htm"
target="_blank">MMS
        Glossary</a></font></td>
    </tr>
    <tr>
      <td><font face="Arial, Helvetica, sans-serif"><a href="Help/HelpMain.html"
target="_blank">MMS
        Tutorial Help</a></font></td>
    </tr>
  </table>
```

Appendix B.
HTML Code Sorry.html

```
<html><head><title>Sorry</title></head>
<body><p align="center"><font color="#FF0000"><font face="Comic Sans MS"><img
border="0" src="../images/navigation/small_icon.jpg" align="left" width="75"
height="93">
</font><font face="Tahoma" size="6">Restricted Area Login Failure</font></font></p>
 
<p>
</p>
<p align="center">
<font face="Tahoma"><b>
Sorry, you have entered an invalid UserId or Password. </b></font></p>
<p align="center">
<font face="Tahoma"><b>
If you feel you made a mistake and want to try to log in again, <a href="login.html">
click
here</a></b></font></p>
<p> </p>
</body></html>
```

Appendix B.
HTML Code Privacy.html

```
<html>

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
<meta name="GENERATOR" content="Microsoft FrontPage 4.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<title>Our Privacy Commitment&amp;nbsp; McCord Management Systems</title>
</head>

<body bgcolor="#FFFFFF">
<p align="center"><img src="../images/Logo/mms2.jpg" width="368" height="95"></p>
<p align="center"><img src="../images/Logo/Logo.jpg" width="371" height="23"></p>
<p align="center"><a href="login.html"><img
src="file:///C|/InetPub/wwwroot/IET/images/navigation/Home.png" width="100"
height="30" border="0"></a></p>
<p align="left"><b><span style="font-size: 10.0pt; font-family: Arial"><font
color="#0000FF">McCord
  Managment System Privacy Commitment</font></span></b><span style="font-
size:10.0pt;font-family:Arial;
color:black"><br>
  <br>
  <font face="Arial, Helvetica, sans-serif">McCord Management Systems is committed
  to protecting your personal privacy. Our Principles of Privacy summarize and
  clarify our commitment: how we safeguard your privacy, how we treat personal
  information, and what choices you have. We understand that for you to take full
  advantage of the benefits of this interactive medium, we must do what we can
  to ensure that your privacy is secure.</font></span><font face="Arial, Helvetica, sans-
serif"><span style="font-size:10.0pt;font-
family:Arial;color:black"><o:p></o:p></span></font><span style="font-
size:10.0pt;font-family:Arial;color:black">
  </span> </p>
<p><b><span style="font-size: 10.0pt; font-family: Arial"><font
color="#0000FF">McCord
  Management System Principles of Privacy:</font></span></b><span style="font-
size:10.0pt;font-family:Arial;color:black"><o:p></o:p>
  </span></p>
<p><span style="font-size:
    10.0pt;font-family:Arial"><font face="Arial, Helvetica, sans-serif">We do
  not disclose your private online communications.</font> </span></p>
<font face="Arial, Helvetica, sans-serif"><span style="font-size:
    10.0pt;font-family:Arial"><o:p> </o:p></span> </font>
<p><font face="Arial, Helvetica, sans-serif"><span style="font-size:
    10.0pt;font-family:Arial">We do not disclose or share your personal registration
```

```
  information (name, telephone number, email address, etc.) unless you specifically
  authorize us to do so. </span></font></p>
<p><font face="Arial, Helvetica, sans-serif"><span style="font-size: 10.0pt; font-family:
Arial">We
  </span><span style="font-size:10.0pt;font-family:Arial;mso-fareast-font-
family:&amp;quot;Times New Roman&amp;quot;;
color:black;mso-ansi-language:EN-US;mso-fareast-language:EN-US;mso-bidi-language:
AR-SA">will keep you informed about what we do with your personal information,
  and we will advise you if we change our policy.</span> </font></p>
<table border="0" width="97%" height="86">
  <tr>
    <td width="100%" height="80" align="center">
      <hr size="10" color="#0000FF">
      <p><font face="Comic Sans MS" size="4">I'm a New User</font></p>
      <p><font face="Arial" size="5"><b>&amp;nbsp; </b></font><a
href="newuser.asp"><font face="Arial" size="5"><b>Sign
        me up!</b></font></a>
    </td>
  </tr>
</table>
<p>&amp;nbsp;</p>
</body>
</html>
```

Appendix C.
ASP Code Login.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%
Dim oConn, sConnString , RS
Dim UserID, Password, DataPassword

UserID = Request("UserID")
Password = Request("Password")

Set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'& "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"

oConn.Open(sConnString)

strSQL = "SELECT * FROM password Where UserID=" & UserID

Set RS = Oconn.Execute(strSQL)
If RS.eof = false then
  DataPassword = RS("password")
else
  DataPassword = "Wrong"
End if

If DataPassword = Password then
  Session("Authenticate") = True
else
Response.Redirect "sorry.html"
end if

%>

<html><head><title>Validate</title></head>
<body><p align="center"><img border="0" src="../images/Logo/mms2.jpg"></p>
<p align="center"><img border="0" src="../images/Logo/Logo.jpg"></p>
<p align="center"><i><font face="Comic Sans MS" color="#0000FF"
size="4">Members
Area</font></i></p>
<form method="post" action="ok.asp" name="login">
<input type="hidden" name="UserID" size="16" value=<%=UserID%>>
<p align="center">
<input type="button" value="Continue" name="B1" onclick="setvalue('ok.asp')">
```

```
</p>
<input type="hidden" name="frompage" value="login">
</body>
</html>

<%'//This script will redirect you where you want to go and pass the appropriate
information.%>
<script>
function setvalue(value)
{
  login.action=value
  login.submit()
}
</script> <%@ LANGUAGE="VBSCRIPT" %>
<%
Dim oConn, sConnString , RS
Dim UserID, Password, DataPassword

UserID = Request("UserID")
Password = Request("Password")

Set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'& "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"

oConn.Open(sConnString)

strSQL = "SELECT * FROM password Where UserID=" & UserID

Set RS = Oconn.Execute(strSQL)
If RS.eof = false then
  DataPassword = RS("password")
else
  DataPassword = "Wrong"
End if

If DataPassword = Password then
  Session("Authenticate") = True
else
Response.Redirect "sorry.html"
end if

%>
```

```
<html><head><title>Validate</title></head>
<body><p align="center"><img border="0" src="../images/Logo/mms2.jpg"></p>
<p align="center"><img border="0" src="../images/Logo/Logo.jpg"></p>
<p align="center"><i><font face="Comic Sans MS" color="#0000FF"
size="4">Members
Area</font></i></p>
<form method="post" action="ok.asp" name="login">
<input type="hidden" name="UserID" size="16" value=<%=UserID%>>
<p align="center">
<input type="button" value="Continue" name="B1" onclick="setvalue('ok.asp')">
</p>
<input type="hidden" name="frompage" value="login">
</body>
</html>

<%'//This script will redirect you where you want to go and pass the appropriate
information.%>
<script>
function setvalue(value)
{
  login.action=value
  login.submit()
}
</script>
```

Appendix C.
ASP Code OK.asp

```
<script language="JavaScript">
<!--
function newWindow1()
{
default_window = window.open("Help.html","plain","width=400,height=500");
}

---->
</script>
<%@ LANGUAGE="VBSCRIPT" %>
<%
Dim oConn, sConnString , RS
Dim UserID, Password, DataPassword
Dim sql, username
Dim pagename, frompage

frompage = request("frompage")

if Session("Authenticate") = False then
  Response.Redirect "sorry.html"
else
  userid=request.form("UserID")
  if userid <> "" then
    Set oConn = Server.CreateObject("ADODB.Connection")
    'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
    '& "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
    sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
    sconnstring = sconnstring & "User Id=sa"
    oConn.Open(sConnString)
    sql="SELECT * FROM USERS WHERE USERID = " & userid & ""
    set rs = oConn.Execute(sql)
    if rs.recordcount <> 0 then
      username = rs.fields(3).value & " " & rs.fields(2).value
    else
      Response.Redirect "sorry.html"
    end if
  else
    Response.Redirect "sorry.html"
  end if
end if
%>

<html><head><title>Logged ON</title></head>
```

```
<body bgcolor="#FFFFFF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg"> </H1>
<p align="center">
<font face="Tahoma">User ID:</font>  <%=userid %>   <font face="Tahoma">User
Name:</font>  <%=username%>
<form method="post" name="ok" action="mycalls.asp">
  <p align="center">
    <input type="image" border="0" src="../images/navigation/MyCalls.png" value=""
onclick="setvalue('mycalls.asp')">
           
    <input type="image" border="0" src="../images/navigation/NewCall.png" value=""
onclick="setvalue('newcall.asp')">
           
    <input type="image" border="0" src="../images/navigation/Search.png" value=""
onclick="setvalue('search.asp')">
             <input type="image"
border="0" src="../images/navigation/Help.png" value=""
onclick="newWindow1();">        
    <a href="logoff.asp"><img border="0" src="../images/navigation/LogOff.png">
    </a> </p>

<p align="left"><input type="hidden" name="UserID" value="<%=userid%>"></p>
<%if frompage = "change" then%>
          <p align="center">Password changed successfully!!</p>
<%end if%>


</form></body></html>
<script>
function setvalue(value)
{
  ok.action=value
  ok.submit()
}
</script>
```

Appendix C.
ASP Code MyCalls.asp

```
<script language="JavaScript">
<!--
function newWindow1()
{
default_window = window.open("Help.html","plain","width=400,height=400");
}
function newWindow2()
{
default_window = window.open("glossary.htm","plain","width=650,height=450");
}
---->
</script>
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim userid, oConn, sql, rs, i, fromflag, status, frompage, url
dim dateonly, problemtext
frompage=request("fromflag")
fromflag="mycalls"
userid=request("UserID")
'response.write userid
set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)
sql="SELECT CALLID, DATEOPEN, (FNAME+' '+LNAME) AS NAME,
SERVICELEVEL, PROBLEM "
sql=sql & "FROM (call INNER JOIN contacts ON call.CONTID ="
sql=sql & " contacts.CONTID) INNER JOIN platform ON call.platform"
sql=sql & " = platform.platform WHERE USERID = " & userid & ""
sql=sql & " AND STATUS = 'O' ORDER BY CALLID"
set rs = Server.CreateObject("ADODB.Recordset")
'response.write sql
rs.Open sql, oConn, 1, 3
url = "mycalls.asp?userid=" & userid
'response.write url
%>

<html><head>
<script language="JavaScript">
<!--
function MM_displayStatusMsg(msgStr) { //v1.0
```

```
  status=msgStr;
  document.MM_returnValue = true;
}
//-->
</script>
</head>
<body bgcolor="#FFFFFF" vlink="#0000FF" alink="#0000FF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23">
</H1>
<H1 align="center"> <a href="NewCall.asp?UserID=<%=userid%>"><img border="0"
src="../images/navigation/NewCall.png" width="100"
height="30"></a>       
  <a href="search.asp?UserID=<%=userid%>"><img border="0"
src="../images/navigation/Search.png"></a>
        
  <input type="image" border="0" src="../images/navigation/Help.png" value=""
onclick="newWindow1();">
         <a href="logoff.asp"> <img border="0"
src="../images/navigation/LogOff.png"></a></H1>
<table border=1 cellpadding=1 cellspacing=0 width="757">
  <tr>
    <td width="60"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="ID to identify a call" onclick="newWindow2();">Call
      ID</a></font></td>
    <td width="98"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Date Call was created"
onclick="newWindow2();">Date</a></font></td>
    <td width="156"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Person who called with the problem"
onclick="newWindow2();">Contact</a></font></td>
    <td width="50"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Days to correct the problem"
onclick="newWindow2();">Level</a></font></td>
    <td width="320"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Reason for the call" onclick="newWindow2();">Problem
      Description</a></font></td>
    <td width="47"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Detailed information about the call"
onclick="newWindow2();">Details</a></font></td>
  </tr>
    <%Do Until rs.eof
       dateonly = rs("dateopen")
                  dateonly = left(dateonly, 8)
                  if mid(dateonly, 7, 1) = " " then
                           dateonly = left(dateonly, 7)
```

```
                end if
        problemtext = rs("problem")
                if len(problemtext) > 50 then
                        problemtext = left(problemtext, 50)
                end if%>
  <tr>
    <td valign="top" width="60">
      <div align="left"></div>
      <%=rs.fields(0).value%></td>
    <td valign="top" width="98"> <%=dateonly%></td>
    <td valign="top" width="156"> <%=rs.fields(2).value%></td>
    <td valign="top" width="50"> <%=rs.fields(3).value%></td>
    <td valign="top" width="320"> <%=problemtext%></td>
    <td valign="top" width="47"> <A
HREF="CallDetails.asp?Call_Number=<%=rs.fields(0).value%>&frompage=mycalls">
Details</A>
      <%rs.movenext%>
  </tr>
  <%Loop%>
</table>
<p>
  <input type="hidden" name="UserID" value="<%=userid%>">
  <input type="hidden" name="FromFlag" value="<%=fromflag%>">
</p>
</body></html>
```

Appendix C.
ASP Code NewCall.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%

dim call_number, oConn, sql, rs, displaycontact
dim calldate, username, contactid, fromflag, user
user = request("UserID")
fromflag = "newcall"
set oConn = Server.CreateObject("ADODB.Connection")
set rs = Server.CreateObject("ADODB.Recordset")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)
sql="SELECT max(callid) from call"
rs.Open sql, oConn
call_number = rs.fields(0).value + 1
rs.close
calldate = now()
sql = "SELECT fname + ' ' + lname from users where userid = " & request("UserID") &
""
rs.Open sql, oConn
username = rs.fields(0).value
rs.close
%>

<html><head><title>New Call</title></head>
<body bgcolor="#FFFFFF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23">
</H1>
<form method="post" name="newcall" action="mycalls.asp">

<input type="hidden" name="UserID" value="<%=request("UserID")%>">
<input type="hidden" name="frompage" value="<%=fromflag%>">
<input type="hidden" name="Call_Number" value="<%=call_number%>">
<input type="hidden" name="Date" value="<%=calldate%>">
<input type="hidden" name="User_Name" value="<%=username%>">

<H1 align="center">
<input type="image" border="0" src="../images/navigation/addcall.png" value=" "
onclick="updatepage('CallDetails.asp')">
       
```

```
<input type="image" border="0" src="../images/navigation/cancel.png" value=" "
onclick="updatepage('mycalls.asp')">
</H1>

<div align="left">
   <table border="1" width="760">
     <tr>
       <td colspan="3" bgcolor="#0000FF">
         <div align="center"><b><font color="#FFFFFF">New Call
Information</font></b></div>
       </td>
     </tr>
     <tr>
       <td colspan="3">Call Number: <%=call_number%></td>
     </tr>
     <tr>
       <td colspan="3">Date: <%=calldate%></td>
     </tr>
     <tr>
       <td colspan="3">User Name: <%=username%></td>
     </tr>
     <tr>
       <td colspan="3">Platform:
         <select id="Platform" name="Platform">
           <%sql = "SELECT DISTINCT platform, servicelevel from platform"
        rs.Open sql, oConn
        do until rs.eof%>
           <option value = "<%=rs.fields(0).value%>"> <%=rs.fields(0).value%>
           Level: <%=rs.fields(1).value%></option>
           <%rs.movenext
        loop%>
         </select>
         <%rs.close%> </td>
     </tr>
     <tr>
       <td colspan="3">Contact:
         <select id="Contact" name="Contact">
           <%sql = "SELECT * from contacts"
        rs.Open sql, oConn
        do until rs.eof
           displaycontact = rs.fields(2).value & " " & rs.fields(1).value & "  " &
rs.fields(3).value & " ext." & rs.fields(4).value%>
           <option value = "<%=rs.fields(0).value%>"> <%=displaycontact%>
<%rs.movenext
        loop%>
         </select>
```

```
        <%rs.close%></td>
      </tr>
      <tr>
        <td colspan="3">Problem:
          <input type="Input" maxlength= 130 size = 95 name="Problem">
        </td>
      </tr>
    </table>
<p> </p></div>

  <table border=1 cellpadding=1 cellspacing=0 width="760">
    <tr bgcolor="#0000FF">
      <td colspan="2">
        <div align="center"><b><font color="#FFFFFF">Solution Steps</font></b></div>
      </td>
    </tr>
    <tr>
      <td width="110">Step Number</td>
      <td width="635">Action Taken</td>
    </tr>
    <tr>
      <td width="110"> 1
        <input type = "Hidden" name = "stepnumber" value = "1">
      </td>
      <td width="635">
        <input type = "Input" name = "actionstep" maxlength = "255" size = 90>
      </td>
    </tr>
  </table>
<H1 align="center"> </H1>
</form></body></html>

<script>
function updatepage(gotopage)
{
  newcall.action=gotopage
  newcall.submit()
}
</script>
```

Appendix C.
ASP Code CallDetails.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim callid, oConn, sql, rs, maxsolutionid, displaycontact
dim dateopen, username, address, contactname, platform, servicelevel
dim problem, solutionid, solution, userid, fromflag, frompage
dim user, contid, solutiondate, i, status, lockout, calluserid
lockout = "False"
fromflag = "calldetails"
callid = request("Call_Number")
frompage = request("frompage")                                  '//Line 10
user = request("UserID")

set oConn = Server.CreateObject("ADODB.Connection")
set rs = Server.CreateObject("ADODB.Recordset")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

'//If this is a new call, insert the information into the database.
if frompage = "newcall" then
   dateopen = request("Date")
   platform = request("Platform")
   if platform = Null then
      platform = "NONE"
   end if
   contid = request("Contact")
   problem = request("Problem")
   if problem = "" then problem = "Please Enter a Problem Description"          '//Line
30
   solutionid = request("stepnumber")
   solution = request("actionstep")
   solutiondate = date()
   sql="insert into call (callid, dateopen, platform, problem, schedule, "
   sql=sql & "status, contid, userid) values (" & callid & ",'" & dateopen
   sql=sql & "','" & platform & "','" & replace(problem,"'","''") & "','N','O'," & contid &
",'" & user & "')"
   oConn.execute sql
   if solution <> null or solution <> "" then
      sql="insert into solution (callid, solutionid, solution, [date], userid) "
      sql=sql & " values(" & callid & "," & solutionid & ",'" & replace(solution,"'","''") &
"','"
```

```
    sql=sql & solutiondate & "'," & user & ")"
    oconn.execute sql
  end if

'//If the page is update from the call details screen.
elseif frompage = "calldetails" then
  dateopen = request("Date")
  platform = request("Platform")
  if platform = Null then
    platform = "NONE"                                    '//Line 50
  end if
  contid = request("Contact")
  problem = request("Problem")
  if problem = "" then problem = "Please Enter a Problem Description"
  solutionid = request("stepnumber")
  solution = request("actionstep")
  solutiondate = date()

  '//Check to see if contact, platform or problem have changed.
  sql="select contid, platform, problem from call where callid=" & callid
  rs.Open sql, oConn
  '//Check the contact first.  If they don't match, change the database record.
  if rs("contid") <> contid then
    sql="update call set contid=" & contid & " where callid=" & callid
    oConn.execute sql
  end if
  '//Check the platform next.  If they don't match, change the database record.
  if rs("platform") <> platform then
    sql="update call set platform='" & platform & "' where callid=" & callid
    oConn.execute sql                                    '//Line 70
  end if
  '//Check the problem last.  If they don't match, change the database record.
  if rs("problem") <> problem then
    sql="update call set problem='" & problem & "' where callid=" & callid
    oConn.execute sql
  end if
  rs.close

  '//If the action step is populated, add it to the database.
  if solution <> "" then
    sql="insert into solution (callid, [solutionid], solution, [date], userid) "
    sql=sql & " values(" & callid & "," & solutionid & ",'" & solution & "','"
    sql=sql & solutiondate & "'," & user & ")"
    oConn.execute sql
  end if
end if
```

```
'//Select the call you want to see the details on.
sql="SELECT call.callid, call.dateopen, users.fname+' '+users.lname as username, "
sql=sql & "contacts.location+'/'+contacts.dept as address, contacts.fname+'
'+contacts.lname as contactname, "
sql=sql & "call.platform, platform.servicelevel, call.problem, "
sql=sql & "call.userid, call.status, contacts.contid FROM "
sql=sql & "platform INNER JOIN (users INNER JOIN (contacts INNER "
sql=sql & "JOIN call ON contacts.contid = call.contid) ON users.userid"
sql=sql & " = call.userid) ON platform.platform = call.platform "
sql=sql & "WHERE call.callid = "& callid &""

rs.Open sql, oConn
platform=rs("platform")
contactname=rs("contactname")        '//Line 100
address=rs("address")
servicelevel=rs("servicelevel")
problem=rs("problem")
status=rs("status")
calluserid = rs("userid")
%>

<%'//Fill in all the page header information.%>
<html><head><title>Call Details</title></head>
<body bgcolor="#FFFFFF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23"> </H1>
<form method="post" name="calldetails" action="mycalls.asp">

<%'//All potential messages for editing status%>
<%if frompage = "searchresults" then%>
   <%'<p>You cannot edit this call because you are not assigned to it!!</p>%>

  <p align = "center"><font face="Arial, Helvetica, sans-serif" size="3"><b><font
color="#CC0000">Search
    Results are Read Only</font></b></font></p>
   <%lockout = "True"%>
<%end if%>
<%'if status = "C" then
   '<p>You cannot edit this call because it is closed!!</p>
   'lockout = "True"
'end if%>

<H1 align="center">
<%if lockout <> "True" then%>
```

```
  <input type="image" border="0" src="../images/navigation/Update.png" value=""
onclick="setvalue('calldetails.asp')">
         
<%end if%>
<input type="image" border="0" src="../images/navigation/Cancel.png" value=""
onclick="setvalue('mycalls.asp')"></H1>

<%'//Assign hidden values to pass to other pages.%>
<input type="hidden" name="UserID" value="<%=rs("userid")%>">
<input type="hidden" name="FromPage" value="<%=fromflag%>">
<input type="hidden" name="Call_Number" value="<%=rs("callid")%>">
<input type="hidden" name="Date" value="<%=rs("dateopen")%>">
<input type="hidden" name="User_Name" value="<%=rs("username")%>">
<input type="hidden" name="Address" value="<%=address%>">
<input type="hidden" name="Service_Level" value="<%=servicelevel%>">

<%'//Fill in the call details themselves.%>
<div align="left">
 <table border="1" width="760">
  <tr bgcolor="#0000FF">
   <td width="48%">
    <div align="center"><b><font color="#FFFFFF">Call
Information</font></b></div>
   </td>
   <td colspan="2">
    <div align="center"><b><font color="#FFFFFF">User and Contact
Information</font></b></div>
   </td>
  </tr>
  <tr>
    <td width="48%">Call Number: <%=rs("callid")%></td>  <td colspan="2">User
Name: <%=rs("username")%></td>
  </tr>
  <tr>
    <td width="48%">Date: <%=rs("dateopen")%></td>
   <%rs.close%>
   <td colspan="2">Contact:
    <%if lockout = "True" then%>
      <%sql = "SELECT * FROM contacts WHERE fname+ ' ' +lname='" &
contactname & "'"
      rs.Open sql, oConn
      displaycontact = rs.fields(2).value & " " & rs.fields(1).value & "  " &
rs.fields(3).value & " ext." & rs.fields(4).value%>
      <%=displaycontact%>
    <%else%>
      <SELECT id="Contact" name="Contact">
```

```
          <%sql = "SELECT * from contacts"
          rs.Open sql, oConn
          do until rs.eof
            displaycontact = rs.fields(2).value & " " & rs.fields(1).value & "  " &
rs.fields(3).value & " ext." & rs.fields(4).value
            if (rs.fields(2).value & " " & rs.fields(1).value) = contactname then%>
          <OPTION SELECTED value = "<%=rs.fields(0).value%>">
<%=displaycontact%>
          <%else%>
          <OPTION value = "<%=rs.fields(0).value%>"> <%=displaycontact%> <%end if
            rs.movenext
          loop%>
        </SELECT>
      <%end if%>
    </td>
    <%rs.close%>
  <tr>
    <td width="48%">Platform:
      <%if lockout = "True" then%>
        <%sql = "SELECT DISTINCT platform, servicelevel from platform where
platform = '" & platform & "'"
        rs.Open sql, oConn%>
        <%=rs("platform")%> Level: <%=rs("servicelevel")%>
      <%else%>
        <SELECT id="Platform" name="Platform">
          <%sql = "SELECT DISTINCT platform, servicelevel from platform"
          rs.Open sql, oConn
          do until rs.eof
            if rs("platform") = platform then%>
              <OPTION SELECTED value = "<%=rs("platform")%>">
<%=rs("platform")%>
              Level: <%=rs("servicelevel")%></OPTION>
            <%else%>
              <OPTION value = "<%=rs("platform")%>"> <%=rs("platform")%> Level:
<%=rs("servicelevel")%></OPTION>
            <%end if
            rs.movenext
          loop%>
        </SELECT>
      <%end if%>
    </td>
    <%rs.close%>
      <td colspan="2">Location/Department: <%=address%></td>
  </tr>
  <tr>
    <td width="48%">Level: <%=servicelevel%></td>
```

```
      <td width="26%">
       <div align="center">
        <%if lockout = "True" then%>
          <input type="button" value="Close Call">
        <%else%>
          <input type="button" value="Close Call" onclick="setvalue('closed.asp')">
        <%end if%>
       </div>
      </td>
      <td width="26%">
       <div align="center">
        <%if lockout = "True" then%>
          <input type="button" value="Assign Call">
        <%else%>
          <input type="button" value="Assign Call" name="Assign_Call"
onclick="setvalue('assigncall.asp')">
        <%end if%>
       </div>
      </td>
    </tr>
    <tr>
      <td colspan="3">Problem:
       <%if lockout = "True" then%>
         <%=problem%>
       <%else%>
         <input type="Input" size=95 maxlength=130 name="Problem"
value="<%=problem%>">
       <%end if%>
      </td>
    </tr>
  </table>
</div>

<%'//Action Steps Section

'//Add current action steps for this call.%>
<%sql = "SELECT * from solution where callid = " & callid
rs.Open sql,oConn%>
<p> </p><table border=1 cellspacing=0 width="760">
  <tr bgcolor="#0000FF">
    <td width="20%">
      <div align="center"><font color="#FFFFFF"><b>Step Number</b></font></div>
    </td>
    <td width="80%">
      <div align="center"><font color="#FFFFFF"><b>Action Taken</b></font></div>
    </td>
```

```
</tr>
<%Do While Not rs.eof%>
<tr>
   <td width="110"><font face="Times New Roman, Times, serif" color="#0000FF">
     <%=rs("solutionid")%> <%maxsolutionid = rs("solutionid")%> </font> </td>
   <td width="635"><font face="Times New Roman, Times, serif" color="#0000FF">
     <%=rs("solution")%> </td>
</tr>
<%rs.movenext%>
<%Loop

'//Add an area for a new action step.%>
<%if lockout <> "True" then%>
<tr>
     <td width="110"> <%=maxsolutionid + 1%>
       <input type = "Hidden" name = "stepnumber" value = "<%=maxsolutionid + 1%>">
     </td>
     <td width="635">
       <input type = "Input" name = "actionstep" maxlength = "255" size = 90>
     </td>
</tr>

<%end if%>
</table>
<H1 align="center">
  <%if lockout <> "True" then%>
    <input type="image" border="0" src="../images/navigation/Update.png" value=""
onClick="setvalue('calldetails.asp')" name="image">
           
  <%end if%>
  <input type="image" border="0" src="../images/navigation/Cancel.png" value=""
onClick="setvalue('mycalls.asp')" name="image">
</H1></form>
</body></html>

<%'//This script will redirect you where you want to go and pass the appropriate
information.%>
<script>
function setvalue(value)
{
  calldetails.action=value
  calldetails.submit()
}
</script>
```

Appendix C.
ASP Code Search.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim callid, oConn, sql, rs, maxsolutionid, displaycontact
dim dateopen, username, address, contactname, platform, servicelevel
dim problem, solutionid, solution, userid, fromflag, frompage
dim user, contid, solutiondate, i, status
callid = request("Call_Number")
frompage = request("fromflag")

set oConn = Server.CreateObject("ADODB.Connection")
set rs = Server.CreateObject("ADODB.Recordset")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

user = request("UserID")
%>

<%'//Fill in all the page header information.%>
<html><head><title>Search Calls</title></head>
<body bgcolor="#FFFFFF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23"> </H1>
<form method="post" name="search" action="searchresults.asp">
<H1 align="center"><input type="image" border="0"
src="../images/navigation/search.png">
       <input type="image" border="0"
src="../images/navigation/Cancel.png" value=""
onclick="setvalue('mycalls.asp')"></H1>

<%'//Assign hidden values to pass to other pages.%>
<input type="hidden" name="UserID" value="<%=user%>">

<%'//Fill in the call details themselves.%>
<div align="left">
  <table border="1" width="760">
    <tr bgcolor="#0000FF">
      <td width="48%">
        <div align="center"><b><font color="#FFFFFF">Call
Information</font></b></div>
      </td>
```

```
    <td colspan="2">
     <div align="center"><b><font color="#FFFFFF">User and Contact
Information</font></b></div>
    </td>
   </tr>
   <tr>
    <td width="48%">Call Number:<input type="input" name="Call_Number"></td>
    <td colspan="2">User Name:<select id="UserID" name="SearchID">
      <%sql="select * from [users]"
       rs.Open sql, oConn
       do until rs.eof
         displaycontact = rs.fields(3).value & " " & rs.fields(2).value%>
         <OPTION value="<%=rs.fields(0).value%>">
<%=displaycontact%></OPTION>
         <%rs.movenext%>
       <%loop%>
       <OPTION SELECTED value=""> </OPTION>
      <%rs.close%>
    </td>
   </tr>
   <tr>
    <td width="48%">Date:<%=now()%></td>
    <td colspan="2">Contact:
     <SELECT id="Contact" name="Contact">
      <%sql = "SELECT * from contacts"
       rs.Open sql, oConn
       do until rs.eof
         displaycontact=rs.fields(2).value & " " & rs.fields(1).value & "  " &
rs.fields(3).value & " ext." & rs.fields(4).value%>
         <OPTION value="<%=rs.fields(0).value%>"> <%= displaycontact%>
</OPTION>
         <%rs.movenext
       loop%>
       <OPTION SELECTED value=""> </OPTION>
     </SELECT>
    </td>
    <%rs.close%>
   <tr>
    <td width="48%">Platform:
     <SELECT id="Platform" name="Platform">
      <%sql="SELECT DISTINCT platform, servicelevel from platform"
       rs.Open sql, oConn
       do until rs.eof%>
         <OPTION value="<%=rs("platform")%>"> <%=rs("platform")%> Level:
<%=rs("servicelevel")%></OPTION>
         <%rs.movenext
```

```
          loop%>
          <OPTION SELECTED value=""> </OPTION>
        </SELECT>
      </td>
      <%rs.close%>
      <td colspan="2">Address:<%=address%></td>
    </tr>
    <tr>
      <td width="48%">Level:<%=servicelevel%></td>
      <td width="26%">Status:
        <SELECT id="Status" name="Status">
          <OPTION SELECTED value="O">Open</OPTION>
          <OPTION value="C">Closed</OPTION>
        </SELECT>
      </td>
      <td width="26%">
        <div align="center">
          <input type="button" value="Assign Call" name="Assign_Call"
onclick="setvalue('assigncall.asp')">
        </div>
      </td>
    </tr>
    <tr>
      <td colspan="3">Problem:
        <input type="Input" size=95 maxlength=130 name="Problem"
value="<%=problem%>">
      </td>
    </tr>
  </table>
</div>

<%'//Action Steps Section%>

<p> </p><table border=1 cellspacing=0 width="760">
  <tr bgcolor="#0000FF">
    <td width="110">
      <div align="center"><font color="#FFFFFF"><b>Step Number</b></font></div>
    </td>
    <td width="635">
      <div align="center"><font color="#FFFFFF"><b>Action Taken</b></font></div>
    </td>
</tr>
<tr>
    <td width="110"><font face="Times New Roman, Times, serif"
color="#0000FF">X</font> </td>
    <td width="635"><font face="Times New Roman, Times, serif" color="#0000FF">
```

```
    <input type="input" name="actionstep" maxlength = "255" size = 90></td>
</tr>
</table>
</body></html>

<%'//This script will redirect you where you want to go and pass the appropriate
information.%>
<script>
function setvalue(value)
{
  search.action=value
  search.submit()
}
</script>
```

Appendix C.
ASP Code SearchResults.asp

```
<script language="JavaScript">
<!--
function newWindow1()
{
default_window = window.open("Help.html","plain","width=400,height=400");
}
function newWindow2()
{
default_window = window.open("glossary.htm","plain","width=650,height=450");
}
---->
</script>
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim userid, oConn, sql, rs, i, fromflag, status, frompage
dim searchid, problem, solution, platform, contact, callnumber
dim dateonly, problemtext

frompage=request("fromflag")
fromflag="searchresults"
userid=request("UserID")
searchid=request("SearchID")
problem=request("Problem")
solution=request("actionstep")
platform=request("Platform")
contact=request("Contact")
callnumber=request("Call_Number")
status=request("Status")

set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

if solution="" then
  sql="SELECT call.CALLID, DATEOPEN, (FNAME+' '+LNAME) AS NAME,
SERVICELEVEL, PROBLEM "
  sql=sql & "FROM ((call INNER JOIN contacts ON call.CONTID ="
  sql=sql & " contacts.CONTID) INNER JOIN platform ON call.PLATFORM"
  sql=sql & " = platform.PLATFORM) WHERE"
```

```
  if searchid<>"" then
    sql=sql & " call.USERID = " & searchid & ""
  end if
  if callnumber<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " call.CALLID = " & callnumber
    else
      sql=sql & " AND call.CALLID = " & callnumber
    end if
  end if
  if contact<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " call.CONTID = " & contact
    else
      sql=sql & " AND call.CONTID = " & contact
    end if
  end if
  if platform<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " platform.PLATFORM = '" & platform & "'"
    else
      sql=sql & " AND platform.PLATFORM = '" & platform & "'"
    end if
  end if
  if status<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " STATUS = '" & status & "'"
    else
      sql=sql & " AND STATUS = '" & status & "'"
    end if
  end if
  if problem<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " PROBLEM LIKE '%" & problem & "%'"
    else
      sql=sql & " AND PROBLEM LIKE '%" & problem & "%'"
    end if
  end if
else
  sql="SELECT call.CALLID, DATEOPEN, (FNAME+' '+LNAME) AS NAME,
SERVICELEVEL, PROBLEM "
  sql=sql & "FROM ((call INNER JOIN contacts ON call.CONTID ="
  sql=sql & " contacts.CONTID) INNER JOIN platform ON call.PLATFORM"
  sql=sql & " = platform.PLATFORM) INNER JOIN solution ON call.CALLID"
  sql=sql & " = solution.CALLID WHERE"
```

```
  if searchid<>"" then
    sql=sql & " call.USERID = " & searchid & ""
  end if
  if callnumber<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " call.CALLID = " & callnumber
    else
      sql=sql & " AND call.CALLID = " & callnumber
    end if
  end if
  if contact<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " call.CONTID = " & contact & ""
    else
      sql=sql & " AND call.CONTID = " & contact & ""
    end if
  end if
  if platform<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " platform.PLATFORM = '" & platform & "'"
    else
      sql=sql & " AND platform.PLATFORM = '" & platform & "'"
    end if
  end if
  if status<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " STATUS = '" & status & "'"
    else
      sql=sql & " AND STATUS = '" & status & "'"
    end if
  end if
  if problem<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " PROBLEM LIKE '%" & problem & "%'"
    else
      sql=sql & " AND PROBLEM LIKE '%" & problem & "%'"
    end if
  end if
  if solution<>"" then
    if right(sql, 5) = "WHERE" then
      sql=sql & " SOLUTION LIKE '%" & solution & "%'"
    else
      sql=sql & " AND SOLUTION LIKE '%" & solution & "%'"
    end if
  end if
end if
```

```
sql=sql & " group by call.callid, dateopen,  (FNAME+' '+LNAME), servicelevel,
problem ORDER BY call.CALLID"
set rs = Server.CreateObject("ADODB.Recordset")
rs.Open sql, oConn, 1, 3
%>

<html><head><title>Search Results</title></head>
<body bgcolor="#FFFFFF" vlink="#0000FF" alink="#0000FF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23">
</H1>
<H1 align="center"> <a href="NewCall.asp?UserID=<%=userid%>"><img border="0"
src="../images/navigation/NewCall.png"></a>     &nbs
p; 
  <a href="search.asp?UserID=<%=userid%>"><img border="0"
src="../images/navigation/Search.png"></a>
         
  <input type="image" border="0" src="../images/navigation/Help.png" value=""
onClick="newWindow1();" name="image">
          <a href="logoff.asp"> <img
border="0" src="../images/navigation/LogOff.png"></a></H1>
<p align="center"><font face="Arial, Helvetica, sans-serif" size="3"
color="#990000"><b><font color="#CC0000">Search
  Results</font></b> </font></p>
<table border=1 cellpadding=1 cellspacing=0 width="757">
  <tr>
    <td width="60"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="ID to identify a call" onclick="newWindow2();">Call
      ID</a></font></td>
    <td width="98"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Date Call was created"
onclick="newWindow2();">Date</a></font></td>
    <td width="156"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Person who called with the problem"
onclick="newWindow2();">Contact</a></font></td>
    <td width="50"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Days to correct the problem"
onclick="newWindow2();">Level</a></font></td>
    <td width="320"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Reason for the call" onclick="newWindow2();">Problem
      Description</a></font></td>
    <td width="47"><font face="Times New Roman, Times, serif" color="#0000FF"><a
href="#" title="Detailed information about the call"
onclick="newWindow2();">Details</a></font></td>
  </tr>
    <%Do Until rs.eof
```

```
                dateonly = rs("dateopen")
                dateonly = left(dateonly, 8)
                if mid(dateonly, 7, 1) = " " then
                dateonly = left(dateonly, 7)
                end if
        problemtext = rs("problem")
                if len(problemtext) > 50 then
                problemtext = left(problemtext, 50)
                end if%>
  <tr>
    <td valign="top" width="60"> <%=rs.fields(0).value%></td>
    <td valign="top" width="98"> <%=dateonly%></td>
    <td valign="top" width="156"> <%=rs.fields(2).value%></td>
    <td valign="top" width="50"> <%=rs.fields(3).value%></td>
    <td valign="top" width="320"> <%=problemtext%></td>
    <td valign="top" width="47"> <A
HREF="CallDetails.asp?Call_Number=<%=rs.fields(0).value%>&frompage=searchresul
ts&UserID=<%=userid%>">Details</A>
    <%rs.movenext%></tr>
  <%Loop%>
</table>
<p>
  <input type="hidden" name="SearchUserID" value="<%=searchid%>">
  <input type="hidden" name="UserID" value="<%=userid%>">
</p>
</body></html>
```

Appendix C.
ASP Code AssingCall.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim callid, oConn, sql, rs, sConnString, userid

callid = request("Call_Number")
userid = request("UserID")

set oConn = Server.CreateObject("ADODB.Connection")
set rs = Server.CreateObject("ADODB.Recordset")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

sql="select [userid],[fname] + ' ' + [lname] as username from [users]"
rs.Open sql, oConn
%>

<%'//Fill in all the page header information.%>
<html><head><title>Call Details</title></head>
<body bgcolor="#FFFFFF">
<H1 align="center"> <img border="0" src="../images/Logo/Logo.jpg" width="371"
height="23"> </H1>
<form method="post" name="assigncall" action="assigncall2.asp">

<%'//Assign hidden values to pass to other pages.%>
<input type="hidden" name="UserID" value="<%=userid%>">
<input type="hidden" name="Call_Number" value="<%=callid%>">
<%'//Fill in the call details themselves.%>
<table width="95%" border="0">
  <tr bgcolor="#0000FF">
    <td>
      <div align="center"><font color="#FFFFFF"><b>Assign Call To Another
User</b></font></div>
    </td>
  </tr>
</table>
<p align="center">User Name:
  <SELECT id="UserName" name="UserName">
    <%do until rs.eof
        if rs("userid") = userid then%>
```

```
   <OPTION SELECTED value = "<%=rs("userid")%>">
<%=rs("username")%></OPTION>
   <%else%>
   <OPTION value = "<%=rs("userid")%>"> <%=rs("username")%></OPTION>
   <%end if
       rs.movenext
     loop%>
  </SELECT>
  <%rs.close%> </p>
<p align="center">
  <input type="button" value="Assign Call" name="Assign_Call"
onclick="setvalue('assigncall2.asp')">
  <input type="button" value="Cancel" name="Cancel"
onclick="setvalue('calldetails.asp')">
</p>
</body></html>

<%'//This script will redirect you where you want to go and pass the appropriate
information.%>
<script>
function setvalue(value)
{
  assigncall.action=value
  assigncall.submit()
}
</script>
```

Appendix C.
ASP Code AssignCall2.asp

```
<%@ LANGUAGE="VBSCRIPT" %>
<%
dim callid, oConn, sql, sConnString, userid, newuser
callid = request("Call_Number")
newuser = request("UserName")
userid = request("UserID")

set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

sql="update [call] set [userid]=" & newuser & " where [callid]=" & callid
response.write sql
oConn.Execute sql

sql="update [solution] set [userid]=" & newuser & " where [callid]=" & callid
response.write sql
oConn.Execute sql

response.redirect "mycalls.asp?userid=" & userid
%>
```

Appendix C.
ASP Code CloseCall.asp

```
<% @ LANGUAGE="VBSCRIPT" %>
<%
dim oConn, sConnString, rs, sql, callid, userid, redirection

set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

callid=request("Call_Number")
userid=request("UserID")
sql="update [call] set [status]='C' where [callid]=" & callid
response.write sql
oConn.Execute sql
response.redirect "mycalls.asp?UserID=" & userid
%>
```

Appendix C.
ASP Code NewUser.asp

```
<html>
<head>
<title>New User</title>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
</head>

<body bgcolor="#FFFFFF">
<p align="center"><img src="../../IET/images/Logo/Logo.jpg" width="371"
height="23"><%@ LANGUAGE="VBSCRIPT"%>
  <%
dim userid
dim contact, firstname, lastname, email, location
dim dept, phone, ext, password, vpassword
dim messagestring, oConn, rs, sConnString, sql


set oConn = Server.CreateObject("ADODB.Connection")
set rs = Server.CreateObject("ADODB.Recordset")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

sql="Select max(userid) from users"
rs.Open sql, oConn

userid=rs(0).value + 1
rs.close

contact=""
firstname=""
lastname=""
email=""
location=""
dept=""
phone=""
ext=""
password=""
vpassword=""
%> </p>
<form method="POST" name="newuser" action="../../IET/Test/newusercheck.asp">
  <table width="709">
```

```
    <tr bgcolor="#0000FF">
      <td valign="center" colspan="2" height="20" width="701">
        <p align="center"><b><font face="Arial" size="4" color="#FFFFFF">New User
          Information</font></b></p>
      </td>
    <tr>
      <td colspan="2" width="701">
        <p align="left"><font face="arial" size="2">Enter your member information
          here. Your information will be kept confidential. Please see <a
href="../../IET/test/privacy.html">
          our privacy policy</a> for details.</font></p>
        <a href="../../IET/test/privacy.html"> </a> </td>
    </tr>
    <%'//Set up all fields to enter into the next form.%>
    <input type="hidden" name="frompage" value="newuser">
    <input type="hidden" name="userid" value="<%=userid%>">
    <tr>
      <td align="right" width="408"><font face="arial" size="2">User ID:</font></td>
      <td width="287"><%=userid%></td>
    </tr>
    <tr>
      <td align="right" width="408"><font face="arial" size="2">First
Name: </font></td>
      <td width="287">
        <input type="Input" maxlength="30" size="22" name="fname">
      </td>
    </tr>
    <tr>
      <td align="right" width="408"><font face="arial" size="2">Last
Name: </font></td>
      <td width="287">
        <input type="Input" maxlength="30" size="22" name="lname">
      </td>
    </tr>
    <tr>
      <td noWrap align="right" width="408"><font face="arial" size="2">Current
        Email Address: </font></td>
      <td width="287">
        <input type="Input" maxlength="100" size="22" name="email">
      </td>
    </tr>
    <tr>
      <td align="right" width="408"><font face="arial"
size="2">Location: </font></td>
      <td width="287">
        <input type="Input" maxlength="20" size="22" name="location">
```

```
    </td>
   </tr>
   <tr>
    <td align="right" width="408"><font face="arial"
size="2">Department: </font></td>
    <td width="287">
     <input type="Input" maxlength="20" size="22" name="department">
    </td>
   </tr>
   <tr>
    <td align="right" width="408"><font face="arial" size="2"> Phone
Number: </font></td>
    <td width="287">
     <input type="Input" maxlength="30" size="22" name="phone">
    </td>
   </tr>
   <tr>
    <td align="right" width="408"><font face="arial" size="2">Extension
Number: </font></td>
    <td width="287">
     <input type="Input" maxlength="30" size="22" name="ext">
    </td>
   </tr>
   <tr>
    <td align="right" width="408">Password :</td>
    <td width="287">
     <input type="Input" maxlength="30" size="22" name="password">
     <td align="right" width="408"><font face="arial" size="2">Verify
Password: </font></td>
    <td width="287">
     <input maxlength="30" size="22" name="vpassword">
    <td align="right" width="408"> </td>
    <td width="287">
     <input type="button" name="submitbutton" value="Enter"
onClick="setvalue('newusercheck.asp')">
    </table>
  <p align="center"> </p>
</form>
<script>
function setvalue(value)
{
  newuser.action=value
  newuser.submit()
}
</script>
</body>
```

Appendix C.
ASP Code NewUserAdd.asp

```
<%@ LANGUAGE="VBSCRIPT"%>
<%
dim userid, fname, lname, loc, dept, phone, email, ext, password
dim vpassword, error
dim oConn, sConnString, sql

userid=request("userid")
fname=request("fname")
lname=request("lname")
email=request("email")
loc=request("location")
dept=request("department")
phone=request("phone")
ext=request("ext")
password=request("password")
vpassword=request("vpassword")

set oConn = Server.CreateObject("ADODB.Connection")
'sConnString = "DRIVER={Microsoft Access Driver (*.mdb)};" _
'      & "DBQ=" & Server.MapPath("\iet\db\mms.mdb") &";"
sconnstring = "Provider=SQLOLEDB; Data Source=JMC; Initial Catalog=MMS;"
sconnstring = sconnstring & "User Id=sa"
oConn.Open(sConnString)

sql="INSERT INTO [users] ([userid],[lname],[fname],[phone],"
sql=sql & "[ext],[location],[dept],[email]) VALUES (" & userid
sql=sql & ",'" & lname & "','" & fname & "','" & phone
sql=sql & "','" & ext & "','" & loc & "','" & dept & "','"
sql=sql & email & "')"
response.write sql
oConn.Execute sql

sql="INSERT INTO [password] ([userid],[password]) VALUES ("
sql=sql & userid & ",'" & password & "')"
response.write sql
oConn.Execute sql
session.Abandon
response.redirect("login.html")
%>
```

Appendix C.
ASP Code NewUserCheck.asp

```
<%@ LANGUAGE="VBSCRIPT"%>
<%
dim frompage, userid, fname, lname, loc, dept, phone, email, ext, password
dim vpassword, error

frompage=request("frompage")
userid=request("userid")
fname=request("fname")
lname=request("lname")
email=request("email")
loc=request("location")
dept=request("department")
phone=request("phone")
ext=request("ext")
password=request("password")
vpassword=request("vpassword")
error="N"
%>

<html>
<head>
<title>New User</title>
</head>
<body bgcolor="#FFFFFF">
<form method="POST" name="newusercheck" action="newusercheck.asp">
  <table width="709">
  <tr bgColor="#0000FF">
    <td vAlign="center" colSpan="2" height="20" width="701">
      <p align="center"><b><font face="Arial" size="4" color="#FFFFFF">New
      User Information</font></b></p>
    </td>
      <tr>
    <td colSpan="2" width="701">
      <p align="left"><font face="arial" size="2">Enter your member
      information here. Your information will be kept confidential. Please see <a
href="../test/privacy.html">
      our privacy policy</a> for details.</font></p>
      <a href="../test/privacy.html">
      </a>
    </td>
  </tr>
<%'//Do all error checks and messages here
   if fname="" then
```

```
   error="Y"%>
   <tr>
   <td><font color="#FF0000">First Name is required </font></td>
 </tr>
<%end if
if lname="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Last Name is required </font></td>
 </tr>
<%end if
if fname="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">First Name is required</font></td>
 </tr>
<%end if
if email="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Current Email Address is required</font></td>
 </tr>
<%end if
if loc="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Location is required</font></td>
 </tr>
<%end if
if dept="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Department is required </font></td>
 </tr>
<%end if
if phone="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Phone Number is required </font></td>
 </tr>
<%end if
if ext="" then
   error="Y"%>
   <tr>
   <td><font color="#FF0000">Extension Number is required field</font></td>
 </tr>
```

```
  <%end if
  if password<>vpassword or password="" then
    error="Y"%>
    <tr>
    <td><font color="#FF0000">Your Password and Verify Password fields do not
      match</font></td>
   </tr>
  <%end if%>

<%'//Set up all fields to enter into the next form.%>
<input type="hidden" name="frompage" value="newusercheck">
 <tr>
   <td align="right" width="408"><font face="arial" size="2">User ID:</font></td>
   <td width="287"><%=userid%><input type="hidden" name="userid"
value="<%=userid%>"></td>
 </tr>
 <tr>
   <td align="right" width="408"><font face="arial" size="2">First
Name: </font></td>
   <td width="287">
   <%if fname="" then%>
     <input type="Input" maxLength="30" size="22" name="fname"></td>
   <%else%>
     <%=fname%><input type="hidden" name="fname" value="<%=fname%>">
   <%end if%>
 </tr>
 <tr>
   <td align="right" width="408"><font face="arial" size="2">Last
Name: </font></td>
   <td width="287">
   <%if lname="" then%>
     <input type="Input" maxLength="30" size="22" name="lname"></td>
   <%else%>
     <%=lname%><input type="hidden" name="lname" value="<%=lname%>">
   <%end if%>
 </tr>
 <tr>
   <td noWrap align="right" width="408"><font face="arial" size="2">Current Email
Address: </font></td>
   <td width="287">
   <%if email="" then%>
     <input type="Input" maxLength="100" size="22" name="email"></td>
   <%else%>
     <%=email%><input type="hidden" name="email" value="<%=email%>">
   <%end if%>
 </tr>
```

```
  <tr>
    <td align="right" width="408"><font face="arial"
size="2">Location: </font></td>
    <td width="287">
    <%if loc="" then%>
      <input type="Input" maxLength="20" size="22" name="location"></td>
    <%else%>
      <%=loc%><input type="hidden" name="location" value="<%=loc%>">
    <%end if%>
  </tr>
  <tr>
    <td align="right" width="408"><font face="arial"
size="2">Department: </font></td>
    <td width="287">
    <%if dept="" then%>
      <input type="Input" maxLength="20" size="22" name="department"></td>
    <%else%>
      <%=dept%><input type="hidden" name="department" value="<%=dept%>">
    <%end if%>
  </tr>
  <tr>
    <td align="right" width="408"><font face="arial" size="2"> Phone
Number: </font></td>
    <td width="287">
    <%if phone="" then%>
      <input type="Input" maxLength="30" size="22" name="phone"></td>
    <%else%>
      <%=phone%><input type="hidden" name="phone" value="<%=phone%>">
    <%end if%>
  </tr>
  <tr>
    <td align="right" width="408"><font face="arial" size="2">Extension
Number: </font></td>
    <td width="287">
    <%if ext="" then%>
      <input type="Input" maxLength="30" size="22" name="ext"></td>
    <%else%>
      <%=ext%><input type="hidden" name="ext" value="<%=ext%>">
    <%end if%>
  </tr>
  <tr>
    <td align="right" width="408">Password :</td>
    <td width="287">
    <%if password<>vpassword or password="" then%>
<input type="Input" maxLength="30" size="22" name="password"></td>
     </tr>
```

```
    <tr>
      <td align="right" width="408"><font face="arial" size="2">Verify
Password: </font></td>
      <td width="287"><input maxLength="30" size="22" name="vpassword"></td>
    </tr>
   <%else%>
      <%=password%><input type="hidden" name="password"
value="<%=password%>">
    <tr>
      <td align="right" width="408"><font face="arial" size="2">Verify
Password: </font></td>
      <td width="287"><%=vpassword%>
      <input type="hidden" name="vpassword" value="<%=vpassword%>"></td>
    </tr>
   <%end if%>
</table>

<%if error="Y" then%>
  <p align="center"><input type="button" name="submitbutton" value="Enter"
onclick="setvalue('newusercheck.asp')"></p>
<%else%>
  <p align="center"><input type="button" name="submitbutton" value="Enter"
onclick="setvalue('newuseradd.asp')"></p>
<%end if%>

</form>
</body>
</html>

<script>
function setvalue(value)
{
  newusercheck.action=value
  newusercheck.submit()
}
</script>
```