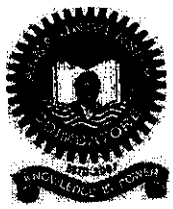



# MOBILE BASED ADMINISTRATION SYSTEM

**PROJECT REPORT**

*Submitted By*

**R.SARANYA**

**Register No.: 0720300038**

*in partial fulfillment for the award of the degree*

*of*

**MASTER OF COMPUTER APPLICATIONS**

in

**COMPUTER APPLICATIONS**

**KUMARAGURU COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution Affiliated to Anna University, Coimbatore)**

**May, 2010**

# KUMARAGURU COLLEGE OF TECHNOLOGY

**(An Autonomous Institution Affiliated to Anna University, Coimbatore)**

# COIMBATORE – 641 006.

Department of Computer Applications

**PROJECT WORK**

**MAY 2010**

This is to certify that the project entitled

## MOBILE BASED ADMINISTRATION SYSTEM

is the bonafide record of project work done by

**R. SARANYA**

**Register No: 0720300038**

of MCA (Computer Applications) during the year 2009-2010.

Project Guide

Head of the Department

Submitted for the Project Viva-Voce examination held on 17.05.2010

Internal Examiner

External Examiner

## DECLARATION

I affirm that the project work titled **MOBILE BASED ADMINISTRATION SYSTEM** being submitted in partial fulfilment for the award of **MASTER OF COMPUTER APPLICATIONS** is the original work carried out by me. It has not formed the part of any other project work submitted for award of any degree or diploma, either in this or any other University.

R.Saranya

0720300038

I certify that the declaration made above by the candidate is true

R.K.Kavitha, Senior Lecturer

# AMAX SOFTWARE SOLUTIONS

(Division of MEDI TRANS)
No.66, KVK Complex, Bhavani Main Road, Near KMCH Hospital,
PERUNDURAI - 638 052. Phone : 04294 - 342410

Date : 05/05/2010

## TO WHOMSOVER IT MAY CONCERN

**Sub:** Student Project Completion Reg.

This is to confirm the successful completion of project training of **Ms.R.Saranya (Reg No. 0720300038),** Student Master of Computer Application department of **Kumaraguru College of Technology, Coimbatore** under the topic "**Mobile Based Administration System".** The student behavior during the training p eriod is good and the project duration is Dec 05, 2009 to May 04, 2010.

The manager

# ABSTRACT

The project entitled **"Mobile Based Administrator System "**is developed to monitor the system using mobile system. When the administrator is not in office, he can monitor the server and user of the system through his mobile phone. He can send a request on SMS to the mobile phone which is connected in the system and the system reads the message and work for the command.

The administrator can monitor system, such as who is working in the system. The details of the mobile such as software, hardware connected to it, battery level and signal level can also be viewed in the system.

Once the connection is open, the messages send from the administrator mobile will be displayed on system. Only the messages send from administrator mobile will be received in the system. Administrator can remotely open the applications using his mobile phone.

System stores the contacts of the users and the message send by them. If any unauthorized user tries to send any message, that will not be stored in the system. We need two mobile phones, one will be connected to the system and another will be with the administrator. Mobile connected with the system is Nokia 3310 using RS 232 interface.

# ACKNOWLEDGEMENT

First and foremost I thank the Almighty for his continuous blessings showered on me in completing this project successfully.

I wish to express my profound gratitude to **Prof. S.Ramachandran, Principal, Kumaraguru College of Technology, Coimbatore** for providing an opportunity and necessary facilities in carrying out this project work.

I am very glad to extend my deepest thanks to **Dr. A.Muthu Kumar M.C.A., M.Phil., PhD, Course Coordinator, Kumaraguru College of Technology, Coimbatore,** who has always been a source of inspiration.

I also thank **Mr. S.Hameed Ibrahim, Senior Lecturer** and **Project Coordinator,** Department of Computer Application, for providing all the desired documents and details regarding the various aspects necessary to the proper functioning of the project.

I express my deep sense and profound gratitude to **Mrs. R.K.Kavitha, Senior Lecturer** and **Guide,** Department of Computer Application, for her guidance, support, cooperation and valuable suggestions during the course of this project.

I also dedicate equal and grateful acknowledgements to all the respectable members of the faculty and lab in-charges of the **Department of Computer Applications, Kumaraguru College of Technology, Coimbatore** and student friends for their motivation, encouragement and continuous support.

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# CHAPTER 1

# INTRODUCTION

## 1.1. COMPANY PROFILE

"Amax Software Solutions" is a software development concern. The technological leadership of Amax Software Solutions is in creating software solutions in network solutions and customizing software to user. It follows Object Oriented Methodology to provide a comprehensive and integrated set of procedures and techniques to consistently provide superior solutions.

At Amax consultancy and software developments works in union with its training programs. The domain areas of expertise include e-business, workflow animation and web based training. It possesses skill sets in Microsoft technologies, Java, .Net, Oracle and Object Oriented design.

### 1.1.2 Objective

The purpose of "MOBILE BASED ADMINISTRATION SYSTEM "is to present a detailed description of monitoring the system using mobile phone. When the administrator is not in the office he can monitor the server and the user of the system by his mobile phone. He can send a request on SMS to the mobile phone which is connected in the system and the system reads the message and work for the System side command.

System stores the contacts of the users and the message send by them .If any unauthorized user tries to send any message, that will not be stored in the system. We need two mobile phones, one will be connected to the system and another will be with the admin. Using RS 232 interface cable the data are send and received to system using mobile.

# CHAPTER 2

# SYSTEM ANALYSIS

## 2.1 EXISTING SYSTEM

The system which is followed at present is tedious procedure for the administrator. It's not possible for the administrator to keep track of all the system in his absence. The admin should be in the office all the time.

### 2.1.1 Drawbacks

- In the absence of administrator, the users work process going in the office will not be known to him.
- In this system, administrator needs to be in office all the time.
- In the existing system, if any problem happens in server the administrator can not be known about it.
- In the existing system, network traffic is not managed.

## 2.2 PROPOSED SYSTEM

Proposed system uses mobile to send the system information to the admin. The admin can monitor the system using the RS 232 interface which is connected to the mobile. The admin can access the system remotely.

### 2.2.1 Advantages

- In the proposed system, administrator can monitor continuously about the users performance.
- Administrator can monitor both the server and the user of the system.
- Only the saved contact's messages will be stored, other messages will not be replied.

- Two way communication is carried out in the developed system (between admin and user).
- When a new message is send to the system, it will read the message.
- Fake messages will not be stored.
- Easy to use and edit.
- The system keeps track of every edit made and it's a simple process to revert back to a previous version of an article.
- Responsibility of managing, upgrading and trouble shooting is very easy.

## 2.3 FEASIBILITY STUDY

Feasibility analysis is the measure of how beneficial or practical the development of system will be to the organization. Once the problem is explained information is gathered about the system to test whether the system is viable Economically, Operability and Technically. Thus feasibility study is carried out in three different phases.

### Economical Study

Economical Study is the measure of the cost-effectiveness of the proposed system. The investment to be made in the proposed system must prove a good investment to the organization by returning benefits equal to or exceeding the cists incurred in developing the system.

The proposed benefits of the system will outweigh the cost costs tp be incurred during system developed since the system does not require procurement of additional facilities it is economically feasible

### Operational Study

Operational Feasibility asks whether the system will work when it is developed and installed. It checks for the support of the management, the current business methods, user's involvement and their attitude towards the proposed system.

The proposed system has found encouraging support from the management as it will be of great use to them

**Technical Study**

Technical Feasibility is the measure of practicality of a specific technical solution and the availability resources and expertise. It centers on the existing computer system (hardware and software) and to what extent it can support the new edition.

The proposed system is developed using Visual Basic and .Net. These recourses are easily available. These features of the selected technologies are quite beneficial to the proper functioning of the system in different environments.

# CHAPTER 3

# SYSTEM SPECIFICATION

## 3.1 HARDWARE REQUIREMENTS

- Computer
  - Processor - Pentium IV
  - Ram - 512MB
  - Hard Disk - 40GB
  - Monitor - 15'' Color Monitor
  - Keyboard - Logitech Multimedia
- Mobile Phone
  - Any mobile phone (Admin)
  - Nokia 3310 (Connected with system)
- Interface
  - Serial Interface Pin

## 3.2 SOFTWARE REQUIREMENTS

| | | |
|---|---|---|
| Operating System | : | Windows XP Professional |
| Front End | : | Visual Basic 6.0 & .Net |
| Mobile Interface Software | : | OxygenMobileActiveX |

# CHAPTER 4

# SOFTWARE DESCRIPTION

## 4.1 VISUAL BASIC .Net

Microsoft Visual Basic .Net is used as front end tool. The reason for selecting Visual Basic .Net as front end tool as follows:

## 4.2 FEATURES

- Visual Basic .Net has flexibility, allowing one or more languages to interoperate to provide the solution. The cross language compatibility allows to do project at faster rate.
- Visual Basic .Net has Common Language Runtime, which allows VB .NET now adds Console Applications to it apart from Windows and Web Applications. Console applications are console oriented applications that run in the DOS version
- All the built-in VB functionality now is encapsulated in a Namespace (collection of different classes) called System
- New keywords are added and old one's are either removed or renamed
- VB .NET is strongly typed which means that we need to declare all the variables by default before using them
- VB .NET now supports structured exception handling using Try...Catch...Finally syntax
- The syntax for procedures is changed. Get and Let are replaced by Get and Set
- Event handling procedures are now passed only two parameters.
- The way we handle data with databases is changed as well. VB .NET now uses ADO .NET a new data handling model to communicate with databases on local machines or on a network and also it makes handling of data on the Internet easy. All the data in ADO .NET is represented in XML format and is exchanged in the same format. Representing data in XML format allows us

for sending large amounts of data on the Internet and it also reduces network traffic when communicating with the database

- VB .NET now supports Multithreading. A threaded application allows to do number of different things at once, running different execution threads allowing to use system resources
- Web Development is now an integral part of VB .NET making Web Forms and Web Services two major types of applications
- The entire component to converge into one intermediate format and then can interact.
- Visual Basic .Net provides excellent security when the application is executed in the system.

# CHAPTER 5

# PROJECT DESCRIPTION

## 5.1 PROBLEM DEFINITION

The latest technology has got of benefits like remotely administrating the system. Admin can remotely perform all actions using his mobile phone in the system. In the absence of administrator, the work processes carried out in the organization are not known. Administrator can remotely access system commands using his mobile.

## 5.2 OVERVIEW OF THE PROJECT

The purpose of "MOBILE BASED ADMINISTRATION SYSTEM" is to present a detailed description of monitoring the system using mobile phone. When the administrator is not in the office he can monitor the server and the user of the system by his mobile phone. He can send a request on SMS to the mobile phone which is connected in the system and the system reads the message and work for the command.

System stores the contacts of the users and the message send by them .If any unauthorized user tries to send any message, that will not be stored in the system. We need two mobile phones, one will be connected to the system and another will be with the admin. Using RS 232 interface cable the data are send and received to system using mobile

## 5.3 MODULE DESCRIPTION

### 5.3.1 Interfacing the Mobile to System

Interfacing the mobile to system is done through RS232 interface. System is connected with cable. System information is send to the administrator through mobile. Nokia 3310 mobile phone with PC interface is used. Using oxygenactivex software

mobile is connected with the system. Serial Interface Cable (15 Pin) is used to connect mobile with the system

Using SystemDiagnoistic process mobile are controlled in the system. Interfacing the Mobile to System is done for sending and receiving the data through mobile.

### 5.3.2 Reading the Incoming Message

The mobile phone in the office is connected with cable and it transforms the system information work into mobile. The data in the mobile will be named as message and will be sent to the administrator mobile, for knowing the further proceedings. The details of the mobile such as hardware connected to it, software used, battery and signal level will be displayed.

Mobile information such as sim card and mobile details will also be displayed. Based o n the signal level, number of locations covered will also be displayed. Once the message is read from mobile through system, it can also be deleted.

### 5.3.3 Reply to the Message

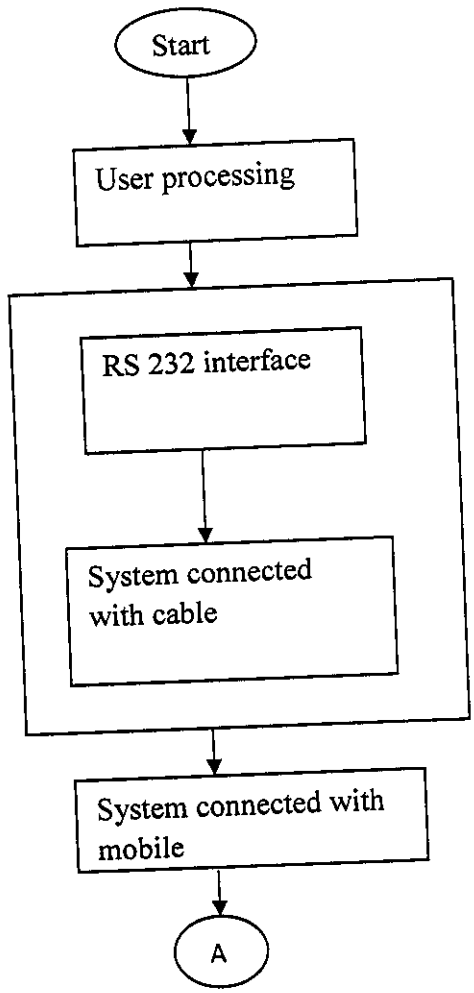
All the send messages will be stored in the system. Only when the system is connected with cable and the connection is open, the response message will be reached to the user system. Once the connection is done, reply messages can be sent to the user. The messages are send through smsactivex.com to mobile.

## 5.4 SYSTEM FLOW DIAGRAM

System flow diagrams define the interaction between the user and system. It's mainly used when there is no database connection.

**Interfacing the mobile to system**

The requirements are represented using the system flow diagram.



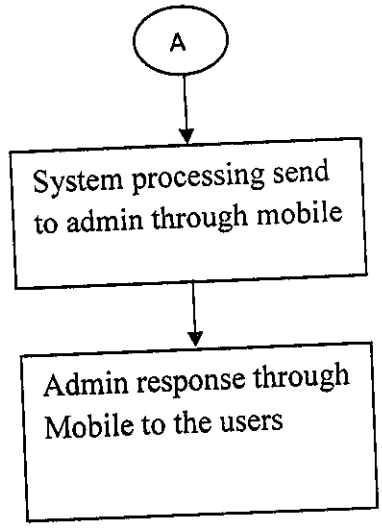





**Figure 5.4.1 Interfacing the mobile to system**

**Description:**

Interfacing the mobile to system is done through RS232 interface. System is connected with cable. User processing will be known to admin through mobile.

**Reading the incoming message**

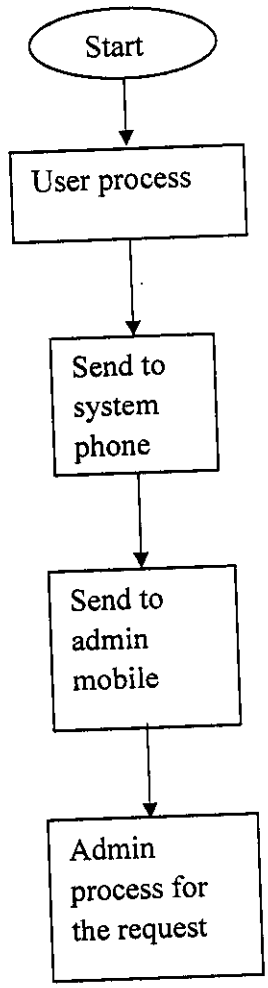



**Figure 5.4.2 Reading the incoming message**

**Description:**

The data in the mobile will be named as message and will be sent to the admin mobile, for knowing the further proceedings.

## REPLY TO THE MESSAGE

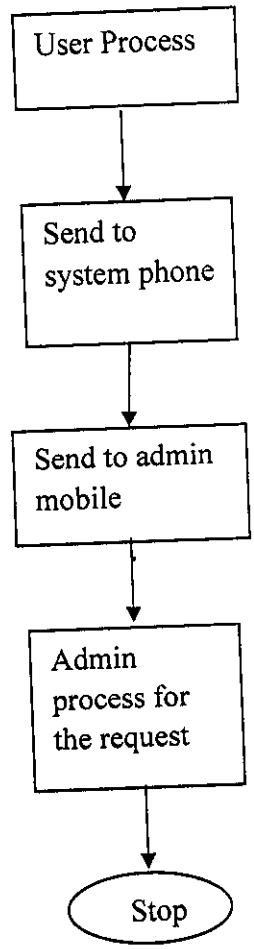



**Figure 5.4.3 Reply to the message**

**Description:**

All the send messages will be stored in the system. Only when the system is connected with cable, the response message will reached to the user system.

## 5.5 INPUT DESIGN

The input design is the process of converting the user-oriented inputs in to the computer-based format. The goal of designing input data is to make the automation as easy and free from errors as possible.

In Mobile Based Administration System, input data such as valid message service center number and the sender number are checked. Initially the connection should be open for sending and receiving messages. Message to be sent should not exceed 255 characters. Action defines the type of data to be sent such as simple text, concatenated text etc. For concatenated message, text will be send part by part.

## 5.6 OUTPUT DESIGN

Output of the system can be defined as the information being processed and then generated by the system in a specified format for the user view. Output design serves the best to provide information to the users of the system. Once the output is designed it would serve for present and future references. Outputs are carefully designed such that it gives an error free output format.

In Mobile Based Administration System, reports generated will be whether the message delivered to the desired user. The details of the message such as location , content, date and time will be displayed in the system.

# CHAPTER 6

# SYSTEM TESTING

## 6.1 SYSTEM TESTING

System testing makes a logical assumption that if all the part of the system is correct and the goal will be successfully achieved. System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live commences.

MOBILE BASED SYSTEM ADMINISTRATION was system tested to ensure that the oxygenactivex software is correctly installed in the system..It also checks, whether the cable attached to the system functions properly.

## 6.2 UNIT TESTING

Unit testing focuses verification effort on the smallest unit of the software design the module. The software is unit tested to ensure that important control paths are tested to uncover errors. The software is tested to ensure that information properly flows into and out of the system unit under test.

Once the interface is connected with the system, software is unit tested, whether the connectivity is made open or not. Also it checks whether the valid message service number is entered or not.

## 6.3 SECURITY TESTING

Security testing verifies that the protection mechanism built into a system will, in fact, protect it from improper penetration.

In 'MOBILE BASED SYSTEM ADMINISTRATION' only from the administrator mobile, the message will be received to the system. The system keeps track of every information maintained such as recent message send to administrator.

# CHAPTER 7

# SYSTEM IMPLEMENTATION

System Implementation is the part of the software engineering life cycle, where, the design artifacts are converted to a working application. Coding is done in this stage using VB .Net which would solve the specific problem the best way. Once the design is coded into a working application, it has to be verified, validated using .NET and tested in detail.

The tested product if successful is deployed in the user environment. The result of this phase consists of source code, together with documentation to make the code more readable. The stage of systems development in which hardware and software are acquired developed and installed the system is tested and documented, people are trained to operate and use the system.

## 7.1 SYSTEM DEVELOPMENT

The interface between PC and mobile exist because of the OxygenMobileActivex software. Now to access the message from the application includes the tool called "Serial Interface Pin". This is included by adding "System.Diagnostics.Process"

## 7.2 SYSTEM VERIFICATION

System Verification answers the question "Am I building the product right?" It includes the review of interim work steps and interim deliverables during a project to ensure they are acceptable. Verification also determines if the system is consistent, adheres to standards, uses reliable techniques and prudent practices, and performs the selected functions in the correct manner. In data access, it verifies the right data is being accessed, in terms of the right place and in the right way.

## 7.3 SYSTEM VALIDATION

Validation answers the question "Am I building the right product?" This checks whether the developer is moving towards the right product, whether the development is

moving towards the actual intended product that was agreed upon in the beginning. Validation also determines if the system complies with the requirements and performs functions for which it is intended and meets the organizations goals and user needs. It is traditional and is performed at the end of the project. In access, it checks whether we are accessing the right data, in terms of data required to satisfy the requirement.

Validation is performed after the work [product is produced against established criteria ensuring that the product integrates correctly into the environment. It determines the correctness of the final software product by a development project with respect to the user needs and requirements.

# CHAPTER 8

# CONCLUSION AND FUTURE ENHANCEMENT

## 8.1 CONCLUSION

The project 'MOBILE BASED SYSTEM ADMINISTRATION is developed using VB .NET is a system oriented application that offers an extensive range of functionalities for users. It provides remote administration where the admin can control the system using mobile. The users in the 'MOBILE BASED SYSTEM ADMINISTRATION is managed using Oxygen Mobile Active Control Access List. Thus this software provides the administrator easy access to the system.

## 8.2 FUTURE ENHANCEMENT

- Using Infrared and Bluetooth the connection can be made synchronously and any port can be used to send data to mobile.
- Any additional modules can be added to the proposed system.

# CHAPTER 9

# APPENDIX

## 9.1 SOURCE CODE

```
Imports Oxygen.MobileClass
Imports System.Diagnostics.Process
Public Class Form1
  Inherits System.Windows.Forms.Form
  Dim mobile1 As Oxygen.Mobile
  Dim i, j As Integer
  Public inc As Integer
 Private Sub Timer2_Tick(ByVal sender As System.Object, ByVal e As
                                                    System.EventArgs)
 Handles Timer2.Tick
     If i = 0 Then
       If mobile1.DeleteSMSMessage(Text1.Text) Then
         MsgBox("Message deleted")
       Else : MsgBox("Message NOT deleted")
       End If
       Button4.Enabled = True
     End If
    i = i + 1
     mobile1 = New Oxygen.Mobile
     mobile1.Open()
     MsgBox(i)
     Dim Cell As Long
     Dim ff As String
```

```
Button2.Enabled = True
Text1.Refresh()
Text1.Text = i
Cell = CLng(Text1.Text)
If i = 1 Then 'I VALUES
  If mobile1.ReadSMSMessage(Cell) = True Then
    Label12.Text = "Text: " & mobile1.MSGText
    Label13.Text = "From : " & mobile1.MSGPhoneNumber
    Label14.Text = "Date: " & mobile1.MSGDateTime
  Else
    MsgBox("Slot is empty")
  End If
End If
Button2.Enabled = True
```

**REPLY**

```
Select Case mobile1.MSGText
  Case "Shutdown"
    Shell("shutdown.exe -s")
    SMSto.Text = mobile1.MSGPhoneNumber
    SMSText.Text = "System_Shutdown"
  Case "Restart"
    Shell("shutdown.exe -r")
    SMSto.Text = mobile1.MSGPhoneNumber
    SMSText.Text = "System_Restart"
  Case "Logoff"
    Shell("shutdown.exe -l")
```

```
        SMSto.Text = mobile1.MSGPhoneNumber
        SMSText.Text = "Logoff_Currentuser"
      Case "Word"
        process.Start("winword.exe")
        SMSto.Text = mobile1.MSGPhoneNumber
        SMSText.Text = "word_open"
      Case "Notepad f1.Txt"
        Dim x As String
        process.Start("notepad.exe", "c:\f1.txt")
        rt.LoadFile("c:\f1.txt", RichTextBoxStreamType.PlainText)
        x = rt.Text
        SMSto.Text = mobile1.MSGPhoneNumber
        SMSText.Text = x
      Case "Calc"
        Shell("calc.exe")
        process.Start("calc.exe")
        SMSto.Text = mobile1.MSGPhoneNumber
        SMSText.Text = "Calc Opened"
      Case "Systemname"
        Dim strComputerName As String =
Environment.ExpandEnvironmentVariables("%ComputerName%")
        MessageBox.Show("The current computer name is: " &
strComputerName, "ComputerName")
        SMSto.Text = mobile1.MSGPhoneNumber
        SMSText.Text = strComputerName
      Case "User"
        Dim strUserName As String =
Environment.ExpandEnvironmentVariables("%username%")
```

```
            MessageBox.Show("The current user of the computer is: " &
strUserName, "UserName")
            SMSto.Text = mobile1.MSGPhoneNumber
            SMSText.Text = strUserName
          Case "Currentprocess"
            process.GetCurrentProcess()
          Case "Process"
            Dim process As System.Diagnostics.Process
            Dim allprocess() As System.Diagnostics.Process
            process = New Process
            allprocess = process.GetProcesses
            Dim i As Int16
            For i = 0 To UBound(allprocess)
              rt.Text = allprocess(i).ProcessName
            Next
            SMSto.Text = mobile1.MSGPhoneNumber
            SMSText.Text = rt.Text
          Case Else
            SMSto.Text = mobile1.MSGPhoneNumber
            SMSText.Text = "Invaild"
        End Select
        MsgBox(i)
        If i = 1 Then
          If mobile1.DeleteSMSMessage(Text1.Text) Then
            'MsgBox("Message deleted")
          Else
            MsgBox("Message NOT deleted")
```

```
  End If
  Button4.Enabled = True
End If
i = i + 1
MsgBox(i)
If i = 2 Then
SEND TO MOBILE
Dim res As Boolean
Select Case Combo1.SelectedIndex
   Case 0
      If (IsNumeric(Text5.Text) = False) Then
         MsgBox("Please, enter correct validity value.")
         Exit Sub
      End If
  End Select
  Button3.Enabled = True
  If text2.Text <> "" Then
     mobile1.SMSCenterNumber = text2.Text
  Else
     mobile1.SMSCenterNumber = mobile1.GetDefaultSMSCenterNumber
  End If
  Combo1.Text = "Send simple text"
  Combo1.SelectedIndex = 0
  If Combo1.SelectedIndex = 0 Then
     res = mobile1.SendSMSMessage(SMSto.Text, SMSText.Text,
Text5.Text, SMSReport.Checked, SMSUnicode.Checked, "")
  End If
```

```
If res Then
   MsgBox("Operation successful")
Else
   MsgBox("Operation failed")
End If
Button3.Enabled = True
    j = j + 1
Button4.Enabled = False
End If
mobile1 = Nothing
'mobile1.Close()
i = 0
End Sub
```

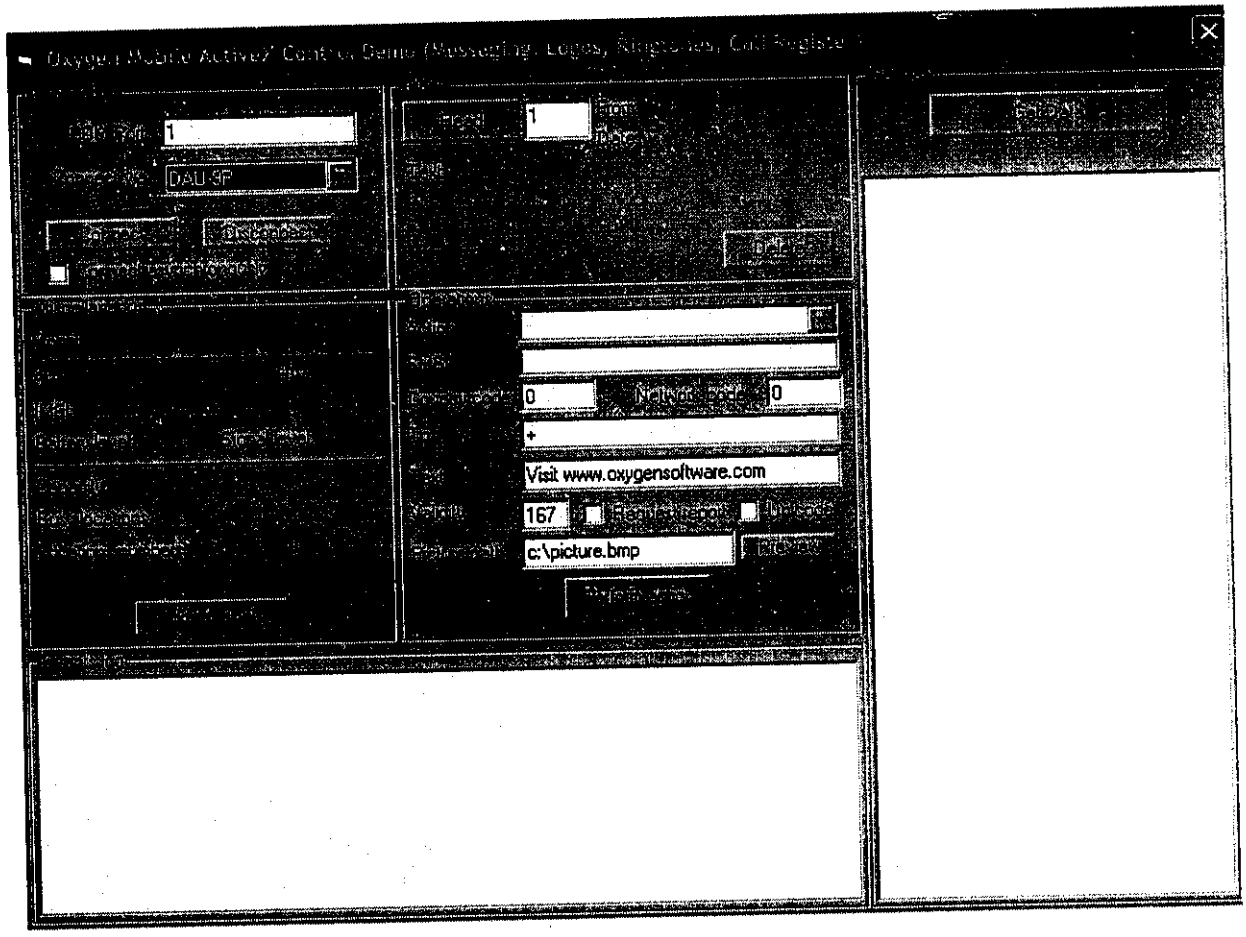
```
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
    mobile1 = New Oxygen.Mobile
    ConnectionMode.SelectedIndex = mobile1.ConnectionMode
    port.Text = mobile1.ComNumber
    inc = 0
    i = 0
    j = 0
```

**CONNECTING TO MOBILE**

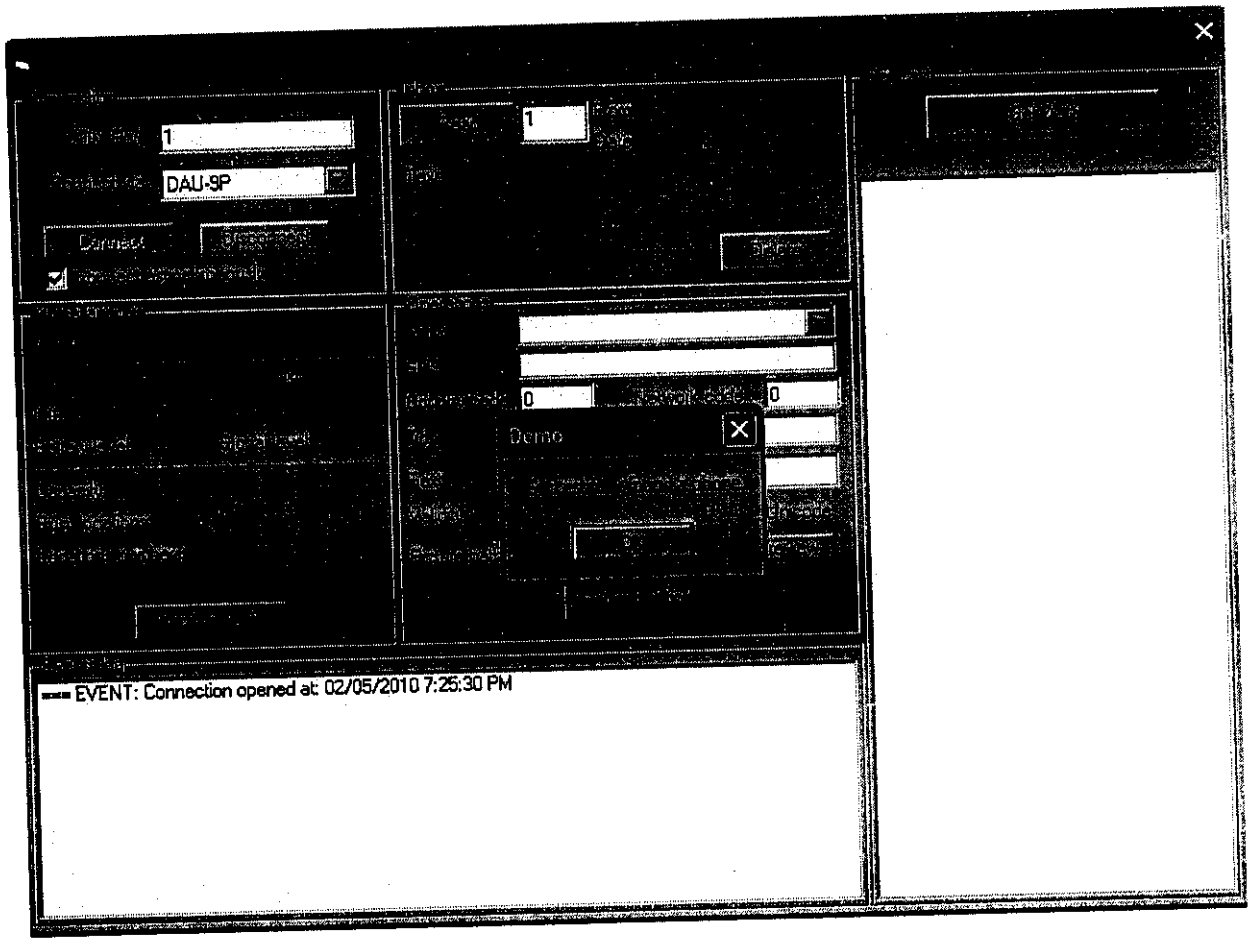
```
    mobile1 = New Oxygen.Mobile
    If IsNumeric(port.Text) = False Then
       MsgBox("Please, enter valid COM number")
       Exit Sub
    End If
```

```
    mobile1.Close()
    port.Text = "1"
    mobile1.ComNumber = port.Text
    ConnectionMode.Text = "DAU-9P"
    ConnectionMode.SelectedIndex = 0
    mobile1.ConnectionMode = ConnectionMode.ListIndex
    mobile1.ConnectionMode = ConnectionMode.SelectedIndex
    If AsyncConnect_cb.Value = 0 Then
    Button4.Enabled = False
    If mobile1.Open = True Then
      MsgBox("Successfully found a phone.")
    Else
      MsgBox("WaitTimeout reached. Failed to find a phone. Last
connection error No: " & CLng(mobile1.LastConnectionError))
    End If
    Button4.Enabled = True
  End Sub
```

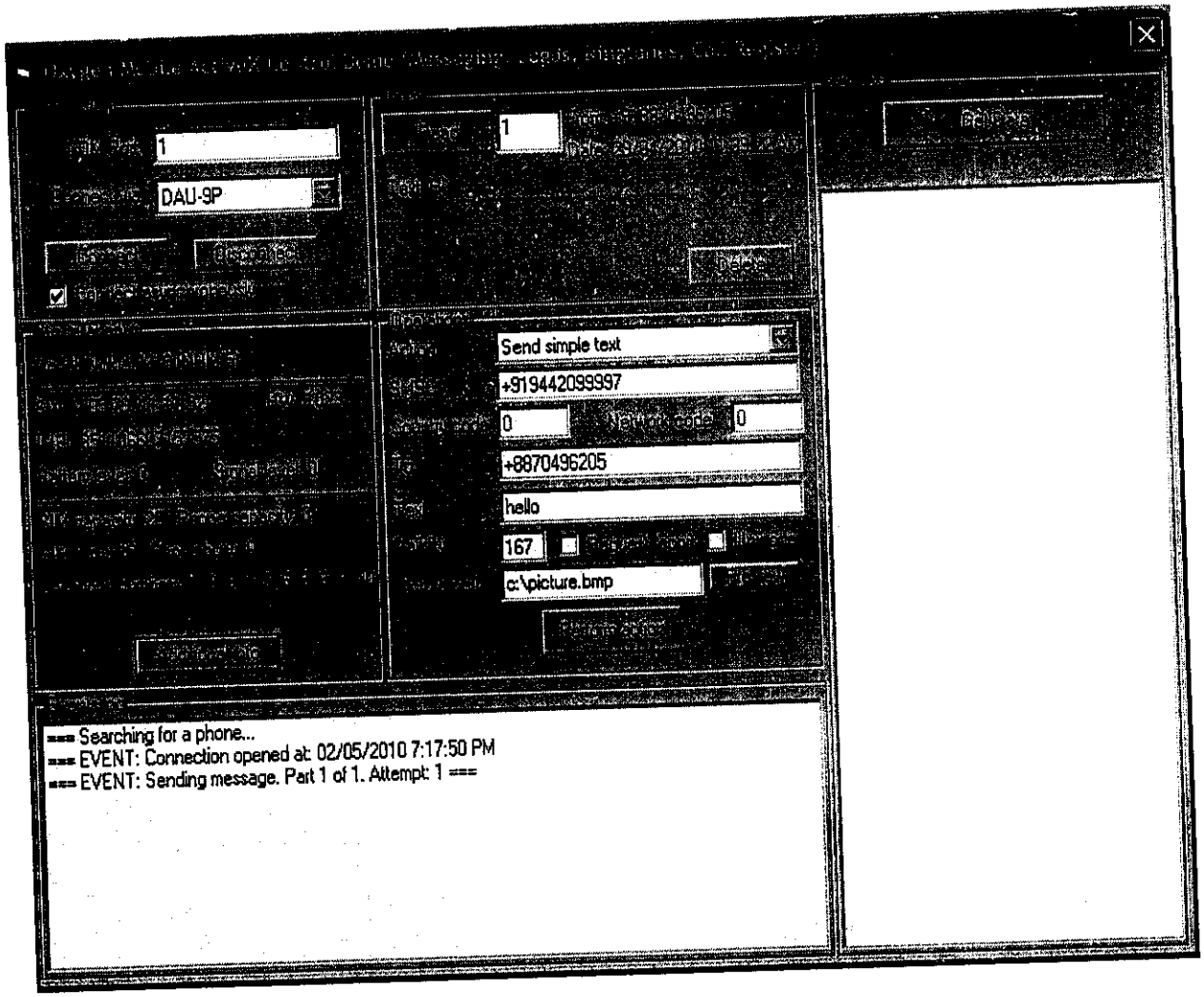
## 9.2 SCREEN SHOTS



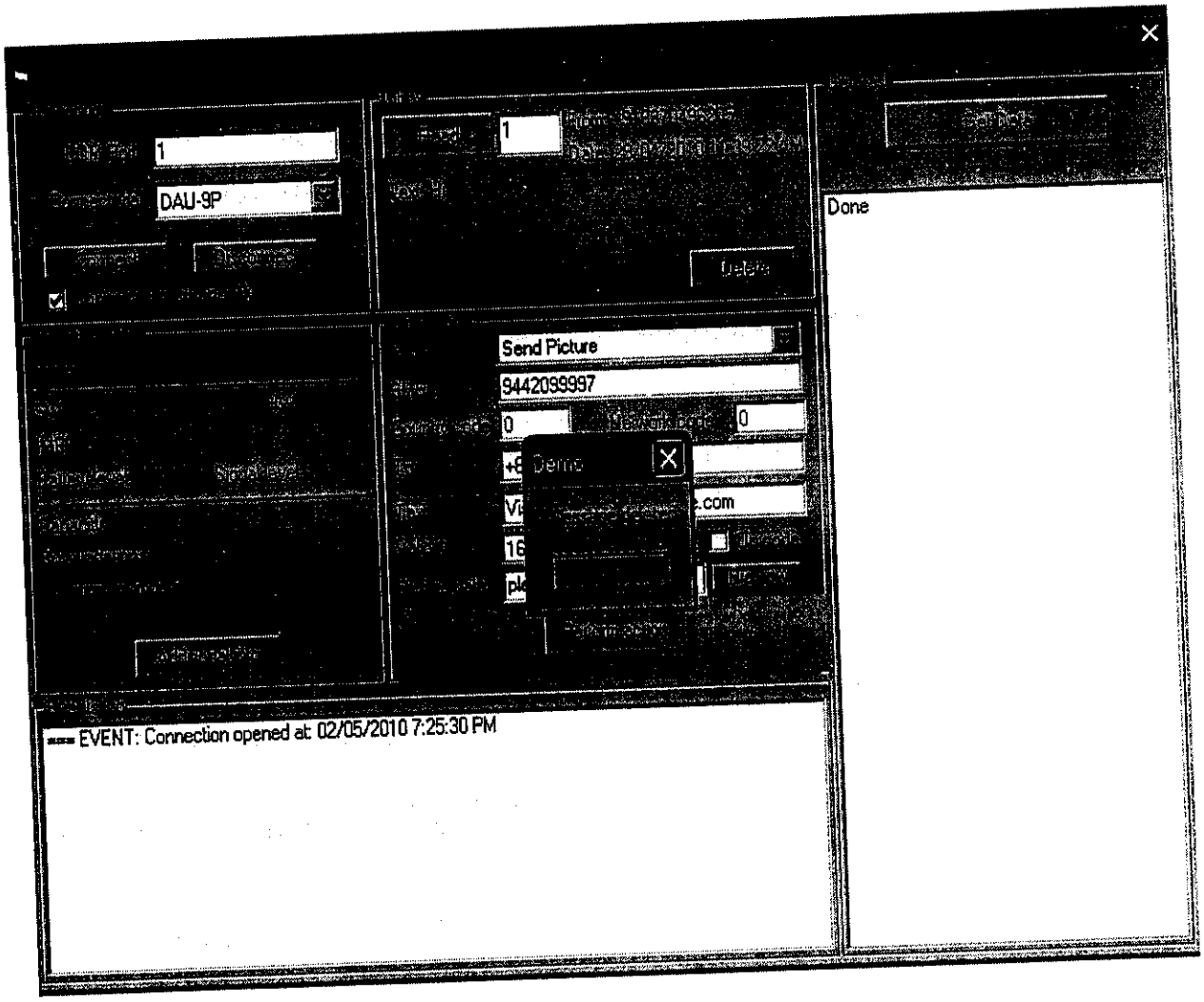
## Searching for phone Connection



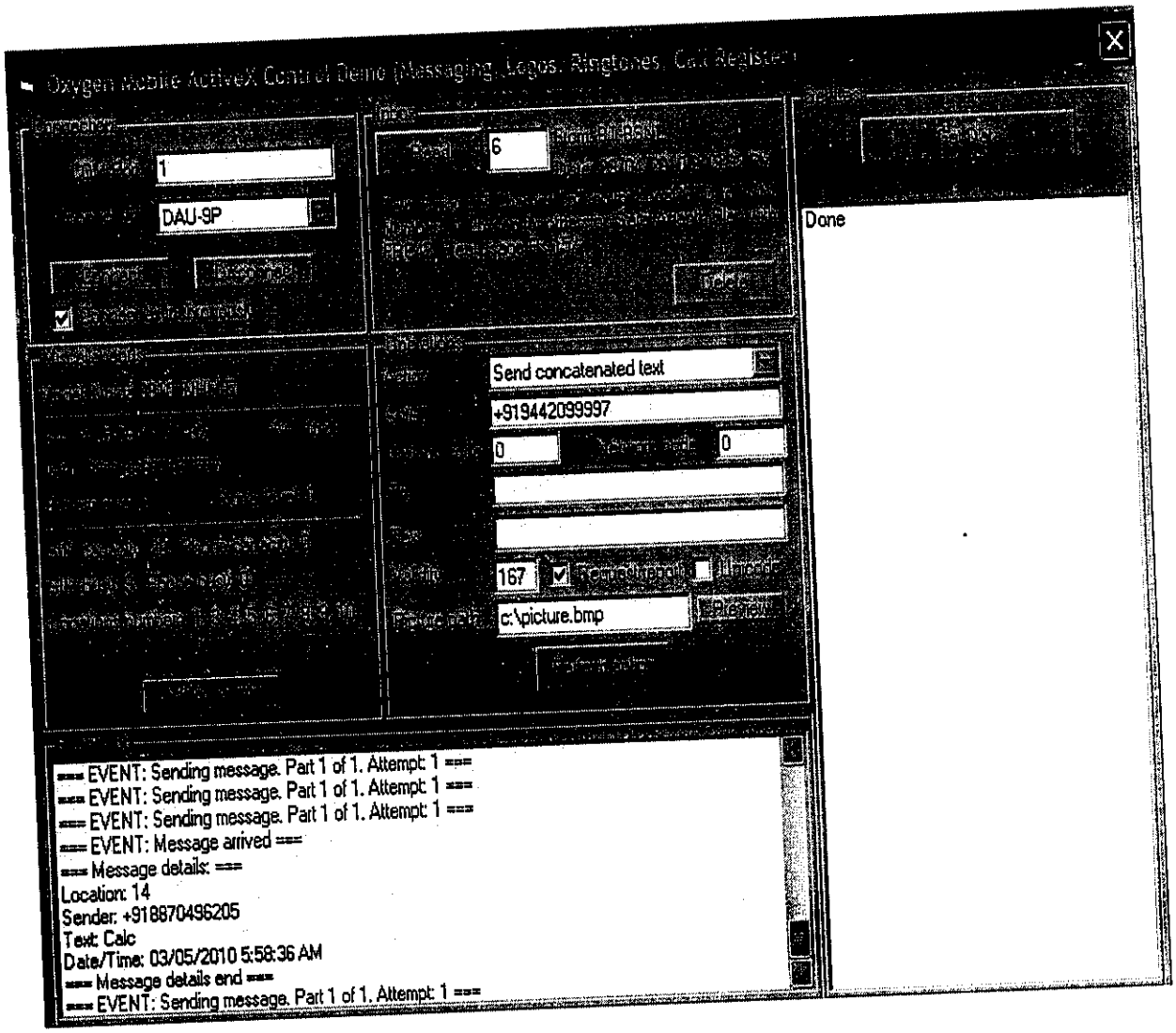
## Sending Message



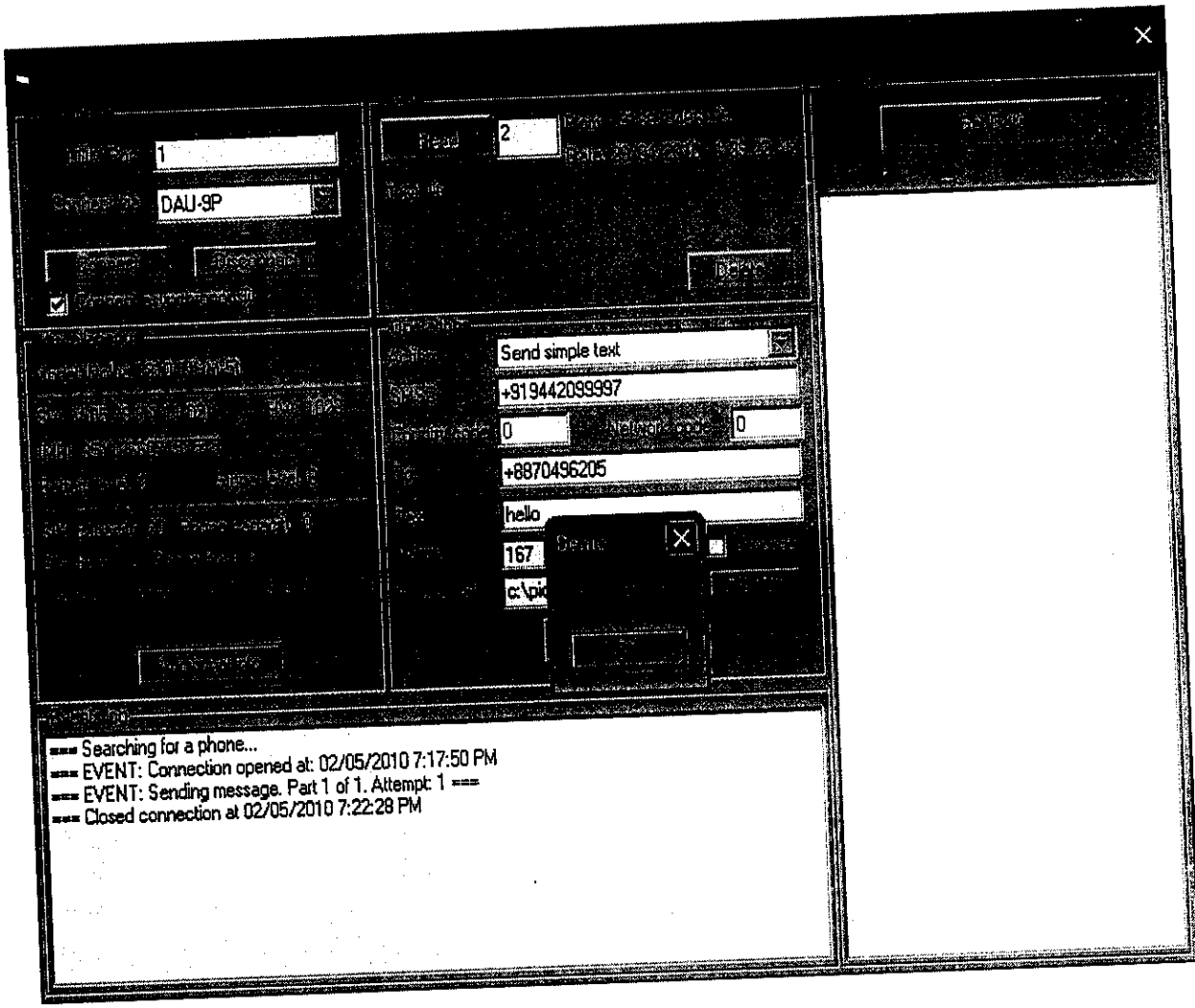
## Deleting Message



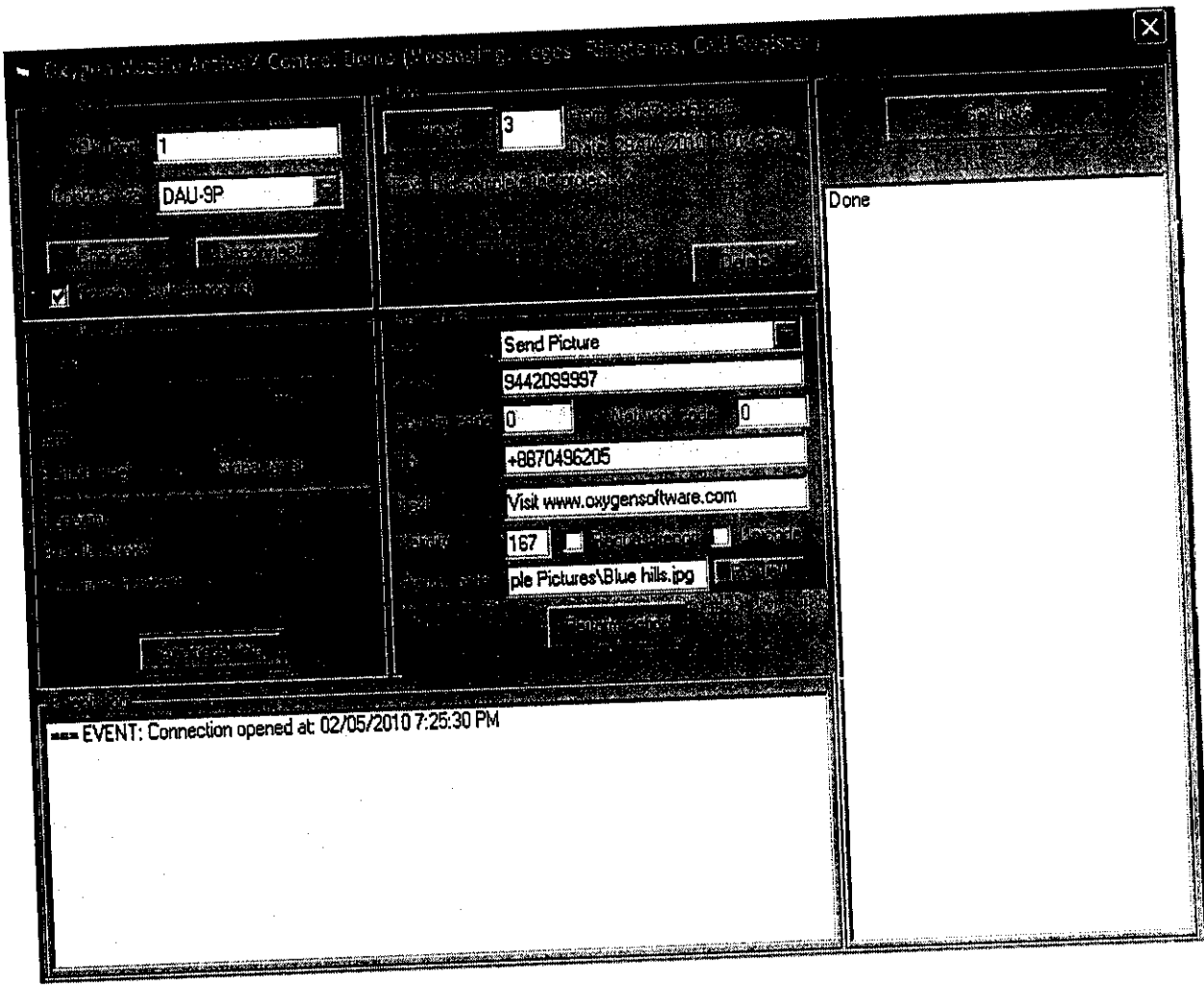
## Reading Message



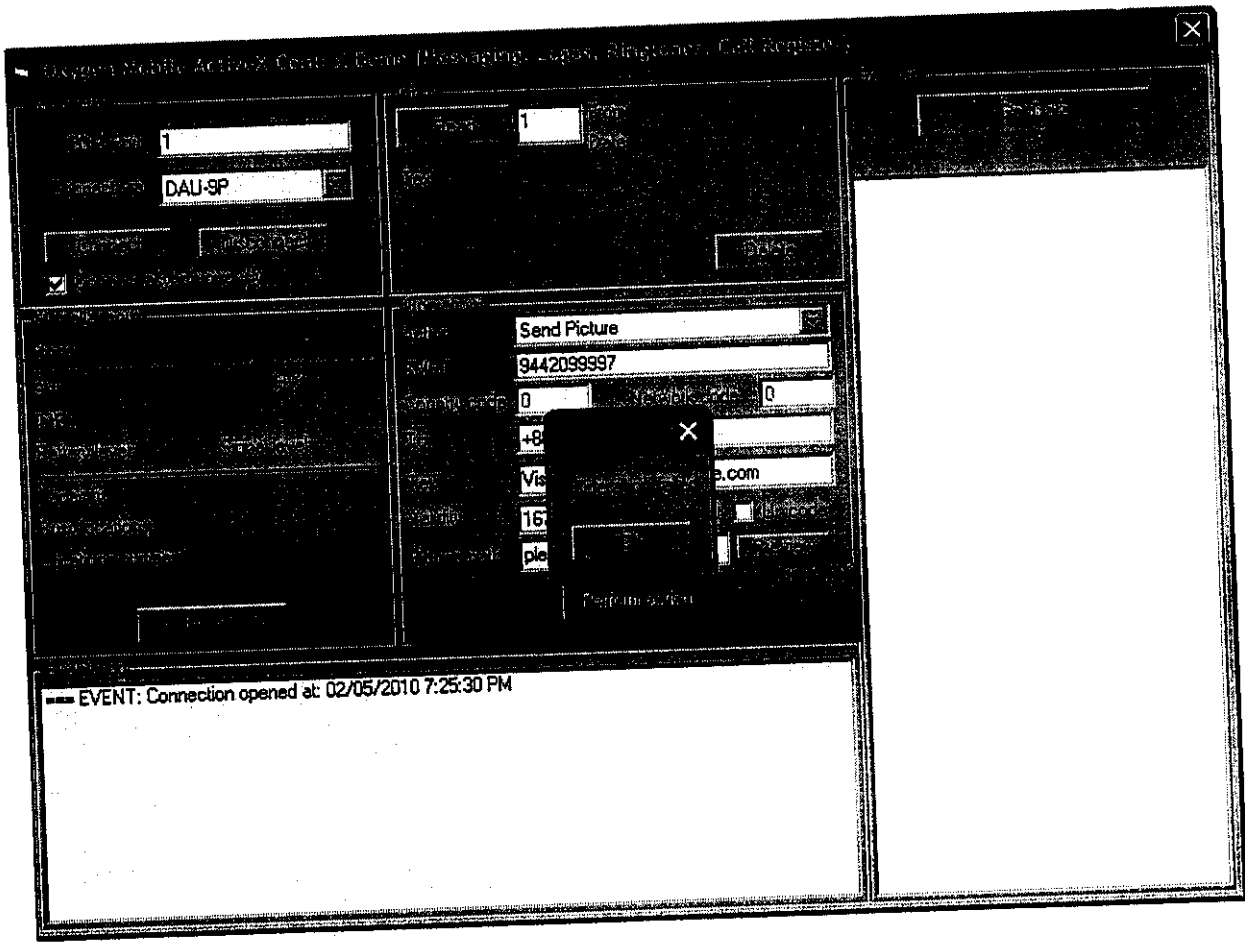
**Slot is Empty**



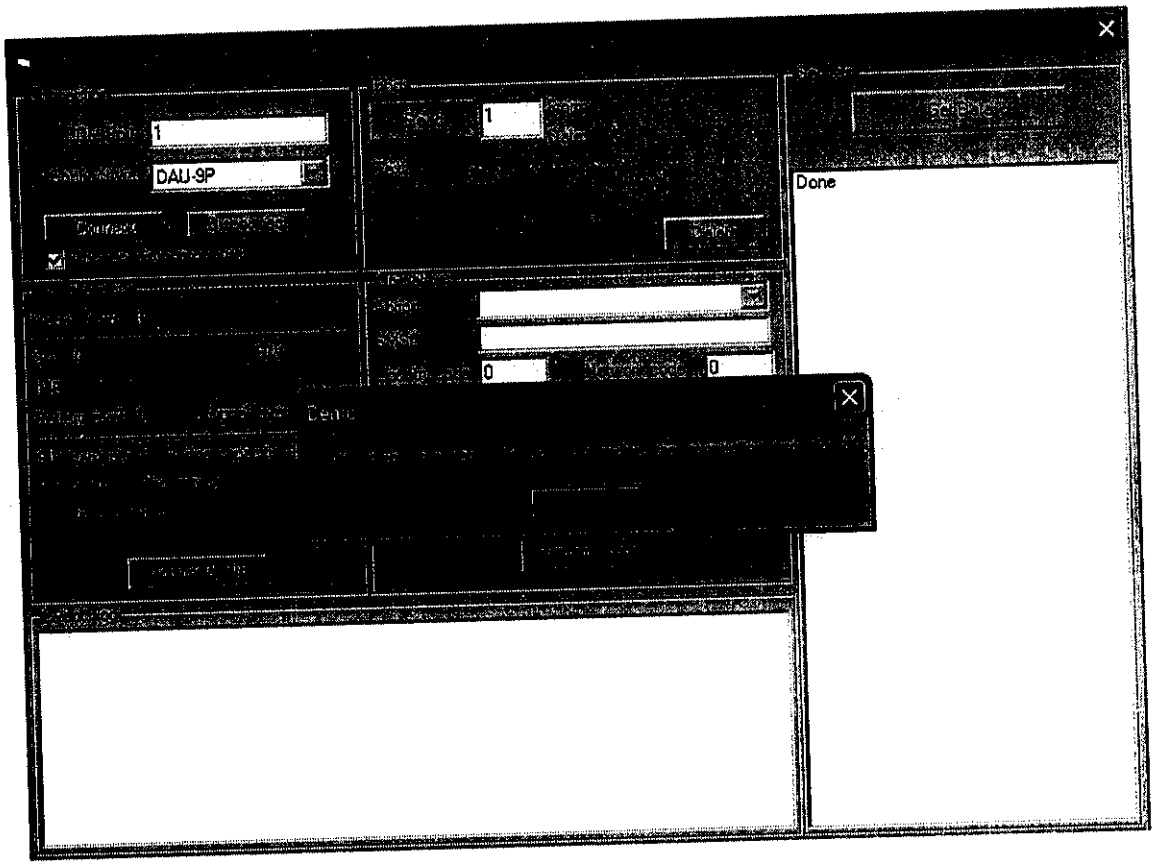
## Sending Picture Message



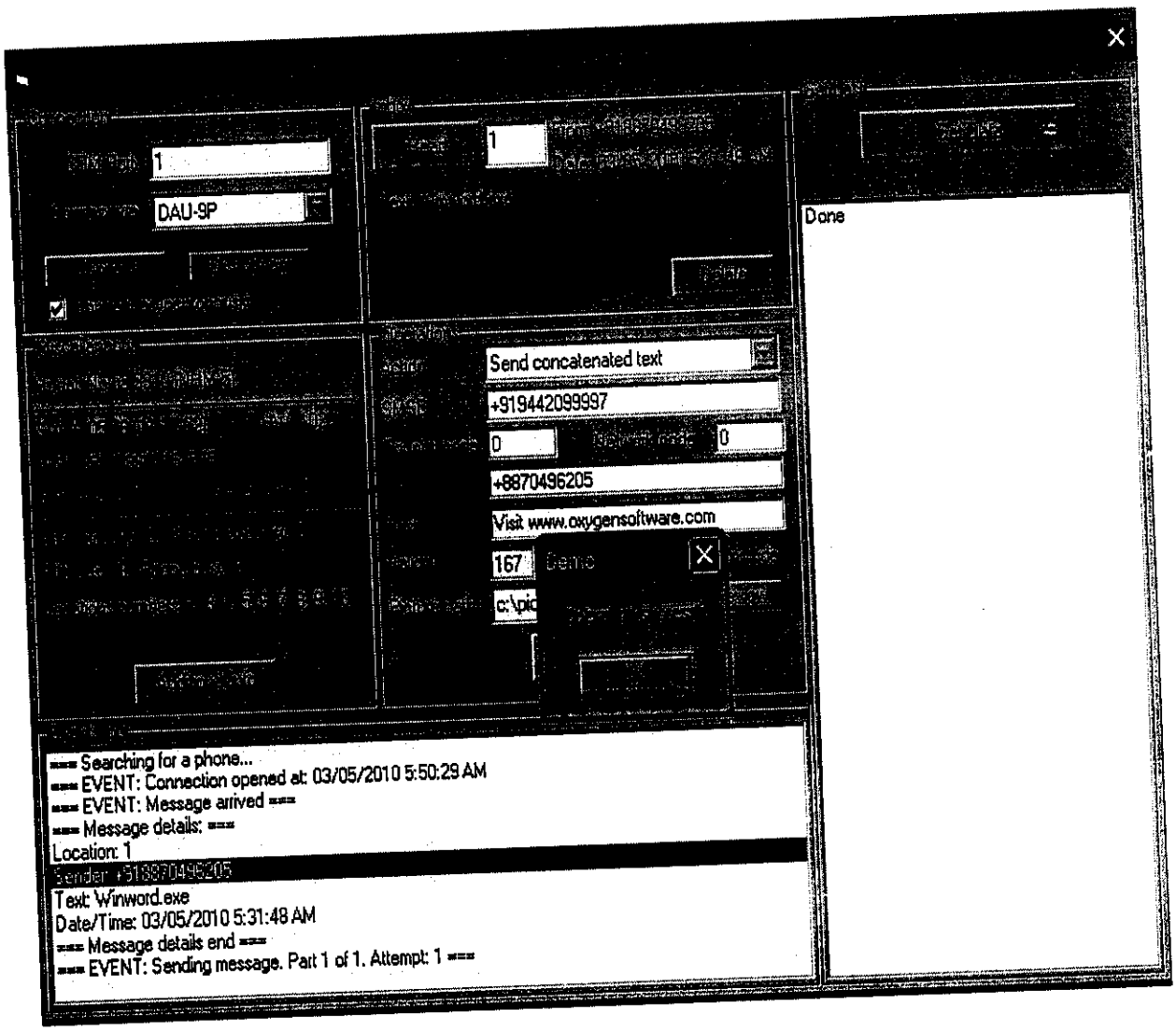
**Operation Failed**



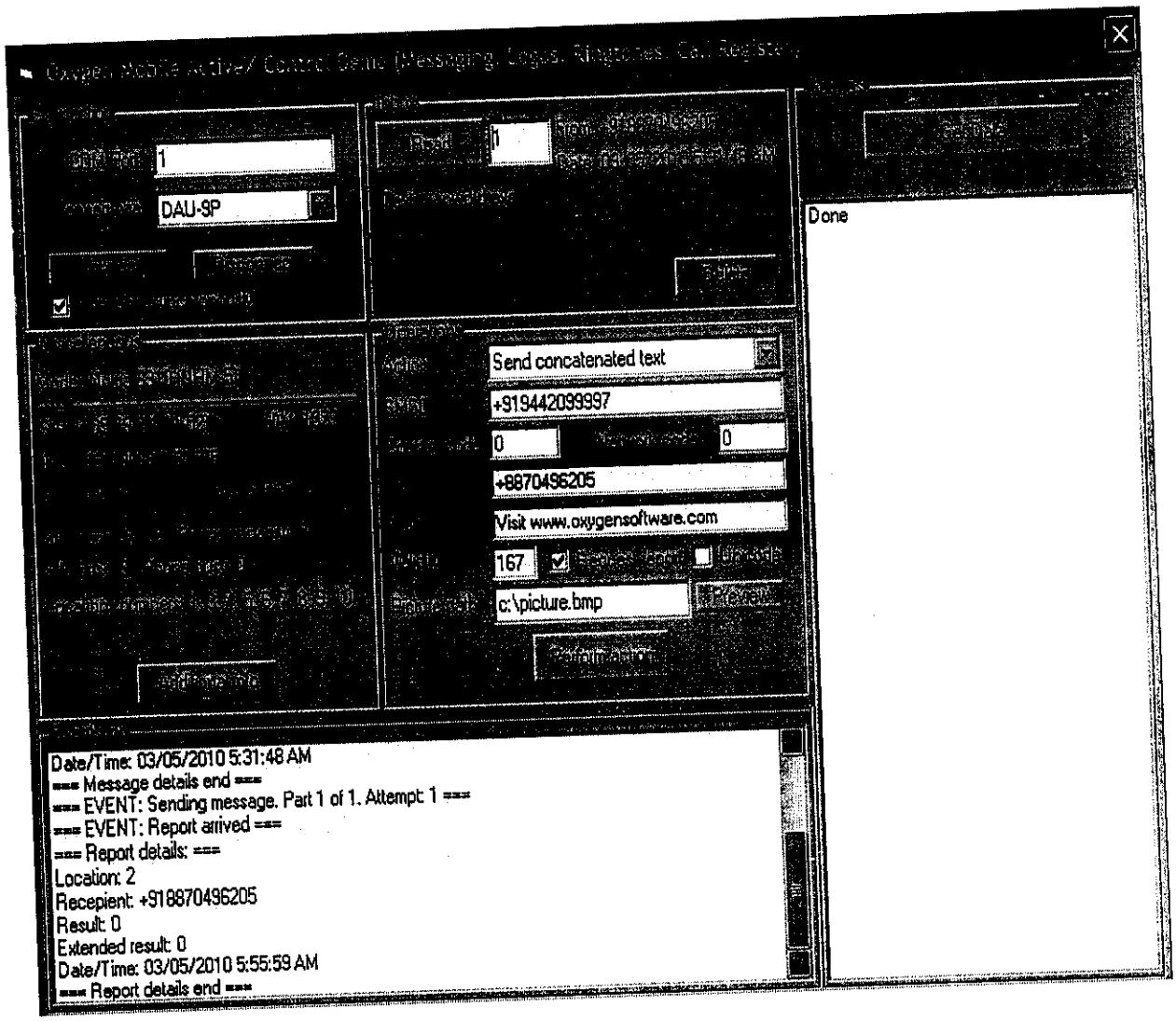
## Time Out Reached



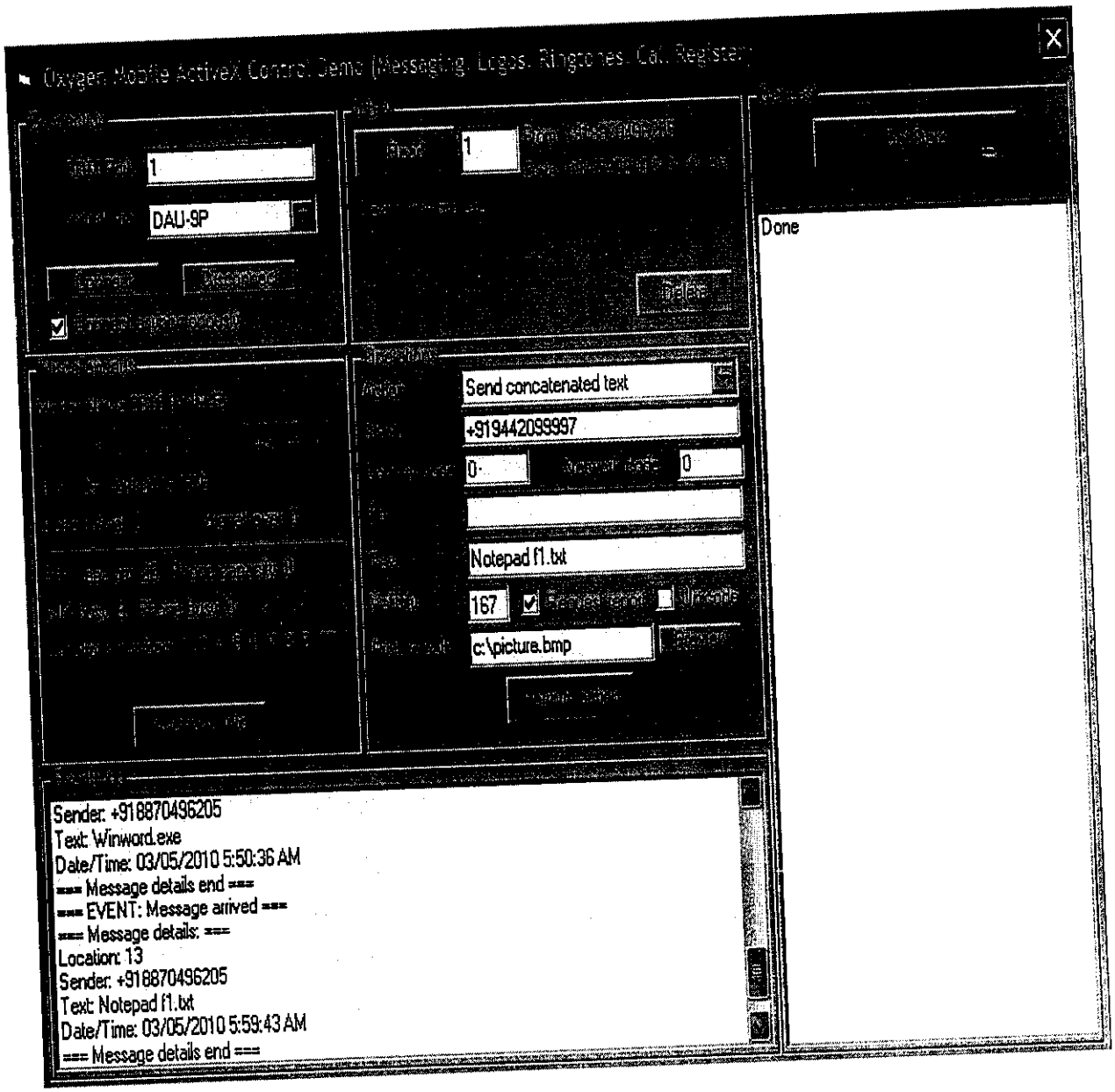
## Sending Concatenated Message



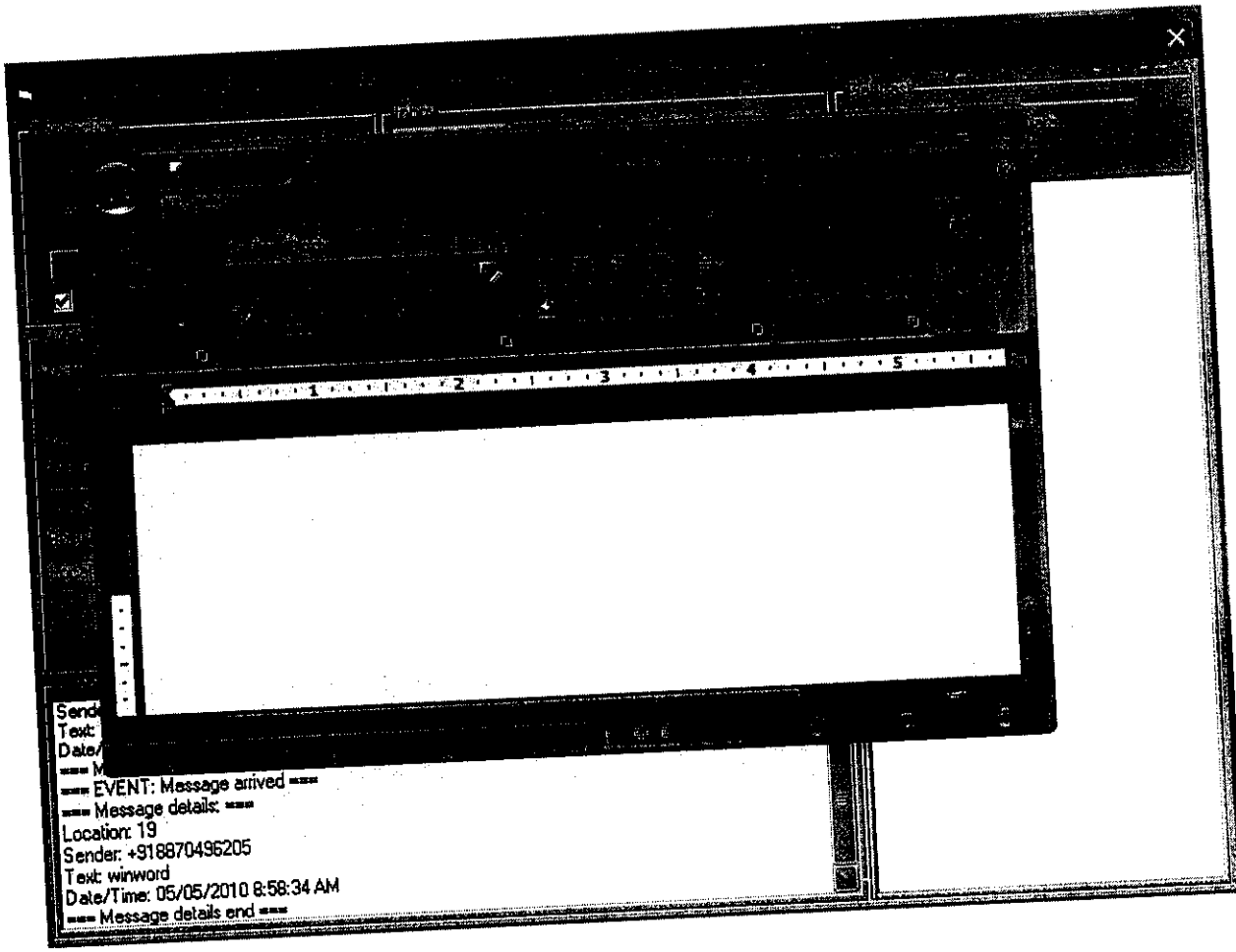
## Report Details



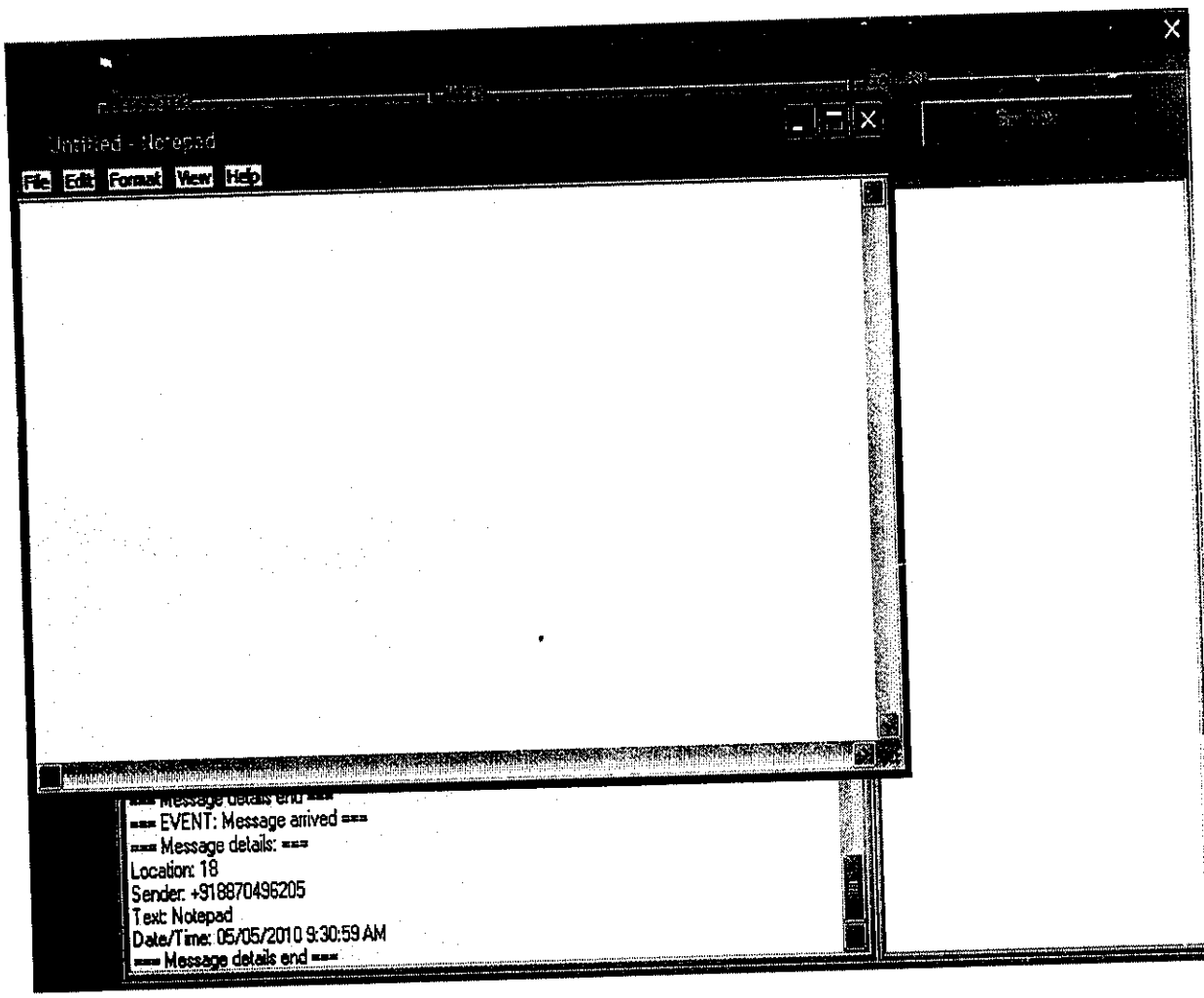
## Displaying message



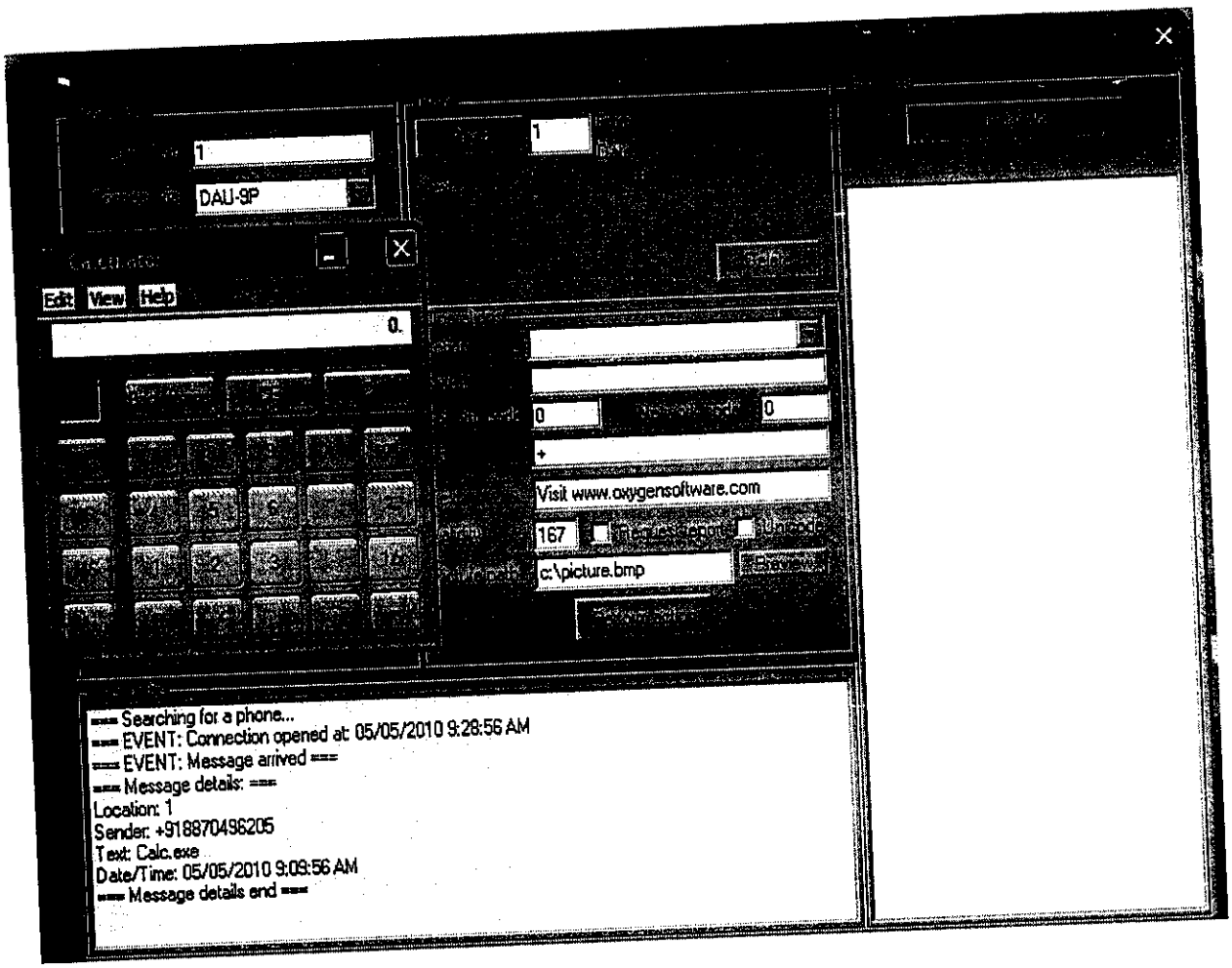
## Opening word apllication



## Opening notepad



## Opening calulator



# CHAPTER 10

# REFERENCES

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3. Cameron Wakefield, "VB.Net and the .Net Platform" Tata McGraw Hill, Tata Mac Hill edition

## Websites

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