# SAEAUT SMSresponder

**An Example of the client application for SAEAUT SMS Service looks for information required by SMS and sends an SMS response**

Much information can be placed in SMS within length of 160 chars. For example, if a customer needs to get price information to the item nr. 2577 in the store, next SMS text can be sent:

*<*>2577*

where <*> denotes the type of SMS. Software application looks in database and sends the information e.g.:

*Item 2577 is not in the store*

A request on item reservation or ordering can be solved in like manner.

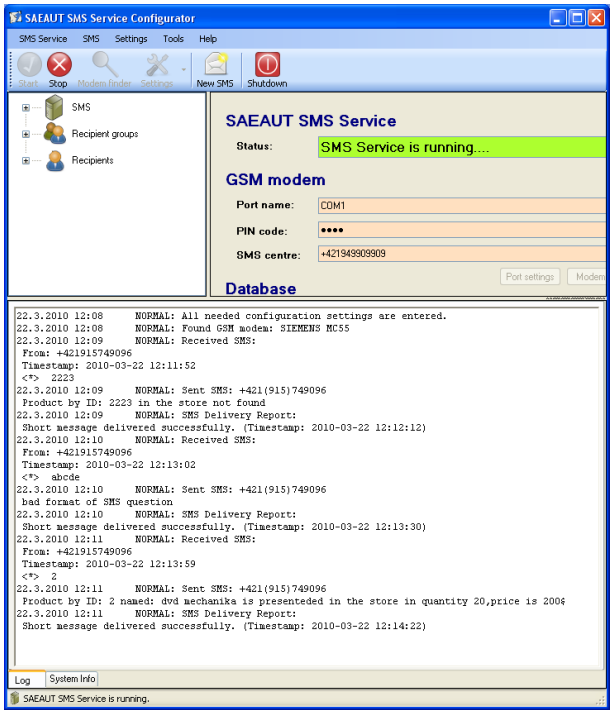


**Figure 1 Configuration application of the SAEAUT SMS Service**

SAEAUT SMS Service was designed just for above mentioned kind of applications. The product contains:

1. The configuration application with user interface
2. Runtime application without user interface implemented as the OS Windows Service

This runtime application can be used by more applications of alike kind as described here. The SMSresponder can run on the same or different computer as runtime application of the SAEAUT SMS Service.

SMSresponder has been implemented directly in the MDB-database file of the SAEAUT SMS Service in MS VBA (Visual Basic for Applications). This file can be downloaded from: http://www.saeautom.sk/download/products/smssce/smsserviceresponderdb.zip.

Of course, this application could have been implemented also within external database file and in whatever programming language. The only thing which must the application provide is writing the response SMS to the database of the SAEAUT SMS Service to be sent. The application must be probably slightly modified for your concrete usage, but we believe that your programmers will be able to do it easily. Another possibility – we can do it for you.

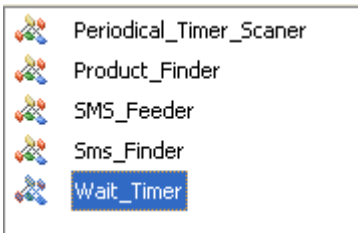


**Figure 2 Demo program modules**

The application contains modules according to the Figure 2. The module *Periodical_Timer_Scaner* provides periodical starting of the application loop. The module *Product_Finder* looks for product in the database according to its *Id*. The *SMS_Feeder* module creates the response SMS and puts it to the table of the sent SMS's. The *SMS_Finder* is



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waiting for coming of the request SMS. The Wait_Timer contains the status machine of the program.

## Connecting of the Microsoft ActiveX Data Objects 2.8 Library

To provide correct functionality of the demo application, the *msado15.dll* must be referenced according to the Figure 3.

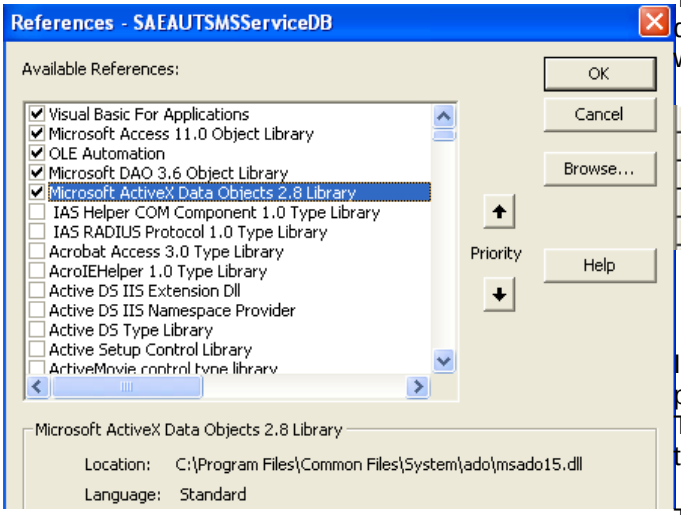


**Figure 3 Referencing of the dll**

| ID | recSenderPhoneNumber | recSendTimeStamp | recSMSText | MarketSmsOccur |
|---|---|---|---|---|
| 1 | +421915749096 | 5.3.2010 12:56:09 | <*>3 | ☑ |
| 2 | +421915749096 | 5.3.2010 12:56:20 | <*>1 | ☑ |

**Figure 4 Enhancement of the standard SMS receiving table**

### The ReceivedSMSList table enhancement

To distinguish application specific SMS the standard SMS receiving table has been enhanced with the column *MarketSmsOccur*.

| Název pole | Datový typ |
|---|---|
| ProdID | číslo |
| ProdName | text |
| ProdPrice | číslo |
| ProdQuantity | číslo |

**Figure 5 Product table**

Information about products in the store are placed in the table according to the Figure 5. This table can be also interconnected from external database.

The complete program listing can be found on next pages.

```
Option Compare Database


Public strCnxn As String

Function ScanTimer()
Dim telProd As String
Dim outSms As String
Dim MDBpath As String


MDBpath = _
"c:\Program Files\SAE - Automation, s.r.o\SAEAUT SMS
Service\Database\SAEAUTSMSServiceDB.mdb"

strCnxn = _
"Provider='Microsoft.Jet.OLEDB.4.0';" & "Data Source='" & MDBpath & " ';"

'Main cycle repeating by every 10 second period
Do

telProd = FindMarketSMS

   If telProd <> "notFound" Then
```



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```
      outSms = FindProduct(telProd)
      FeedSMS telProd, outSms
   End If
   wait 10

Loop

End Function
```

**Listing 1: TimerScaner**

```
Option Compare Database

 'Function for periodicaly
 'finding of arrived new storeSMS in tab ReceivedSMSList
 Function FindMarketSMS() As String

    On Error GoTo ErrorHandler

    'recordset and connection variables
    Dim rstListSms As ADODB.Recordset
    Dim Cnxn As ADODB.Connection
    Dim strSQLListSms As String
    Dim key As String


    'open connection
    Set Cnxn = New ADODB.Connection
    Cnxn.Open strCnxn

    'open recordset server-side for indexing
    Set rstListSms = New ADODB.Recordset
    rstListSms.CursorLocation = adUseServer
    strSQLListSms = "ReceivedSMSList"

    rstListSms.Open strSQLListSms, strCnxn, adOpenKeyset, _
    adLockOptimistic, adCmdTableDirect

            rstListSms.MoveFirst
            maxRec = rstListSms.RecordCount
            key = Left(rstListSms!recSMSText, 3)

            'Cycle for sequentional serching
            'of storeSMS in tab ReceivedSMSList
            Do While rstListSms.EOF = False
                'Logic of deciding by format key
                'whether the SMS is specific storeSMS
                If (key = "<*>") And (rstListSms!MarketSmsOccur = False) Then
                    Beep
                    rstListSms!MarketSmsOccur = True
                    rstListSms.Update
                    FindMarketSMS = rstListSms!recSenderPhoneNumber & "," _
                    & rstListSms!recSMSText
                    Exit Do
                End If

                If rstListSms!id <= maxRec Then
                    rstListSms.MoveNext
                Else
                    FindMarketSMS = "notFound"
                    Exit Do
```



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```
                End If
            Loop

   If rstListSms.EOF = True Then FindMarketSMS = "notFound"

    ' clean up
    rstListSms.Close
    Cnxn.Close
    Set rstListSms = Nothing
    Set Cnxn = Nothing
    Exit Function

ErrorHandler:
    ' clean up
    If Not rstListSms Is Nothing Then
        If rstListSms.State = adStateOpen Then rstListSms.Close
    End If
    Set rstListSms = Nothing

    If Not Cnxn Is Nothing Then
        If Cnxn.State = adStateOpen Then Cnxn.Close
    End If
    Set Cnxn = Nothing

    If Err <> 0 Then
        MsgBox Err.Source & "-->" & Err.Description, , "Error"
    End If
End Function
```

**Listing 2: SmsFinder**

```
Option Compare Database

 Function FindProduct(telProd As String) As String

    On Error GoTo ErrorHandler

    'recordset and connection variables
    Dim rstProdukt As ADODB.Recordset
    Dim Cnxn As ADODB.Connection
    Dim strSQLProdukt As String
    Dim tmp, strID As String
    Dim id As Integer

    'tmp = "+444222111111<*>1
    adr1 = InStr(1, telProd, ">")
    adr2 = Len(telProd)
    lenIdProd = adr2 - (adr1)

    tmp = Mid(telProd, adr1 + 1, lenIdProd)


    strID = Trim(tmp)

    'Logic of deciding whether the format of store SMS is correct
    If Not IsNumeric(strID) Then
        FindProduct = "bad format of SMS question"
        Exit Function
    End If

    'Open connection
```



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```
    Set Cnxn = New ADODB.Connection

    Cnxn.Open strCnxn

    'Open recordset server-side for indexing
    Set rstProdukt = New ADODB.Recordset
    rstProdukt.CursorLocation = adUseServer
    strSQLProdukt = "Store"
    rstProdukt.Open strSQLProdukt, strCnxn, adOpenKeyset, _
    adLockOptimistic, adCmdTableDirect
    rstProdukt.Index = "PrimaryKey"

    'point of deciding whether a product is presented in store or not
    rstProdukt.Seek Array(strID), adSeekFirstEQ
    If rstProdukt.EOF Then
        FindProduct = "Product by ID: " & strID & _
        " in the store not found"
    Else
        FindProduct = "Product by ID: " & rstProdukt!prodID & _
        " named: " & rstProdukt!prodName & _
        " is presenteded in the store in quantity " & _
        rstProdukt!prodQuantity & _
        ",price is " & rstProdukt!prodPrice & "$"
    End If

    ' clean up
    rstProdukt.Close
    Cnxn.Close
    Set rstProdukt = Nothing
    Set Cnxn = Nothing
    Exit Function

ErrorHandler:
    ' clean up
    If Not rstProdukt Is Nothing Then
        If rstProdukt.State = adStateOpen Then rstProdukt.Close
    End If

    Set rstProdukt = Nothing
    Set Cnxn = Nothing

    If Not Cnxn Is Nothing Then
        If Cnxn.State = adStateOpen Then Cnxn.Close
    End If
    Set Cnxn = Nothing

    If Err <> 0 Then
        MsgBox Err.Source & "-->" & Err.Description, , "Error"
    End If
End Function
```

**Listing 3: ProdFinder**

```
Option Compare Database
```



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```
'Declaring of function important for the geting of Computer name

Private Declare Function GetComputerName Lib "kernel32" _
    Alias "GetComputerNameA" _
    (ByVal lpBuffer As String, nSize As Long) As Long

'Procedure for exact formating and inserting a new SMS to the SimpleSMSList
table
'SimpleSMSList table servs as a outputing gate for the outgoing SMS
Sub FeedSMS(ByVal tel As String, ByVal sms As String)

    On Error GoTo ErrorHandler

    'recordset and connection variables
    Dim rstFeedSms As ADODB.Recordset
    Dim Cnxn As ADODB.Connection
    Dim strSQLFeedSms As String

    'data and time format variables
    Dim time As Date
    Dim datTim As Date

    datTim = DateValue(Now) & " " & TimeValue(Now)

    'open connection
    Set Cnxn = New ADODB.Connection
    Cnxn.Open strCnxn

    'open recordset server-side for indexing
    Set rstFeedSms = New ADODB.Recordset
    rstFeedSms.CursorLocation = adUseServer
    strSQLFeedSms = "SimpleSMSList"

    rstFeedSms.Open strSQLFeedSms, strCnxn, adOpenKeyset, _
    adLockOptimistic, adCmdTableDirect

    'preformating of inputing tel. +444222111111 number
    'to the standard world format  +444(222)111111
    adr1 = InStr(1, tel, ",") - 1
    tel = Left(tel, adr1)

    lenTelPreselection = Len(tel) - 9

    tel1 = Left(tel, lenTelPreselection)
    tel2 = Left(Right(tel, 9), 3)
    tel3 = Right(tel, 6)

    telSum = tel1 & "(" & tel2 & ")" & tel3

    'inserting of the formated strings
    'to the specific fields of the table SimpleSMSList
    rstFeedSms.AddNew
    rstFeedSms!usComputerName = ReturnComputerName '"SAE18"
    rstFeedSms!usSenderPhone = telSum
    rstFeedSms!usSMSText = sms
    rstFeedSms!usTimeStamp = datTim
    rstFeedSms.Update
    blnRecordAdded = True

    'clean up
    rstFeedSms.Close
```



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```
    Cnxn.Close
    Set rstFeedSms = Nothing
    Set Cnxn = Nothing
    Exit Sub

ErrorHandler:
    ' clean up
    If Not rstFeedSms Is Nothing Then
        If rstFeedSms.State = adStateOpen Then rstFeedSms.Close
    End If
    Set rstFeedSms = Nothing

    If Not Cnxn Is Nothing Then
        If Cnxn.State = adStateOpen Then Cnxn.Close
    End If
    Set Cnxn = Nothing

    If Err <> 0 Then
        MsgBox Err.Source & "-->" & Err.Description, , "Error"
    End If
End Sub

'Functionality important for the geting of Computer name

Function ReturnComputerName() As String
Dim rString As String * 255, sLen As Long, tString As String
    tString = ""
    On Error Resume Next
    sLen = GetComputerName(rString, 255)
    sLen = InStr(1, rString, Chr(0))
    If sLen > 0 Then
        tString = Left(rString, sLen - 1)
    Else
        tString = rString
    End If
    On Error GoTo 0
    ReturnComputerName = UCase(Trim(tString))
End Function
```

**Listing 4: SMSFeeder**



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