Memorandum

To: File

From: John Effland

Date: 2005-03-10

Revisions:

2005-03-10	jee	Initial
2006-02-24	jee	SW Version 1.1 now includes the leave type "Other"

Subject: Leave Calendar Program Architecture and Design

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1. Summary

A program to generate a calendar that displays vacation and travel times for employees was written in August of 2000. It was subsequently updated to show the schedule of visitors to the NTC. The leave calendar software presents the user with a dialog box to assign leave as shown in Figure 1, stores the leave dates and names in a database, and then queries the database to generate static HTML pages which display calendars for the current and following month. A sample calendar generated by this program is shown in Figure 2. While access to the database is restricted to a few users, anyone can access the HTML calendar files residing on \\cvfiler\cv-cdl-pub. This document describes the design of the software and the system architecture.

It is important to note that the architecture is basically obsolete and should eventually be replaced by a commercially available, dynamic web-based design.

2. History

The software originated from an article in Microsoft Developer's Net News Magazine[1] entitled "Building a Web-based Event Calendar." That article assumed the developer would generate Active Server Pages on Microsoft's Internet Information Server, so much of the code was written for that platform. The NRAO didn't have that web server, so the code was ported to Visual Basic Version 6 to build the executable. A SQL database server was running on my office computer "wheat" and was used to store the data and stored procedures, which also reside in the database server.

The intent of the MSDN article was to build a dynamic, web-based scheduling program, but this was scaled down to a simple executable program running on a windows-based client computer, accessing a server-based database, and generating static HTML code to a file each time the program is run.

3. Architecture

The overall architecture of the program is shown in Figure 3. The executable file is stored on `\\cvfiler` and is downloaded and run on the client computer. The user must have access rights to the SQL server program running on `wheat`. Data are returned from this database server to the client in the form of "recordsets" using Microsoft's

[1] MSDN News Magazine, July/August 2000, Volume 9, Number 4, Page 7.

API called "Active-X Data Object's" (ADO). The static HTML calendar page is built and the resulting file is stored on `\\cvfiler\cv-cdl-pub` with a file name that includes the year and month, such as `Leave2005Apr.html`.

The dialog box shown in Figure 1 uses several Visual Basic controls that require further discussion. A hidden ADO data control allows inserting records into the database and also simplifies the connection of the datagrid to the database. Figure 4 shows the form as seen from the Visual Basic IDE and the data control, named `adodc1`, is hidden when the program runs. The data control updates the database with user names and leave dates in routine `btnAddLeave_Click`. Existing names and leave dates are tabulated in the datagrid on the dialog box, which allows the user to edit data directly in the cells of the grid. Changes the user makes to entries in the datagrid are posted back into the database *via* linkage by defining the data control to be the datasource for the datagrid.

The data control is dynamically loaded with the dataset connection string in routine `Form_Load` and its recordsource is defined in the same routine. Attempts to dynamically generate the recordsource by returning a string from a stored procedure were never successful, but the code remains commented in the routine for future reference.

The leave dates are selected using a `DateTimePicker` control.

The stored procedures, listed in Section 7, are routines written in Microsoft's "T-SQL," run on the database server, and return recordsets. The Visual Basic code is listed in Section 8.

4. File Locations

The leave calendar software uses a number of files given in this section.

Visual Basic VB Project files:

`\\cvfiler.cv.nrao.edu\cv-cdl-sis\MeasSys\Software\Utils\WebCalendar\WebCalCode.vbp`
`\\cvfiler.cv.nrao.edu\cv-cdl-sis\MeasSys\Software\Utils\WebCalendar\WebCalCode.vbw`

Visual Basic form file:

`\\cvfiler.cv.nrao.edu\cv-cdl-sis\MeasSys\Software\Utils\WebCalendar\Form1.frm`

Visual Basic executable location:

`\\cvfiler.cv.nrao.edu \cv-cdl-pub\WebCalendarSoftware\WebCalendar.exe`

Directory for HTML Leave Calendars

`\\cvfiler.cv.nrao.edu\cv-cdl-pub\`

5. Database Use

Names and dates are stored on a MS SQL Server version 7.0[2] database running on computer `wheat` in my office.

Database name:	TeamWeb
Tables Used:	Schedule

The database table `Schedule` is structured as shown in Table 1.

[2] Wheat is actually running Microsoft's Data Engine, which is functionally equivalent to SQL Server but the number of concurrent users is limited by slowing down the server when more than 5 concurrent users are logged into the server.

Table 1: Schema for Database Table "Schedule"		
Field Name	**Datatype**	**Size (Bytes)**
idSchedule	smallint	2
dtDateStart	smalldatetime	4
vcEvent	varchar(100)	100
dtDateEnd	smalldatetime	4
iEventType	smallint	2

A number of other tables in the database `TeamWeb` were for prototyping of other projects but are now unused.

6. Windows Libraries and OLE Objects

The leave calendar software uses the following libraries and OLE objects:

```
stdole2.tlb         OLE Automation
MSBIND.DLL          Microsoft Data Binding Collection VB 6.0 (SP4)
msador15.dll        Microsoft ActiveX Data Objects Recordset 2.0 Library
msado25.tlb         Microsoft ActiveX Data Objects 2.0 Library
MSADODC.OCX
MSCOMCTL.OCX
MSCOMCT2.OCX
MSDATGRD.OCX
```

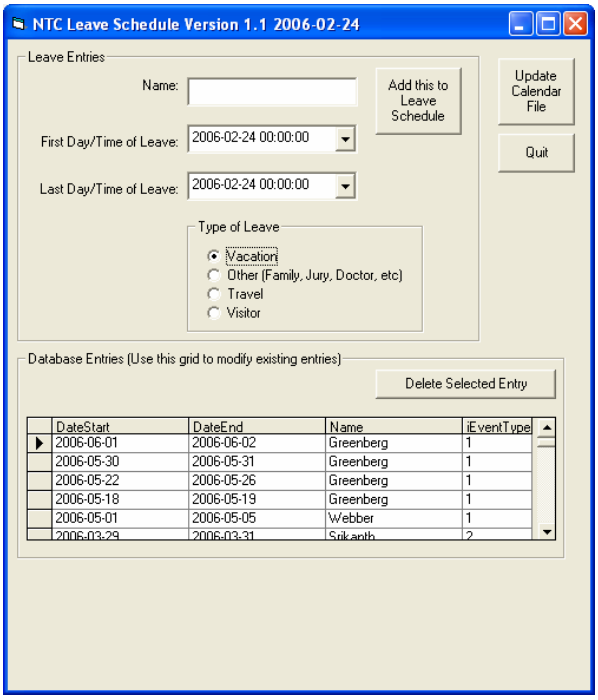

Figure 1: Dialog Box for adding leave to the database and generating the calendar file

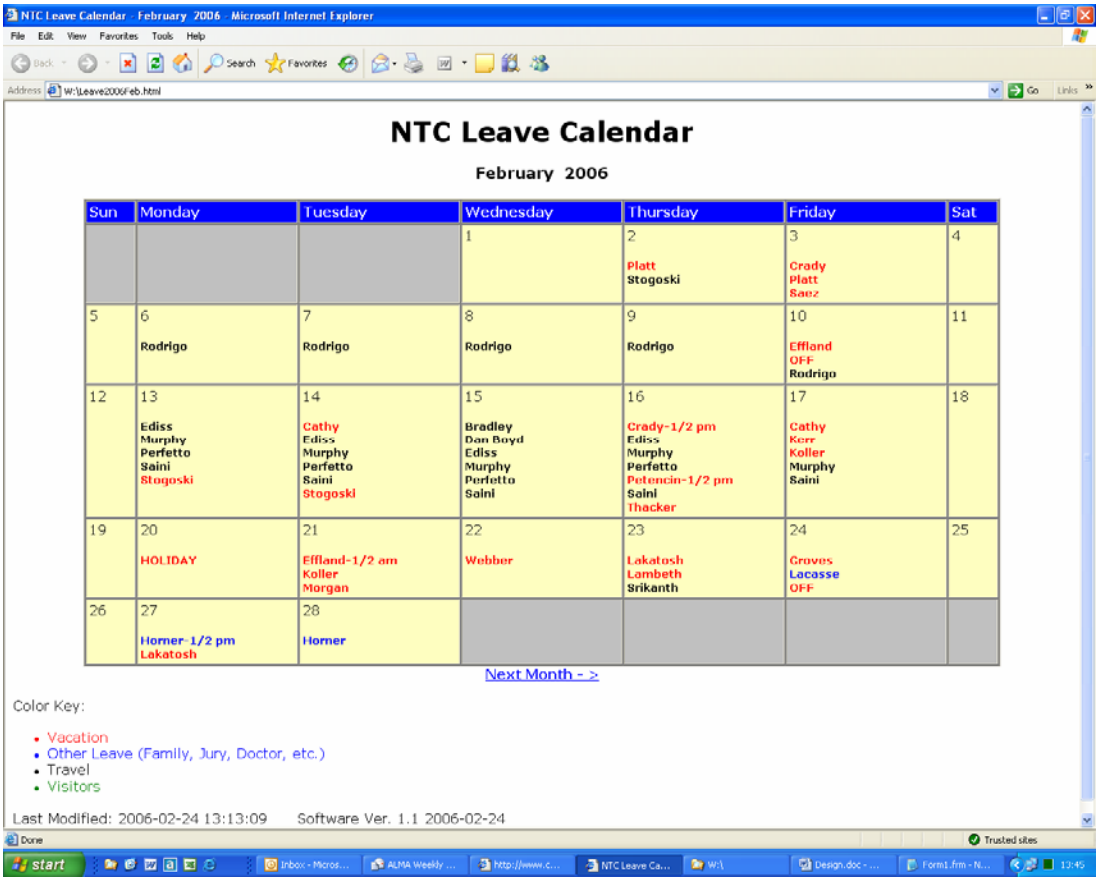

Figure 2: Sample of Calendar Output

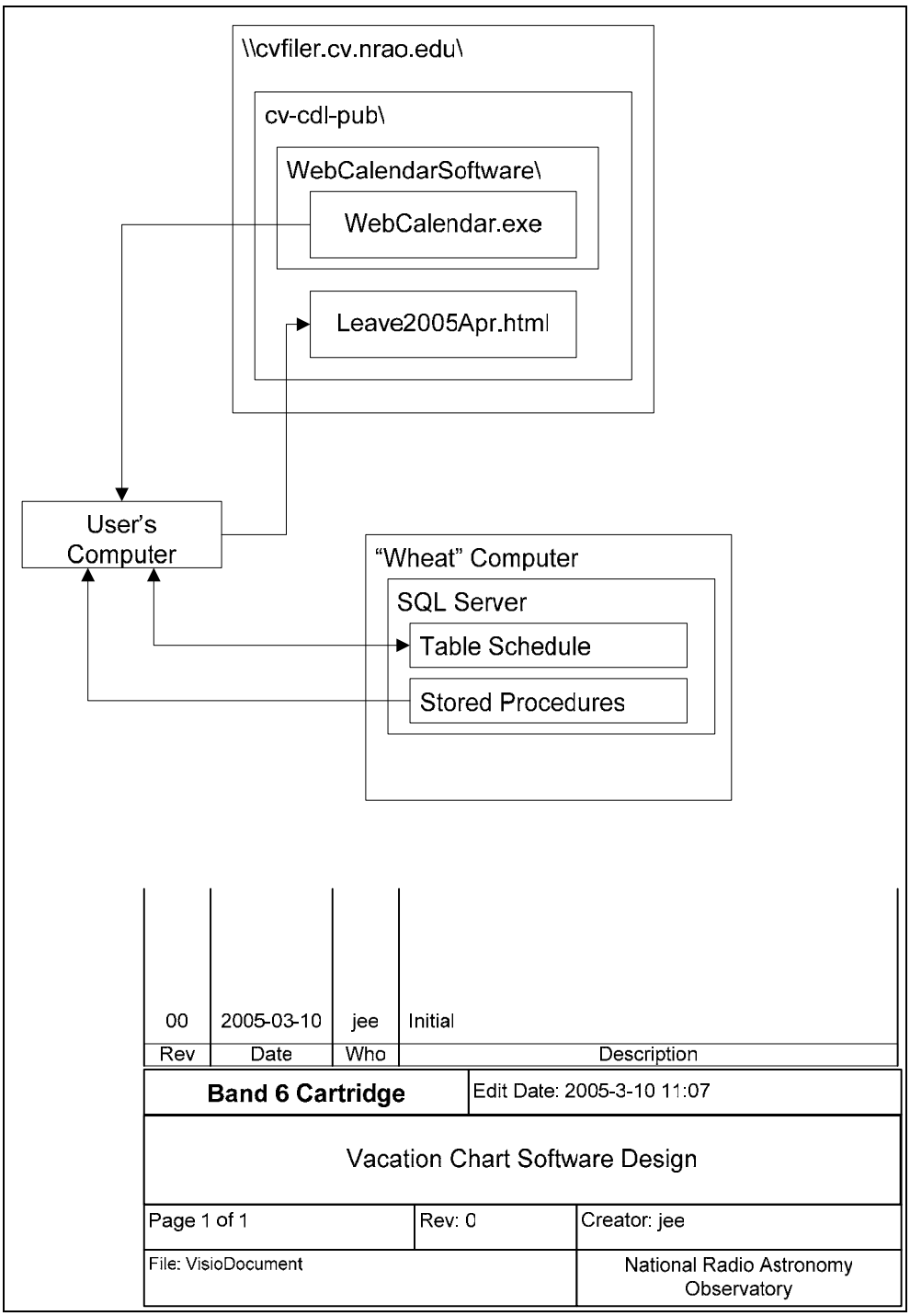

Figure 3: Overall Architecture

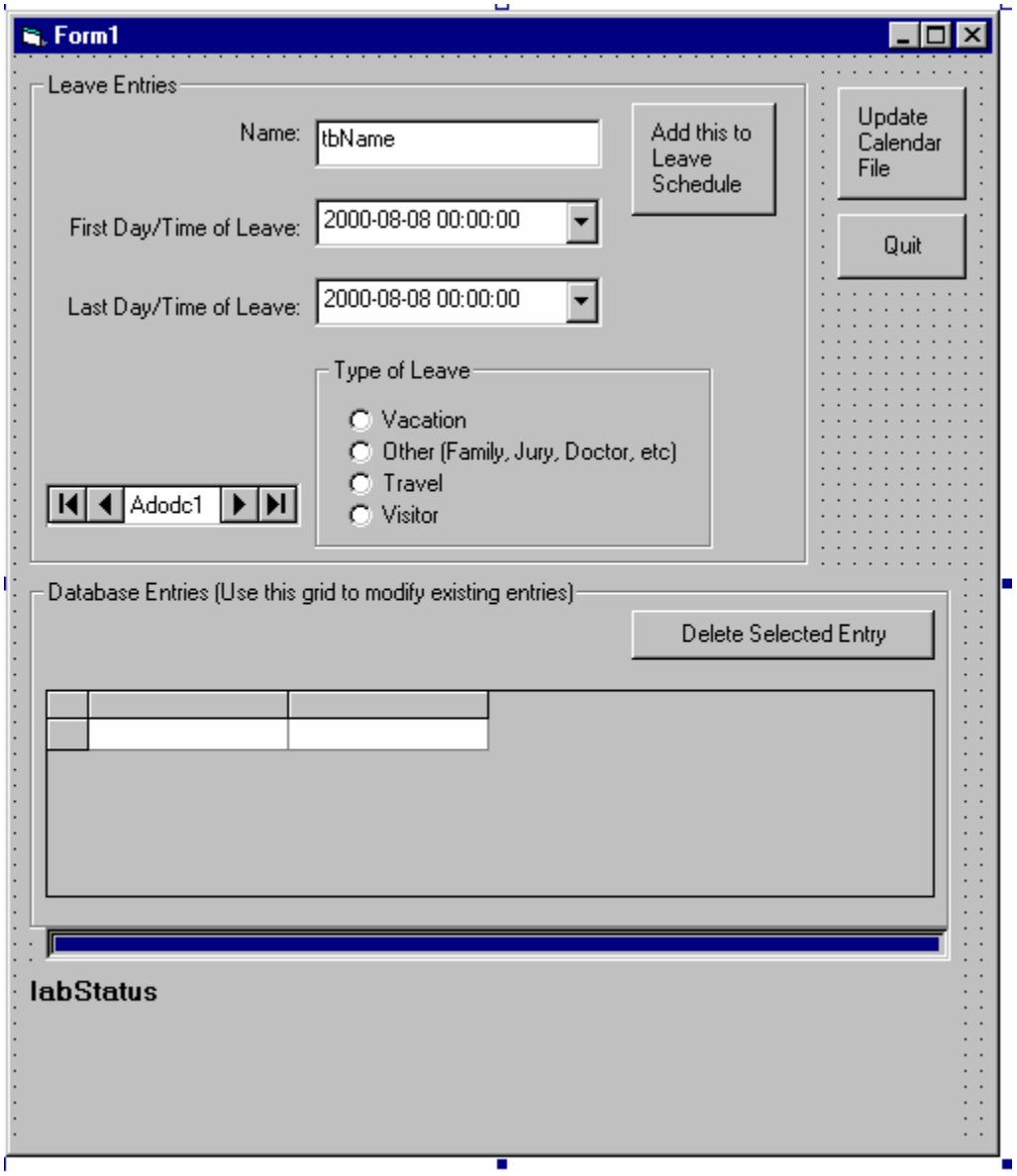

Figure 4: Form from Visual Basic Editor

7. Stored Procedures in Database “TeamWeb” on MS SQL Server “Wheat”

The following stored procedures run queries on tables in the database TeamWeb and return recordsets using Microsoft’s ADO API. Note that only the procedure `spGetScheduleforDay` actually runs with the leave calendar software. The other stored procedures are uncompleted enhancements.

```
*****************************************************************
CREATE Procedure spGetScheduleForDay(@nDateTime smalldatetime)
-- Returns all events whose dates fall between the date given in the parameter
-- 2000-08-08 jee
As
       SELECT vcEvent, iEventType
       FROM Schedule
       -- Style 0 shows dates as text in form: "mon dd yyyy hh:miAM (or PM)"
       WHERE (CONVERT(DATETIME, @nDateTime, 0)
       BETWEEN CONVERT(DATETIME, dtDateStart,0) AND CONVERT(DATETIME, dtDateEnd,0))
       ORDER BY vcEvent
Return

*****************************************************************
CREATE Procedure spGetRecsByDate
-- Returns all events ordered by date
-- 2000-09-01 jee
As
       SELECT *
       FROM Schedule
       ORDER BY dtDateStart DESC
return

*****************************************************************
CREATE Procedure spGetSchedule(@nMonth tinyint,@nYear smallint)

As
       select idSchedule, convert(varchar, datepart(dd, dtDateStart)) 'nDay', vcEvent
       from Schedule
       where datepart(yy, dtDateStart) = @nYear and datepart(mm, dtDateStart) = @nMonth
       order by datepart(dd, dtDateStart)
return
```

8. Visual Basic Code

The following code is used to generate the dialog box to assign vacations and to generate the static web pages.

```
Option Explicit
'
Private Const sVersion = "1.1 2006-02-24"
'
' V 1.1    2006-02-24 jee 1) added "Other Leave" type and color
'                         2) Updated VB to SP6 to get progress bar working again
' V 1.0.14 2005-03-10 jee returned fonts to orig size and sat/sun columns only 50 wide
' V 1.0.13 2005-03-09 jee made fonts larger and sat/sun cols smaller.
' V 1.0.12 2004-08-17 jee changed header from CDL to NTC in DoHeader
' V 1.0.11 2004-01-14 jee changed header from CDL to NTC in DoHeader
' V 1.0.10 2003-12-15 jee changed header from CDL to NTC
' V 1.0.9 2003-09-29 jee changed from Appointments to Visitors in DoFooter and iLeave_Type
' V 1.0.8 2003-01-22 jee corrected spelling of Shure to sure!!
' V 1.0.7 2002-11-20 jee cvfiler root is no longer "shares" but is "cv-cdl-pub"
' V 1.4 2002-10-18 jee changed to use CV Filer,  spGetScheduleForDay now
'                      sorts by "event"
' V 1.3 2000-09-01 jee Orders data control records by date
```

```
' V 1.2 2000-08-31 jee corrected color in MakeCalendar color assignments.
' V 1.1 2000-08-18 jee added error checks for data control.
' V 1.0 2000-08-16 jee 1) added multiple month support.
'



Private Enum iLEAVE_TYPE
    Vacation = 1
    Travel
    Visitor
    Other
End Enum

Private Const sCOLOR_VACATION As String = "red"
Private Const sCOLOR_TRAVEL As String = "black"
Private Const sCOLOR_VISITOR As String = "green"
Private Const sCOLOR_OTHER_LEAVE As String = "blue"

' file name for output of html file
'Private Const sDIRECTORY_NAME As String = "//cvfiler/shares/cv-cdl-pub/"
Private Const sDIRECTORY_NAME As String = "//cvfiler/cv-cdl-pub/"

' Database connection string
Private Const sdbCONNECTION = "Provider=SQLOLEDB.1;Integrated Security=SSPI;" & _
                              "Persist Security Info=False;Initial Catalog=TeamWeb;Data
Source=wheat"

Private m_oConnection As ADODB.Connection

' if TRUE, don't change the end date to match changes in the start date.
Private bEndDateChanged As Boolean

' if true, quit
Private m_bDataBaseError As Boolean

'Private m_rsEvents As ADODB.Recordset

'**********************************************************************
'**********************************************************************
Private Sub Adodc1_Error(ByVal ErrorNumber As Long, Description As String, ByVal Scode As
Long, ByVal Source As String, ByVal HelpFile As String, ByVal HelpContext As Long,
fCancelDisplay As Boolean)
    ' Runs if error occurs with Active X Data Object Control
    '
    ' 2000-08-18 jee
    '
    Call MsgBox(Description, vbInformation + vbOKOnly)

    ' don't display error in another dialog box
    fCancelDisplay = True

    m_bDataBaseError = True
End Sub
'**********************************************************************
Private Sub btnAddLeave_Click()
    ' 2000-08-10 jee
    ' 2000-08-15 jee Moved MakeCalendar to own button
    ' 2003-09-29 jee changed from Appointments to Visitors
    ' 2006-02-24 jee 1) added other leave type
    '                2) now hide status box
    '
    Dim iLeaveTypeBuff As Integer
```

```
    Dim vDateDiff As Variant

    Call ShowStatus("")

    ' validate the field values
    If Len(Me.tbName) = 0 Then
        Call MsgBox("Please enter someone's name for this leave.", _
                vbOKOnly + vbExclamation)
        Exit Sub
    End If

    If Len(Me.DTPickerStart.Value) = 0 Then
        Call MsgBox("Please enter a valid start date for this leave.", _
                vbOKOnly + vbExclamation)
        Exit Sub
    End If

    If Len(Me.DTPickerEnd.Value) = 0 Then
        Call MsgBox("Please enter a valid end date for this leave.", _
                vbOKOnly + vbExclamation)
        Exit Sub
    End If

    ' compare number of seconds to make sure dates OK
    vDateDiff = DateDiff("s", Me.DTPickerStart.Value, Me.DTPickerEnd.Value)
    If DateDiff("s", Me.DTPickerStart.Value, Me.DTPickerEnd.Value) < 0 Then
        Call MsgBox("The start date occurs after the end date.", _
                vbOKOnly + vbExclamation)
        Exit Sub
    End If

    ' decode the leave type
    If Me.obTravel.Value Then
        iLeaveTypeBuff = iLEAVE_TYPE.Travel
    ElseIf Me.obVisitor.Value Then
        iLeaveTypeBuff = iLEAVE_TYPE.Visitor
    ElseIf Me.obOther.Value Then
        iLeaveTypeBuff = iLEAVE_TYPE.Other
    Else
        iLeaveTypeBuff = iLEAVE_TYPE.Vacation
    End If

    With Me.Adodc1.Recordset
        .AddNew
        !Name = Me.tbName.Text
        !DateStart = Me.DTPickerStart.Value
        !DateEnd = Me.DTPickerEnd.Value
        !iEventType = iLeaveTypeBuff
        .Update
    End With


    ' reset the input fields
    Me.tbName.Text = ""
    Me.DTPickerEnd.Value = Format(Now, "yyyy-MM-dd")
    Me.DTPickerStart.Value = Format(Now, "yyyy-MM-dd")
    Me.obVacation.Value = True
    bEndDateChanged = False
End Sub
'*********************************************************************
Private Sub btnDeleteEntry_Click()
    ' deletes the selection on the data grid
    '
```

```
    ' 2000-08-10 jee
    ' 2003-01-22 jee corrected shure to sure!!
    ' 2006-02-24 jee added hide statusbox
    '
    Call ShowStatus("")

    If MsgBox("Are you sure you want to delete the record" _
              & vbCr & " highlighted in the grid box?", vbQuestion + vbYesNo) = vbYes Then
        With Me.Adodc1.Recordset
            .Delete
        End With
    End If
End Sub
'*********************************************************************
Private Sub btnQuit_Click()
    ' 2000-08-10 jee
    '
    Unload Me
End Sub
'*********************************************************************
Private Sub btUpdateCalendar_Click()
    ' 2000-08-15 jee
    ' 2006-02-24 jee Hide status area at first
    '
    Dim sFileName1 As String
    Dim sFileName2 As String
    Const sINTERVAL_TYPE As String = "m"    ' "m" specifies months as interval.
    Dim vThisMonth As Variant   ' current date
    Dim vNextMonth As Variant   ' a date in the next month

    ' hide the status area
    Call ShowStatus("")

    vThisMonth = Now

    ' add one month the the current date to get next month's date
    vNextMonth = DateAdd(sINTERVAL_TYPE, 1, vThisMonth)
    '
    ' Generate file names from date
    ' first file name is this month's schedule
    sFileName1 = sDIRECTORY_NAME & "Leave" & Format$(vThisMonth, "YYYYMMM") & ".html"
    ' second file name is the next months schedule
    ' This is obtained by adding one month to the current date
    sFileName2 = sDIRECTORY_NAME & "Leave" & Format$(vNextMonth, "YYYYMMM") & ".html"

    ' Fetch data from database and write out file

    'first, for this month
    Open sFileName1 For Output As #1
    Me.ProgressBar.Visible = True
    Call MakeCalendar(vThisMonth, 0, sFileName2)
    Me.ProgressBar.Visible = False
    Close #1

    ' then, for next month
    Open sFileName2 For Output As #1
    Me.ProgressBar.Visible = True
    Call MakeCalendar(vNextMonth, 1, sFileName1)
    Me.ProgressBar.Visible = False
    Close #1

    ' update the statusbar
    Call ShowStatus("Files written to:" & vbCr & vbCr & _
```

```
                            sFileName1 & vbCr & vbCr & _
                            sFileName2)

End Sub
'**********************************************************************
Private Sub DTPickerEnd_Change()
    ' When the end date changes,
    ' match this with changes in the start date.
    '
    ' 2000-08-10 jee
    '
    ' if TRUE, don't change the end date to match changes in the start date.
    bEndDateChanged = True

End Sub
'**********************************************************************
Private Sub DTPickerStart_Change()
    ' Change the end date to match this, unless the user
    ' has already changed the end date.
    '
    ' 2000-08-10 jee
    '
    '
    If Not bEndDateChanged Then
        Me.DTPickerEnd.Value = Me.DTPickerStart.Value
    End If
End Sub
'**********************************************************************
Private Sub Form_Initialize()
    '
    ' 2000-08-10 jee
    ' 2000-08-18 JEE added init of data control.
    '
    ' if TRUE, don't change the end date to match changes in the start date.
    bEndDateChanged = False

    m_bDataBaseError = False

End Sub
'**********************************************************************
Private Sub Form_Load()
    ' 2000-08-10 jee
    ' 2000-08-18 jee added init of data control
    ' 2000-09-01 added m_oConnection
    ' 2003-12-15 jee changed caption from CDL ... to NTC ...
    '
    Me.ProgressBar.Visible = False
    Me.ProgressBar.Scrolling = ccScrollingSmooth

'    Dim oConn As ADODB.Connection


'    Set m_rsEvents = m_oConnection.Execute("spGetRecsByDate")

    ' setup default values
    Me.DTPickerStart.Value = Format(Now, "yyyy-MM-dd")
    Me.DTPickerEnd.Value = Format(Now, "yyyy-MM-dd")
    Me.tbName.Text = ""

    Me.obVacation.Value = True
    Me.Caption = "NTC Leave Schedule Version " & sVersion

    Me.Show
```

```
    ' load the data control with the connection string
    Call ShowStatus(vbCr & vbCr & "     Connecting to database...")

    Me.Refresh

'    Set oConn = cnGetDataConnection

    With Me.Adodc1
        .ConnectionString = sdbCONNECTION
        ' Can't get a stored procedure to populate the data grid because it produces forward
only cursors.
        'Set .Recordset = oConn.Execute("spGetRecsByDate")
        .RecordSource = "SELECT dtDateStart AS DateStart, dtDateEnd AS DateEnd, vcEvent AS
Name, iEventType FROM Schedule ORDER BY dtDateStart DESC"
        On Error Resume Next
        .Refresh
        On Error GoTo 0
    End With

    If m_bDataBaseError Then
        End
    End If

    With Me.DataGrid1
        Set .DataSource = Me.Adodc1
    End With

   Call ShowStatus("")


End Sub
'*********************************************************************
Sub ShowStatus(ByVal sStatus)
    ' shows the status box
    '
    ' Calling Parms: sStatus - string to show
    '                          if "", then hide status box
    '
    ' 2000-08-18 jee
    ' 2006-02-24 jee added refresh
    '
    Me.labStatus.Caption = sStatus

    If Len(sStatus) = 0 Then
        Me.labStatus.Visible = False
    Else
        Me.labStatus.BackColor = vbBlue
        Me.labStatus.ForeColor = vbWhite
        Me.labStatus.Visible = True
    End If
    Me.Refresh
End Sub
'*********************************************************************
Sub DoHeader(ByVal sTitle As String)
    ' 2004-01-14 jee changed header from CDL to NTC
    ' 2004-08-17 jee now I really think I changed the header from CDL to NTC
    '

    Print #1, "<html>"
    Print #1, "<head>"
    Print #1, "<META HTTP-EQUIV=""Content-Type"" CONTENT=""text/html; charset=iso8859-1"">"
    Print #1, "<title>NTC Leave Calendar -  " & sTitle & "</title>"
```

```
    Print #1, "</head>"

    Print #1, "<body bgcolor=""white"" link=""blue"" alink=""blue"" vlink=""blue"">"
    Print #1, "<basefont face=""Verdana, Arial"">"

    Print #1, "<center><h1>NTC Leave Calendar</h1>"
    Print #1, "<h3> " & sTitle & " </h3>";
End Sub
'*********************************************************************
Sub DoFooter()
    ' 2000-08-15 jee
    ' 2000-08-31 jee added software version
    ' 2003-09-29 jee changed from Appointments to Visitors
    ' 2006-02-24 jee added general leave color
    '
    Print #1, "</center>"
    Print #1, "<p> <font size = X small>" & "Color Key:"
    Print #1, "<UL> <font color=""" & sCOLOR_VACATION & """><LI> " & "Vacation"
    Print #1, "<font color=""" & sCOLOR_OTHER_LEAVE & """><LI> " & "Other Leave (Family, Jury,
Doctor, etc.)"
    Print #1, "<font color=""" & sCOLOR_TRAVEL & """><LI> " & "Travel"
    Print #1, "<font color=""" & sCOLOR_VISITOR & """><LI> " & "Visitors" & " </UL>"
    Print #1, "<P> <font color=""black""> " & "Last Modified: " & Format$(Now(), "yyyy-mm-dd
hh:mm:ss")
    Print #1, "      Software Ver. " & sVersion; "</p>"
    Print #1, "</body></html>"
End Sub
'*********************************************************************
Function cnGetDataConnection() As ADODB.Connection
    '
    ' 2000-08-07 jee
    ' 2000-08-10 jee changed connection string to be constant
    ' 2000-09-01 jee changed to use m_oConnection
    '
'    Dim oConn As ADODB.Connection
'    Dim strConn As String
'    Set oConn = CreateObject("ADODB.Connection")
    If m_oConnection Is Nothing Then
        Set m_oConnection = CreateObject("ADODB.Connection")
        m_oConnection.Open sdbCONNECTION
    End If
    Set cnGetDataConnection = m_oConnection
End Function
'*********************************************************************
Private Sub MakeCalendar(ByVal dtDate As Variant, _
                         ByVal iWhichMonth As Integer, _
                         ByVal sLinkFileName As String)
    '
    ' Purpose: Main calendar page that shows events in a calendar format
    '
    ' Calling Parms: vDate - date used to obtain month to query and generate
    '                        calendar data.
    '                iWhichMonth = not 1 is current month
    '                              1 - next month
    '                sLinkFileName - name of file containing prevous/next month calendar
    '
    ' 2000-08-07 jee from MSDN paper, August, 2000
    ' 2000-08-10 jee
    ' 2000-08-16 jee
    ' 2000-08-31 jee corrected color assignments
    ' 2005-03-09 jee shortened sat and sun
    ' 2005-03-10 jee cleaned up do loop
    ' 2006-02-24 jee added other leave, removed progress bar
```

```
Dim dbConn, rs, nDex, nMonth, nYear

' Set the Month and Year
If nMonth = "" Then nMonth = Month(dtDate)
If nYear = "" Then nYear = Year(dtDate)

' Set the date to the first of the current month
dtDate = DateSerial(nYear, nMonth, 1)

Call ShowStatus("Connecting to database...")
Set dbConn = cnGetDataConnection
Call ShowStatus("")
'Set rs = dbConn.Execute("spGetSchedule " & nMonth & ", " & nYear)

DoHeader (MonthName(Month(dtDate)) & "  " & nYear)

' print out the days of the week in the table header
Print #1, "<tr><td colspan=2>"
Print #1, "<table border=1 bgcolor=""gray"" cellpadding=3>"
Print #1, "<tr bgcolor=""Blue"">"
Print #1, "<td width=50><font color=""white""><b>Sun</b></font></td>"
Print #1, "<td width=180><font color=""white""><b>Monday</b></font></td>"
Print #1, "<td width=180><font color=""white""><b>Tuesday</b></font></td>"
Print #1, "<td width=180><font color=""white""><b>Wednesday</b></font></td>"
Print #1, "<td width=180><font color=""white""><b>Thursday</b></font></td>"
Print #1, "<td width=180><font color=""white""><b>Friday</b></font></td>"
Print #1, "<td width=50><font color=""white""><b>Sat</b></font></td></tr>"
Print #1, "<tr bgcolor=""#ffffc0"">"

' Add blank cells until the first day of the month
For nDex = 1 To Weekday(dtDate) - 1
    Print #1, "<td bgcolor=""#c0c0c0""> </td>"
Next

' Loop for this month
With Me.ProgressBar
    .Min = 0
    .Max = 31
    .Visible = True
    .Value = 0
End With
Do
    Me.ProgressBar.Value = Me.ProgressBar.Value + 1
   ' print out the day of the month at the top of the cell:
    Print #1, "<td valign=""top"">" & Day(dtDate) & "<br> <br>"

    ' find all entries for this date and put them into the recordset
     Set rs = dbConn.Execute("spGetScheduleForDay '" & dtDate & "'")

    ' loop until the recordset is empty
    'If Not rs.EOF Then
        ' loop until EOF
        Do Until rs.EOF
            ' font size is one size smaller
            Print #1, "<font size=""-1"">"

            ' change colors according to type
            Select Case rs.Fields("iEventType")
                Case iLEAVE_TYPE.Vacation:
                    Print #1, "<font color=""" & sCOLOR_VACATION & """>";
                Case iLEAVE_TYPE.Other:
                    Print #1, "<font color=""" & sCOLOR_OTHER_LEAVE & """>";
```

```
                    Case iLEAVE_TYPE.Travel:
                        Print #1, "<font color=""" & sCOLOR_TRAVEL & """>";
                    Case iLEAVE_TYPE.Visitor:
                        Print #1, "<font color=""" & sCOLOR_VISITOR & """>";
                    Case Else:
                        Print #1, "<font color=""black"">";
                End Select
                ' print out the event
                Print #1, "<b>" & rs("vcEvent");
                Print #1, "</b></font><br>"
                rs.MoveNext

                'If rs.EOF Then Exit Do
            Loop
        'End If

        Print #1, "</td>"

        ' terminate row if day is Saturday
        If Weekday(dtDate) = 7 Then
            Print #1, "</tr>" & vbCrLf & "<tr  bgcolor=""#ffffc0"">"
        End If

        dtDate = DateAdd("d", 1, dtDate)
    Loop Until (Month(dtDate) <> CInt(nMonth))

    ' Add blank cells to fill out the rest of the month if needed
    If Weekday(dtDate) <> 1 Then
        For nDex = Weekday(dtDate) To 7
            Print #1, "<td bgcolor=""#C0C0C0""> </td>"
        Next
    End If
    Print #1, "</tr>"
    Print #1, "</table></td></tr>"

    Print #1, "<tr><td><a href=""" & sLinkFileName & """ > "

    ' enter previous/next month links
    If iWhichMonth = 1 Then
        Print #1, "<b>&lt - Previous Month"
    Else
        ' current month
        Print #1, "<b>Next Month - &gt"
    End If

    Print #1, "</b></a></td></tr>"
    Print #1, "</form>"


    Call DoFooter

End Sub
```