

Re: Is there a way to prevent a RichTextBox from scrolling?

Source:

<http://www.tech-archive.net/Archive/DotNet/microsoft.public.dotnet.framework.windowsforms.controls/2007-01/ms>

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 - *Date:* Tue, 23 Jan 2007 01:16:48 +0100
-

```
// this is a class for syntax highlighting
// i found somewhere because i had the same problem.
// you should have a try. take a look at setscrollpos:
```

```
Public Class cRTBWrapper
' Scrollbar direction
Const SBS_HORZ = 0
Const SBS_VERT = 1

' Windows Messages
Const WM_VSCROLL = &H115
Const WM_HSCROLL = &H114
Const SB_THUMBPOSITION = 4

' This is just a class structure that holds syntax options
Public Class tDict
Private _Pattern As String
Private _isRegex As Boolean
Private _ignoreCase As Boolean
Private _color As Integer

Public Sub New(ByVal thispattern As String, ByVal thisregex As
Boolean, ByVal thisCase As Boolean, ByVal thisColor As Integer)
_Pattern = thispattern
_isRegex = thisregex
_ignoreCase = thisCase
_color = thisColor
End Sub

Public Property pattern() As String
Get
Return _Pattern
End Get
Set(ByVal Value As String)
_Pattern = Value
```

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```
End Set  
End Property
```

```
Public Property isRegex() As Boolean  
Get  
Return _isRegex  
End Get  
Set(ByVal Value As Boolean)  
_isRegex = Value  
End Set  
End Property
```

```
Public Property ignoreCase() As Boolean  
Get  
Return _ignoreCase  
End Get  
Set(ByVal Value As Boolean)  
_ignoreCase = Value  
End Set  
End Property
```

```
Public Property color() As Integer  
Get  
Return _color  
End Get  
Set(ByVal Value As Integer)  
_color = Value  
End Set  
End Property
```

```
End Class
```

```
' This is just a dictionary class used to store your color info
```

```
Public Class cDict  
Inherits CollectionBase
```

```
Sub New()  
End Sub
```

```
Sub add(ByVal Pattern As String, ByVal isRegex As Boolean, ByVal  
isCase As Boolean, ByVal value As Integer)  
If exists(Pattern) = -1 Then  
list.Add(New tDict(Pattern, isRegex, isCase, value))  
End If  
End Sub
```

```
Public Property item(ByVal index As Integer) As Integer  
Get  
Return list(index)  
End Get  
Set(ByVal Value As Integer)
```

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```
list(index) = Value
End Set
End Property

Function exists(ByVal lookup As String) As Integer
Dim entry As tDict

For Each entry In list
If entry.pattern = lookup Then Return entry.color
Next

Return -1
End Function

Function index(ByVal lookup As String) As Integer
Dim entry As tDict
Dim thisIndex = 1

For Each entry In list
If entry.pattern = lookup Then Return thisIndex
thisIndex += 1
Next

Return -1 ' Make it black
End Function
End Class

' This is just a list class used to store the headers color info
Private Class cList
Inherits CollectionBase

Sub New()
End Sub

Sub add(ByVal item As Integer)
If exists(item) = -1 Then
list.Add(item)
' Console.WriteLine("New color: " & item)
End If
End Sub

Public Property item(ByVal index As Integer) As Integer
Get
Return list(index)
End Get
Set(ByVal Value As Integer)
list(index) = Value
' Console.WriteLine("Setting color")
End Set
End Property
```

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```
Function exists(ByVal lookup As Integer) As Integer  
Dim current As Integer
```

```
If list.Count <> 0 Then  
For current = 0 To list.Count - 1  
Dim compare As Color = Color.FromArgb(lookup)  
Dim source As Color = Color.FromArgb(list(current))
```

```
' This is very strange, the samme RGB color can have  
diffrent  
' ARGB values ??? Maybe its reporting 'A'  
diffrently, oh well  
' lets just work around that little feature
```

```
If compare.R = source.R And _  
compare.G = source.G And _  
compare.B = source.B Then  
Return current  
End If  
Next  
End If
```

```
Return -1  
End Function  
End Class
```

```
' This is just a class used to store the position info  
Public Class cPosition  
Public Cursor As Integer  
Public CurrentLine As Integer  
Public LinePosition As Integer  
Public xScroll As Integer  
Public yScroll As Integer  
End Class
```

```
' Public events  
Public Event position(ByVal PositionInfo As cPosition)
```

```
' Vars  
Private WithEvents _bind As RichTextBox  
Public rtfSyntax As New cDict  
Private rtfColors As New cList  
Private rtfHeader As String  
Private rtfBody() As String  
Private txtBody() As String  
Private CursorPosition As cPosition  
Private RTFDebug As Boolean = True
```

```
'-----  
' Sub: New
```

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```
' Purpose: This was the most chalanging part of the entire project.  
' How to write this, humm. Maybe i'll save it till later.  
' Ya, later!  
,
```

```
Public Sub New()  
End Sub
```

```
-----  
' Sub: Bind  
' Purpose: Provide access to the object and its events  
,
```

```
Public Sub bind(ByVal rtb As RichTextBox)  
_bind = rtb  
AddHandler _bind.KeyUp, AddressOf update  
AddHandler _bind.MouseUp, AddressOf update  
AddHandler _bind.TextChanged, AddressOf update  
End Sub
```

```
-----  
' API: GetScrollPos  
' Purpose: Returns an integer of the position of the scrollbar  
,
```

```
Private Declare Function GetScrollPos Lib "user32.dll" ( _  
ByVal hWnd As IntPtr, _  
ByVal nBar As Integer) As Integer
```

```
-----  
' API: SetScrollPos  
' Purpose: Sets the scrollbars to a certin value  
,
```

```
Private Declare Function SetScrollPos Lib "user32.dll" ( _  
ByVal hWnd As IntPtr, ByVal nBar As Integer, _  
ByVal nPos As Integer, ByVal bRedraw As Boolean) As Integer
```

```
-----  
' API: PostMessageA  
' Purpose: Sends a message to a control  
,
```

```
Private Declare Function PostMessageA Lib "user32.dll" ( _  
ByVal hwnd As IntPtr, ByVal wParam As Integer, _  
ByVal lParam As Integer, ByVal lParam As Integer) As Boolean
```

```
-----  
' API: LockWindowUpdate  
' Purpose: Locks or Unlocks a window  
,
```

```
Private Declare Function LockWindowUpdate Lib "user32.dll" (ByVal  
hwnd As Long) As Long
```

```
-----  
' Sub: Update
```

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```
' Purpose: Reports the cursor position (Customized for word wrap support)
'
Private Overloads Sub update()
CursorPosition = getCurrentPosition()
RaiseEvent position(CursorPosition)
debugprint(_bind.Rtf)
End Sub
Private Overloads Sub update(ByVal sender As Object, ByVal e As System.Windows.Forms.KeyEventArgs)
update()
End Sub
Private Overloads Sub update(ByVal sender As Object, ByVal e As System.Windows.Forms.MouseEventArgs)
update()
End Sub
Private Overloads Sub update(ByVal sender As Object, ByVal e As System.EventArgs)
rtfColors.Clear() ' Clear the colors
readRTFColor() ' Read and parse the colors in the current document
readRTFBody() ' Read and split the RTF into lines
readTXTBody() ' Read and split the text into lines
End Sub

'-----
' Sub: asciiprint
' Purpose: Help in debugging, converts line to ascii char numbers
'
Private Function asciiprint(ByVal str As String) As String
Dim counter As Integer
Dim retval As String

For counter = 1 To str.Length
retval &= "{" & Asc(Mid(str, counter, 1)) & " } "
Next

Return retval
End Function

'-----
' Sub: debugprint
' Purpose: Prints out the current document substituting non-printables
'
Private Sub debugprint(ByVal out As String)
out = out.Replace(Chr(13) & Chr(10), Chr(182) & vbCrLf)
out = out.Replace(Chr(32), Chr(183))
End Sub

'-----
```

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```
' Sub: toggleDebug  
' Purpose: Hide or show the debug window  
,
```

```
Public Function toggleDebug() As Boolean  
RTFDebug = Not RTFDebug  
Return RTFDebug  
End Function
```

```
-----  
' Sub: getCurrentPosition  
' Purpose: Determins relative line position  
,
```

```
Private Function getCurrentPosition() As cPosition  
Dim retval As New cPosition  
Dim counter As Integer
```

```
retval.Cursor = _bind.SelectionStart
```

```
If _bind.Text <> "" Then  
For counter = 0 To retval.Cursor - 1  
If _bind.Text.Substring(counter, 1) = Chr(10) Then  
retval.CurrentLine += 1  
retval.LinePosition = 0  
Else  
retval.LinePosition += 1  
End If  
Next  
End If
```

```
Return retval  
End Function
```

```
-----  
' Sub: saveScroll  
' Purpose: saves the scroll info and locks the window  
,
```

```
Private Sub saveScroll(ByVal hWnd As IntPtr)
```

```
CursorPosition.xScroll = GetScrollPos(_bind.Handle, SBS_HORZ)  
CursorPosition.yScroll = GetScrollPos(_bind.Handle, SBS_VERT)  
End Sub
```

```
-----  
' Sub: restoreScroll  
' Purpose: Resets the scroll info ans unlocks the window  
,
```

```
Private Sub restoreScroll(ByVal hWnd As IntPtr)  
SetScrollPos(_bind.Handle, SBS_HORZ, CursorPosition.xScroll,  
True)  
PostMessageA(_bind.Handle, WM_HSCROLL, SB_THUMBPOSITION +
```

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```
&H10000 * CursorPosition.xScroll, Nothing)
SetScrollPos(_bind.Handle, SBS_VERT, CursorPosition.yScroll,
True)
PostMessageA(_bind.Handle, WM_VSCROLL, SB_THUMBPOSITION +
&H10000 * CursorPosition.yScroll, Nothing)
```

End Sub

```
' Sub: _bind_TextChanged
' Purpose: Do the highlighting
'
```

```
Private Sub _bind_KeyUp(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyEventArgs) Handles _bind.KeyUp
If e.KeyData = Keys.Space Then
update() ' Update the cursor position
saveScroll(_bind.Handle) ' Freeze the windows and get the
scroll nfo
```

```
applyColor(CursorPosition.CurrentLine) ' Do any coloring
_bind.Rtf = Render() ' Update the RTF
_bind.SelectionStart = CursorPosition.Cursor ' Reset the
cursor
debugprint(_bind.Rtf) ' Update the debug window
```

```
restoreScroll(_bind.Handle) ' Unfreeze the windows and
Restore the scroll
End If
```

```
If e.KeyCode = Keys.Enter Then
update() ' Update the cursor position
saveScroll(_bind.Handle) ' Freeze the windows and get the
scroll nfo
```

```
applyColor(CursorPosition.Handle, WM_VSCROLL,
SB_THUMBPOSITION + &H10000 * CursorPosition.yScroll, Nothing)
```

End Sub

```
' Sub: _bind_TextChanged
' Purpose: Do the highlighting
'
```

```
Private Sub _bind_KeyUp(ByVal sender As Object, ByVal e As
System.Windows.Forms.KeyEventArgs) Handles _bind.KeyUp
If e.KeyData = Keys.Space Then
```

```
' Sub: readRTFColor()
' Purpose: parse the color information in the header of the document
'
```

```
Private Function readRTFColor() As Boolean
Dim strHeader As String = ""
```

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```
' Get Header string
' I hate RegEx :-)
,

Dim colHeader As System.Text.RegularExpressions.MatchCollection
= System.Text.RegularExpressions.Regex.Matches(_bind.Rtf,
"{\colortbl\s?;(.*);}")

If RTFDebug Then Console.WriteLine("Colors found: " &
colHeader.Count)

If colHeader.Count = 1 Then
strHeader = colHeader.Item(0).Groups(1).Value
If RTFDebug Then
Console.WriteLine(colHeader.Item(0).Groups(1).Value)
Else
If RTFDebug Then Console.WriteLine("No color info in
header")
Return False
End If

' Translate the string to ARGB color values
' I hate RegEx :-)
,

Dim colColors As System.Text.RegularExpressions.MatchCollection
= System.Text.RegularExpressions.Regex.Matches(strHeader, "(\\d+)")

If Not colColors Is Nothing Then
Dim colorCounter As-----
' Sub: readRTFColor()
' Purpose: parse the color information in the header of the document
,

Private Function readRTFColor() As Boolean
Dim strHeader As String = ""

' Get Header string
' I hate RegEx :-)
,

Dim colHeader As System.Text.RegularExpressions.MatchCollection
= System.Text.RegularExpressions.Regex.Matc Next
End If
End Function

'-----
' Sub: readRTFBody()
' Purpose: Read the RTF and strip off the header info, and split it
into limes.
' RegEx avoided here !
,

Private Function readRTFBody() As String
Dim tmp As String = _bind.Rtf
```

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```
Dim bodyStart As Integer
```

```
Dim position As Integer = InStr(tmp, "\viewkind4")
```

```
If InStr(position, tmp, " ") < 0 Then
```

```
bodyStart = InStr(position, tmp, "\par")
```

```
Else
```

```
bodyStart = InStr(position, tmp, " ")
```

```
End If
```

```
Dim tmpRtfBody As String = tmp.Substring(bodyStart)
```

```
rtfBody = Split(tmpRtfBody, "\par")
```

```
End Function
```

```
' Sub: readTXTBody()
```

```
' Purpose: Split the text portion into lines
```

```
' RegEx avoided here !
```

```
,
```

```
Private Function readTXTBody() As String
```

```
Dim tmpText As String
```

```
Dim counter As Integer
```

```
tmpText = _bind.Text
```

```
Next
```

```
End If
```

```
End Function
```

```
' Sub: readRTFBody()
```

```
' Purpose: Read the RTF and strip off the header info, and split it  
into lines.
```

```
' RegEx avoided here !
```

```
,
```

```
Private Function readRTFBody() As String
```

```
Dim tmp As String = _bind.Rtf
```

```
Dim bodyStart As Integer
```

```
' Sub: Render()
```

```
' Purpose: Put the moded RTF back together
```

```
,
```

```
Private Function Render() As String
```

```
Dim tmp As String = reBuildBody()
```

```
Return reBuildHeader() & "\viewkind4 " & reBuildBody()
```

```
End Function
```

```
' Sub: reBuildHeader()
```

```
' Purpose: Using the colortable supplied by readRTFColor() rebuilds  
the
```

```
' headers after all you might have added a color!
```

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```
'  
Private Function reBuildHeader() As String  
Dim thisColor As Integer  
Dim DocHead As String  
  
DocHead = "{\rtf1\ansi\ansicpg1252\deff0\deflang1033"  
DocHead &= "{\colortbl ;"  
  
For Each thisColor In rtfColors  
Dim setColor As Color = Color.FromArgb(thisColor)  
DocHead &= "\red" & setColor.R  
DocHead &= "\green" & setColor.G  
DocHead &= "\blue" & setColor.B & ";"  
If RTFDebug Then Console.WriteLine("Adding Header Color")  
Next  
  
DocHead &= "}"-----  
' Sub: Render()  
' Purpose: Put the moded RTF back together  
'  
Private Function Render() As String  
Dim tmp As String = reBuildBody()  
Return reBuildHeader() & "\viewkind4 " & reBuildBody()  
End Function  
  
-----  
' Sub: reBuildHeader()  
0A Dim tmp As String = rtfBody(counter)  
If tmp = "" Then tmp = " "  
DocBody &= tmp & "\par" & vbCrLf  
Next  
  
If RTFDebug Then Console.WriteLine("RTF body lines rendered: " &  
UBound(rtfBody))  
Return DocBody  
End Function  
  
-----  
' Sub: ChangeColor  
' Purpose: Change the color of an element document wide. Basicly  
this changes  
' the info in the color table used to build the headers.  
' Note: This changes a color to a color  
'  
Private Sub changeColor(ByVal srcColor As Color, ByVal toColor As  
Color)  
Dim index = rtfColors.exists(srcColor.ToArgb)  
  
If index <> -1 Then  
rtfColors.item(index) = toColor.ToArgb  
End If
```

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End Sub

```
'-----  
' Sub: ChangeColor  
' Purpose: Change the color of an element document wide. Basicly  
this changes  
' the info in the color table used to build the headers.  
' Note: This changes a index value of a color to a color  
'  
Dim tmp As String = rtfBody(counter)  
If tmp = "" Then tmp = " "  
DocBody &= tmp & "\par" & vbCrLf  
Next  
  
If RTFDebug Then Console.WriteLine("RTF body lines rendered: " &  
UBound(rtfBody))  
Return DocBody  
End Function  
  
'-----  
' Sub: ChangeColor  
h  
Dim Style As tDict  
Dim rxOptions As New System.Text.RegularExpressions.RegexOptions  
Dim colorindex As Integer  
  
rtfBody(line) = txtBody(line)  
  
For Each Style In rtfSyntax  
If Style.ignoreCase Then rxOptions =  
System.Text.RegularExpressions.RegexOptions.IgnoreCase Else rxOptions =  
System.Text.RegularExpressions.RegexOptions.None  
  
rtfColors.add(Style.color)  
colorindex = rtfColors.exists(Style.color)  
  
If Style.isRegex Then  
Dim Matches As  
System.Text.RegularExpressions.MatchCollection =  
System.Text.RegularExpressions.Regex.Matches(rtfBody(line), Style.pattern,  
rxOptions)  
Dim count As Integer = 0  
  
For Each thisMatch In Matches  
Dim oldWord =  
rtfBody(line).Substring(thisMatch.Index + count, thisMatch.Length)  
Dim newString = "\cf" & colorindex + 1 & oldWord &  
"\cf0 "  
  
rtfBody(line) = rtfBody(line).Remove(thisMatch.Index  
+ count, thisMatch.Length)
```

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```
rtfBody(line) = rtfBody(line).Insert(thisMatch.Index
+ count, newString)
If RTFDebug Then Console.WriteLine("Regex pattern
match: " & Style.pattern)
count += 9
Next
Else
Dim Matches As
System.Text.RegularExpressions.MatchCollection =
System.Text.RegularExpressions.Regex.Matches(rtfBody(line), "\b" &
Style.pattern & "\b", rxOptions)
Dim count As Integer = 0

For Each thisMatch In Matches
Dim oldWord =
rtfBody(line).Substring(thisMatch.Index + count, thisMatch.Length)
Dim newString = "\cf" & colorindex + 1 & oldWord &
"\cf0 "

rtfBody(line) = rtfBody(line).Remove(thisMatch.Index
+ count, thisMatch.Length)
rtfBody(line) = rtfBody(line).Insert(thisMatch.Index
+ count, newString)
count += 9
If RTFDebug Then Console.WriteLine("Pattern match: "
& Style.pattern)
Next
End If
Next

End Function

Public Function colorDocument()
Dim counter As Integer
update(Me, New System.EventArgs)

For counter = 0 To UBound(txtBody)
applyColor(counter)
Next

_bind.Rtf = Render()
End Function
End Class

End Class
```

Just add this code to your form:

Code:
Friend WithEvents rtbwrapper as new crtbwrapper

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And then

Code:

```
with rtbwrapper
..bind(Name of rtb)
..rtfsyntax.add("\bhello\b",true,true,color.blue.toargb)
'add more syntax
end with
```

"Brad Wood" <dude@xxxxxxxx> schrieb im Newsbeitrag
news:%23ejXt5PNHHA.536@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Problem:

Selecting / changing color of text in a subclassed RichTextBox on
TextChanged.

- Native suppress redrawing with WM_SETREDRAW
- Make selections, set colors
- Set position back to where user was using Select()
- Unsuppress redrawing
- Call Refresh()

All works fine except the text always scrolls such that the line selected
(the line the user is modifying) jumps to the top.

Seems I've read and tried everything:

- Suppress native windows scroll messages (WM_VSCROLL and WM_HSCROLL).
- Getting/Resetting scroll position using Get/SetScrollPos (GetScrollPos
returns 0 which indicates failure but last windows message is
inconsistent - sometimes "the operation completed successfully").
- Setting HideSelection to true (seemed to help others with similar
issues).

Is there no way to make this work?