

</Grid>
</Border>

</Trigger>

</Trigger>

</Trigger>

</ControlTemplate>

</ControlTemplate.Triggers>

<Trigger Property="IsEnabled" Value="false":

<Trigger Property="IsPressed" Value="true">
 <Setter TargetName="ButtonBorder"</pre>

<Setter TargetName="ButtonBorder'

<Setter TargetName="ButtonPath"</pre>

<Setter Property="Visibility" Value="Collapsed"/>

Property="Background"
Value="{StaticResource

Property="BorderBrush" Value="{StaticResource

Property="Margin" Value="2.5,2.5,1.5,1.5" />

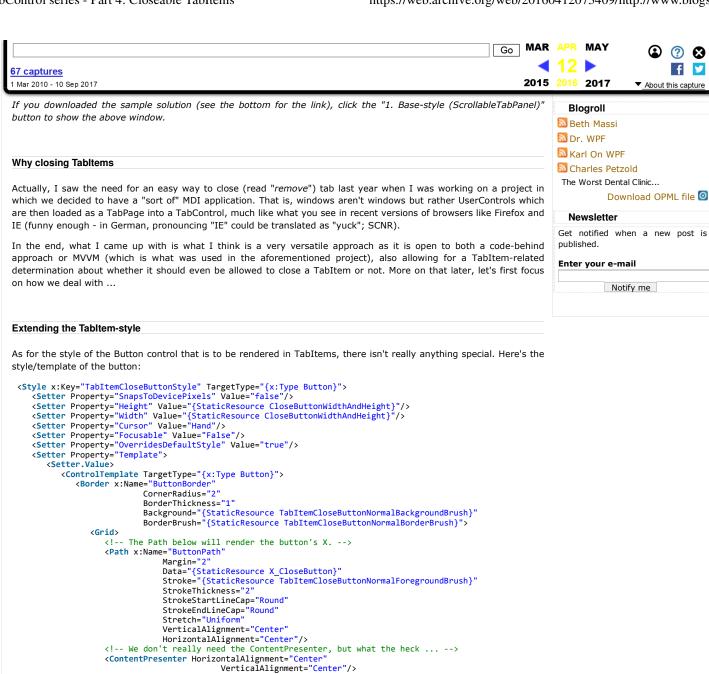
TabItemCloseButtonHoverBackgroundBrush}" />

TabItemCloseButtonHoverForegroundBrush}"/>

TabItemCloseButtonPressedBackgroundBrush}" />

TabItemCloseButtonPressedBorderBrush}" />

TablitemCloseButtonPressedForegroundBrush}"/>



- The style includes a Trigger that is applied when the button is down/pressed; here, a Margin shifts the button's content down and to the right. To only have a slight change (a shift by 1px would be to drastic), the Margin is incremented by 0.5 for top/left and decremented by 0.5 for bottom/right. To make this work, SnapToDevicePixels is explicitly set to False in the style. While this setter isn't required (SnapToDevicePixels is False by default), I prefer to explicitly point this out.
- The button's "image" is, again (see the previous parts), a Path. In this case, it's really only two lines plus round start-/end-caps (the latter being defined in the Path, of course):

```
<Geometry x:Key="X_CloseButton">M0,0 L10,10 M0,10 L10,0</Geometry>
```

To actually integrate this button into the TabItem's ControlTemplate only takes a few minor changes. Here's the part of the template that contains the amendments:

```
<Border Name="Border"
         Background="{StaticResource TabItem_BackgroundBrush_Unselected}"
BorderBrush="{StaticResource TabItem_BorderBrush_Selected}"
Margin="{StaticResource TabItemMargin_Base}"
          BorderThickness="2,1,1,0"
          CornerRadius="3,3,0,0">
    <Grid>
       <Grid.ColumnDefinitions>
           <!-- Text / TabItem's Caption -->
           <ColumnDefinition/>
            <!-- Close button -->
           <ColumnDefinition/>
       </Grid.ColumnDefinitions>
        <!-- This is where the Content of the TabItem will be rendered. -->
       HorizontalAlignment="Center'
                              ContentSource="Header"
Margin="7,2,12,2"
       RecognizesAccessKey="True"/>
<Button x:Name="cmdTabItemCloseButton"</pre>
                 Style="{StaticResource TabItemCloseButtonStyle}"
Command="{Binding Path=Content.DataContext.CloseCommand}"
CommandParameter="{Binding
                 RelativeSource={RelativeSource FindAncestor,
                  AncestorType={x:Type TabItem}}}'
                  Grid.Column="1
                 Margin="-7,5,7,5"/>
    </Grid>
</Border>
```

So, all we really do in the above is to add another ColumnDefinition to the (already existing) Grid control, placing the button into the second column. This doesn't influence i.e. the TabItemMenu, where the textual content is shown, as that is refering to the ContentPresenter's content. The only thing noteable here is the definition of the button's margin, which sort of "replaces" the right margin of the TabItem by applying a negative left margin - this helps to consider the fact that the button may not be visible at all times, in which case the TabItem's Margin should remain as it was before we added the button.

Now, showing a button wasn't much work, but we're talking about a ControlTemplate for the TabControl, so how can we react to a button-click ..?

Enter ICommand

The close-button itself is not worth much if there isn't an easy, versatile and independent way to react to clicks. The "WPF-way" of dealing this is, of course, to use the ICommand interface. For the sake of simplicity and since there's already plenty of tutorials on the web, I won't dig into the specifics of ICommand here. Instead, I've taken over the RelayCommand class, an approach that Josh Smith's introduced in his article on MVVM, published in the MSDN magazine and dropped it into the code behind of the TabControl window. The fact that there's now code-behind in the window is actually neglectable - it could as well be part of a ViewModel instead. This is because, if you look at the binding in the XAML above, the Command associated with the Button control is targetting the DataContext rather than any code-behind, and it also passes a reference to the parent TabItem to the Command - this is all we need in order to utilize the command. Here's the complete code-behind of the window (for the VB-version, please refer to the sample solution - see the bottom of this article for the download link):

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67 captures
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1 Mar 2010 - 10 Sep 2017

    About this capture

       private Utils.RelayCommand _cmdCloseCommand;
       /// Returns a command that closes a TabItem.
       public ICommand CloseCommand
              if (_cmdCloseCommand == null)
                  cmdCloseCommand = new Utils.RelayCommand(
                     param => this.CloseTab_Execute(param),
                      param => this.CloseTab_CanExecute(param)
              return _cmdCloseCommand;
       }
            Called when the command is to be executed.
       ///
            <param name="parm">
            The TabItem in which the Close-button was clicked.
       private void CloseTab_Execute(object parm)
           TabItem ti = parm as TabItem;
           if (ti != null)
              tc.Items.Remove(parm);
            Called when the availability of the Close command needs to be determined.
       ///
            <param name="parm">
       /// The TabItem for which to determine the availability of the Close-command.
       private bool CloseTab_CanExecute(object parm)
           //For the sample, the closing of TabItems will only be //unavailable for disabled TabItems and the very first TabItem.
          TabItem ti = parm as TabItem;
if (ti != null && ti != tc.Items[0])
              //We have a valid reference to a TabItem, so return
              //true if the TabItem is enabled.
              return ti.IsEnabled;
           //If no reference to a TabItem could be obtained, the command
           //cannot be executed
           return false;
       }
       #endregion
    }
}
For the sample, the only two conditions that would prevent the Command from being executed (resulting in a disabled
```

For the sample, the only two conditions that would prevent the Command from being executed (resulting in a disabled button) refer to disabled TabItems and the very first one (this way there'll always be at least one enabled item).

Note that, if you were using the MVVM pattern, the CloseCommand-region would be part of the ViewModel and the window's DataContext (see the constructor) would rather point to that ViewModel.

The last word

This concludes the last part of the TabControl series. This series has been way longer than I originally thought, but I had enough fun with it to play around with a couple of things that weren't part of the original plan ... 9

As always, comments are appreciated. Let me know if you have any questions or suggestions for improving the control.

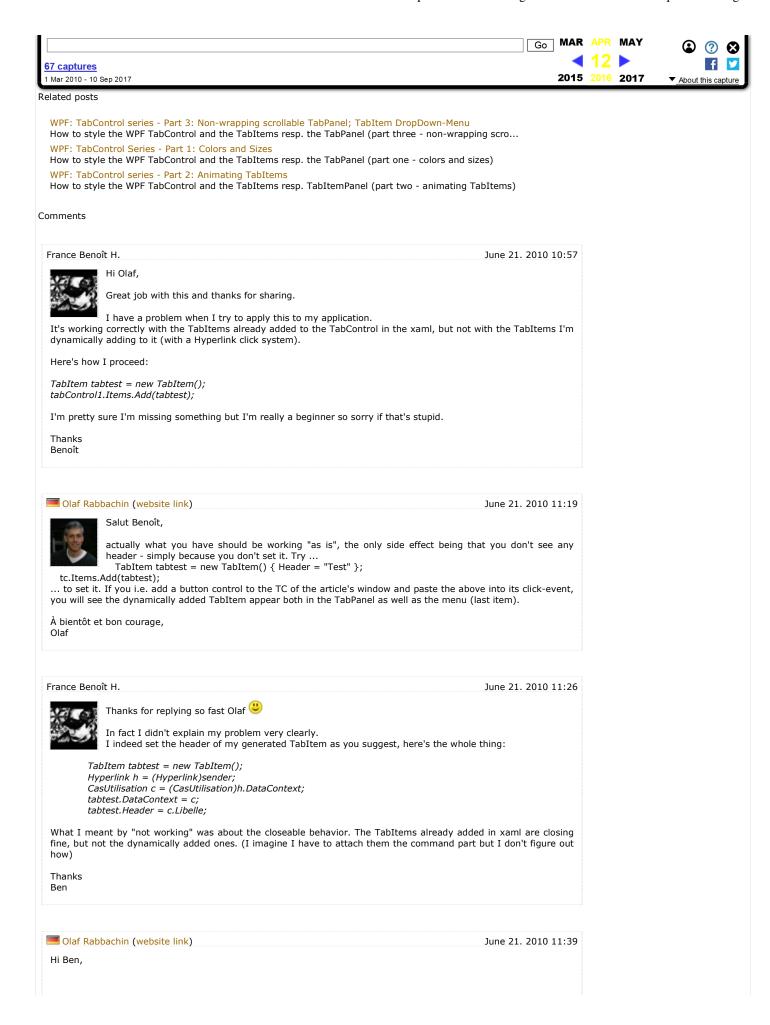
The sample solution

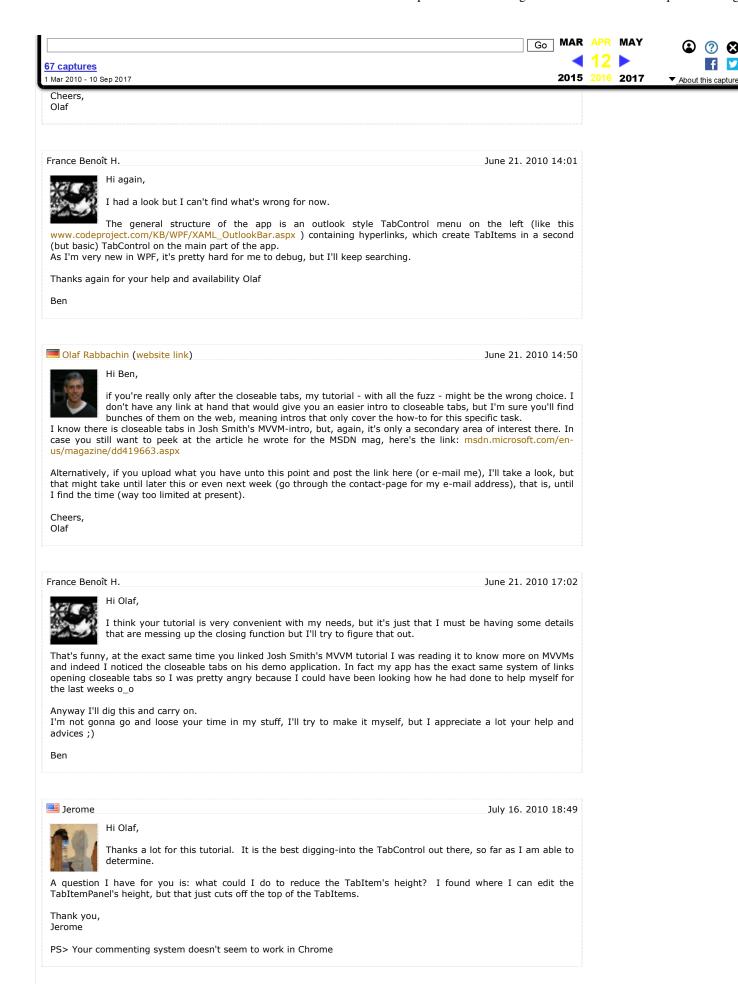
I've created a sample solution that contains everything discussed here, containing one project for each the C# and the VB versions

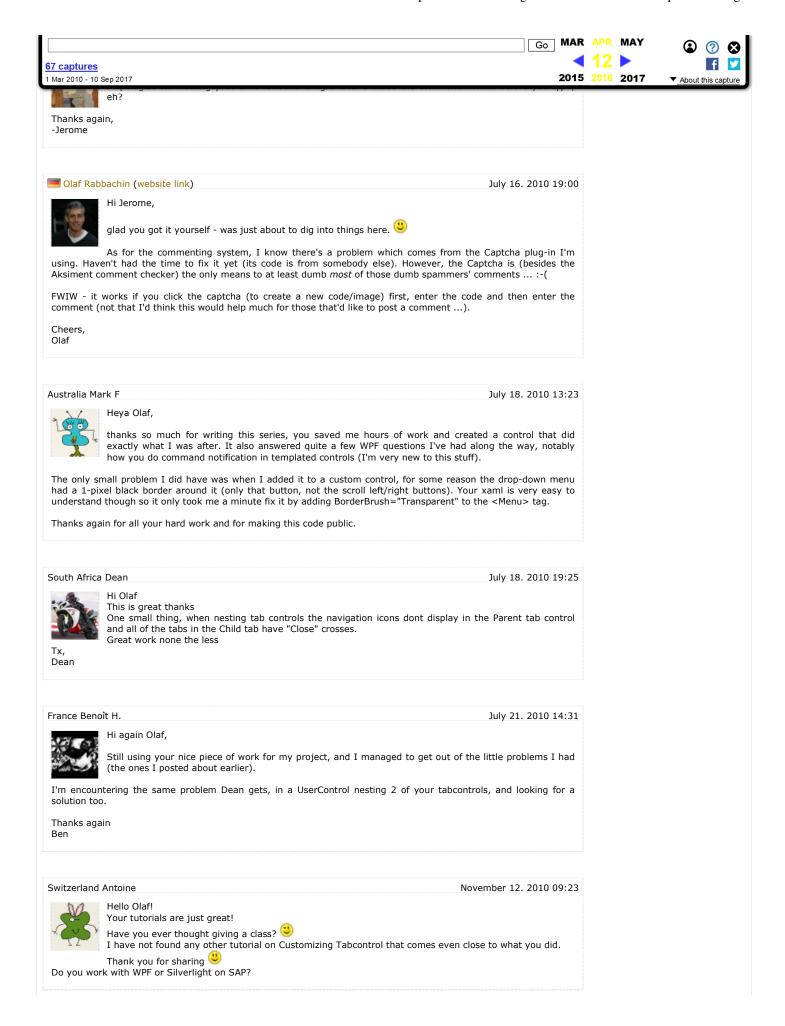
Download: TabControlStyle - Part Four.zip (76.83 kb)

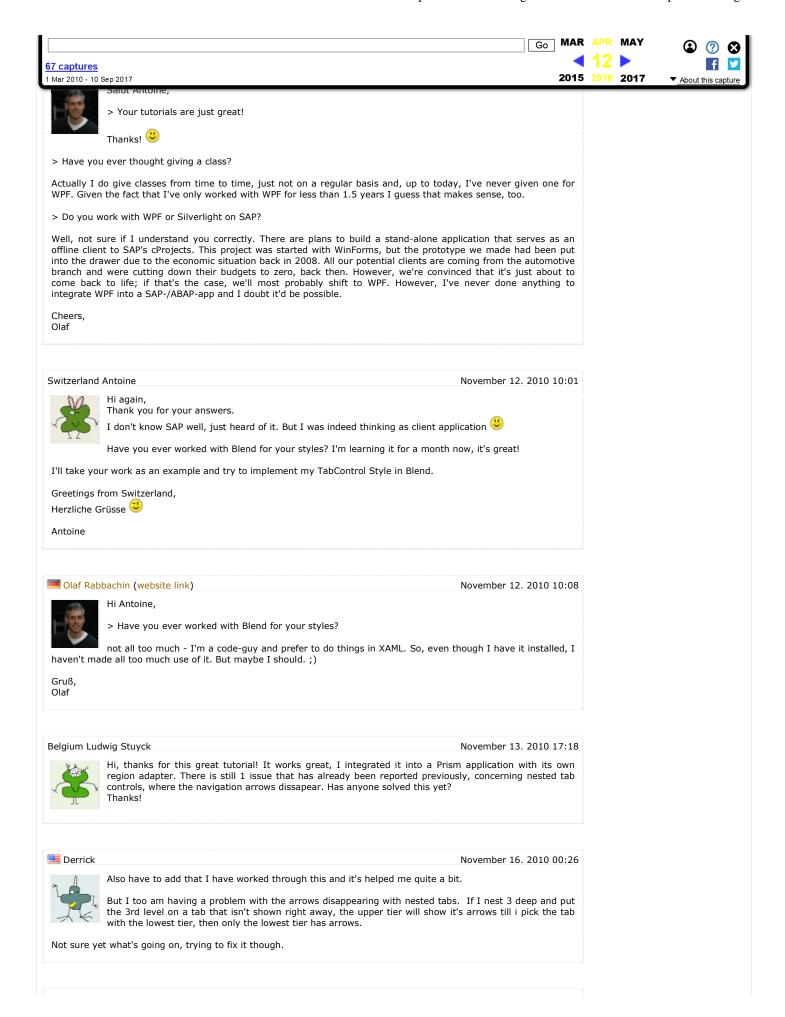
Location: SinglePost

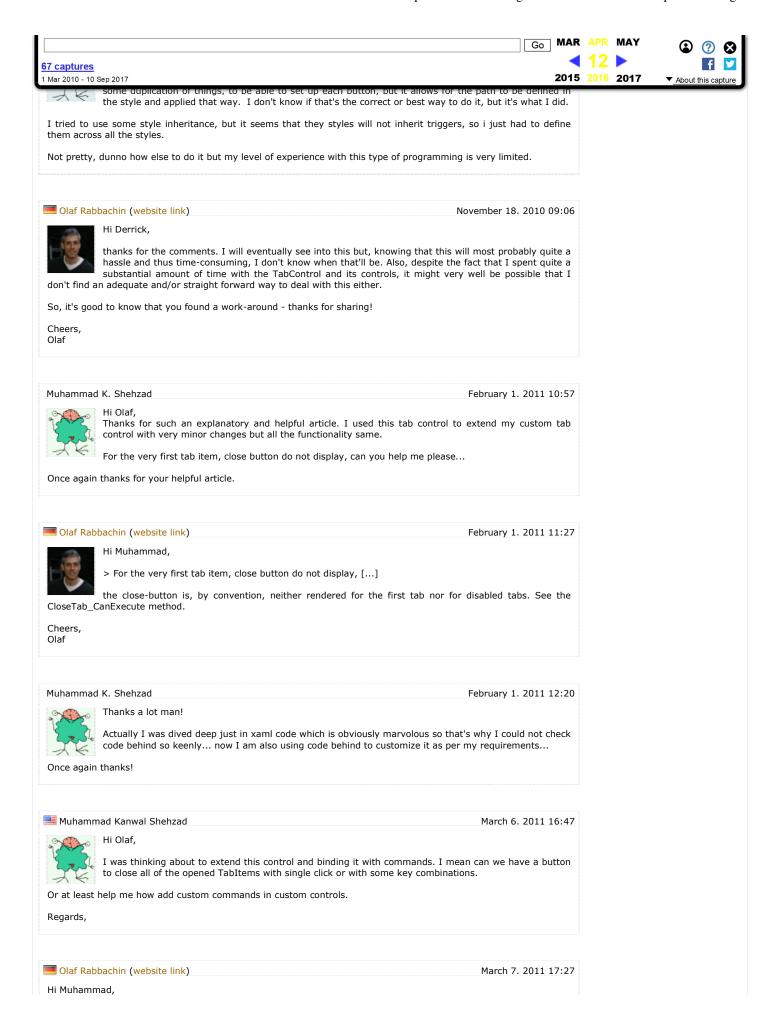
Currently rated 4.8 by 16 people

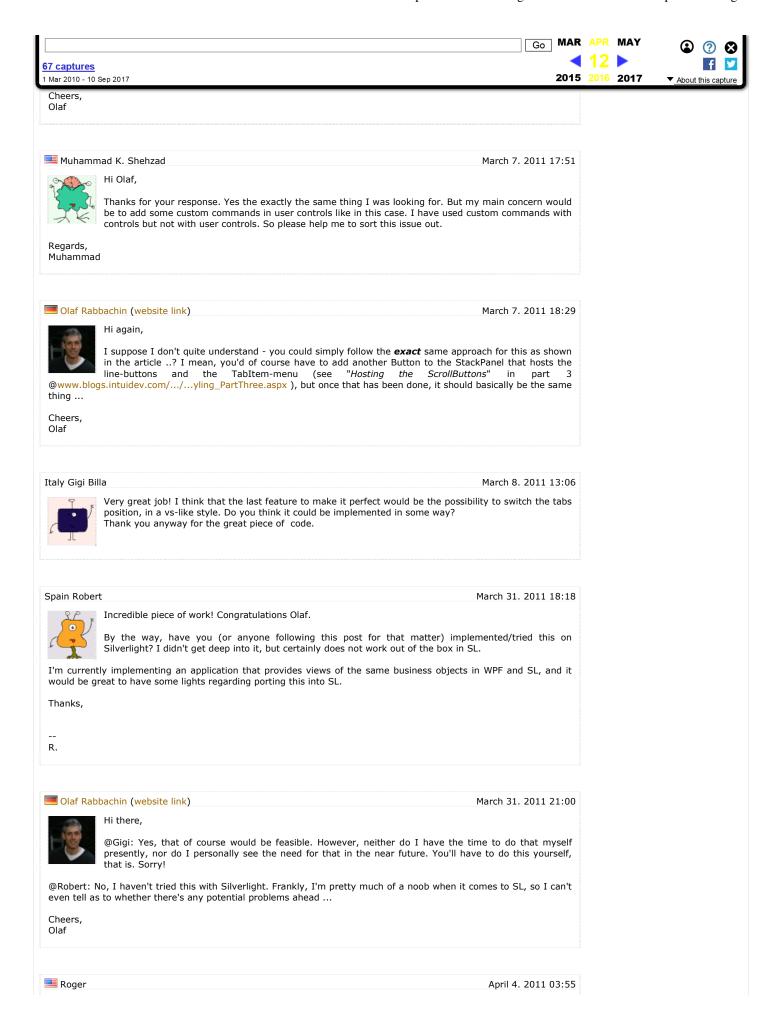




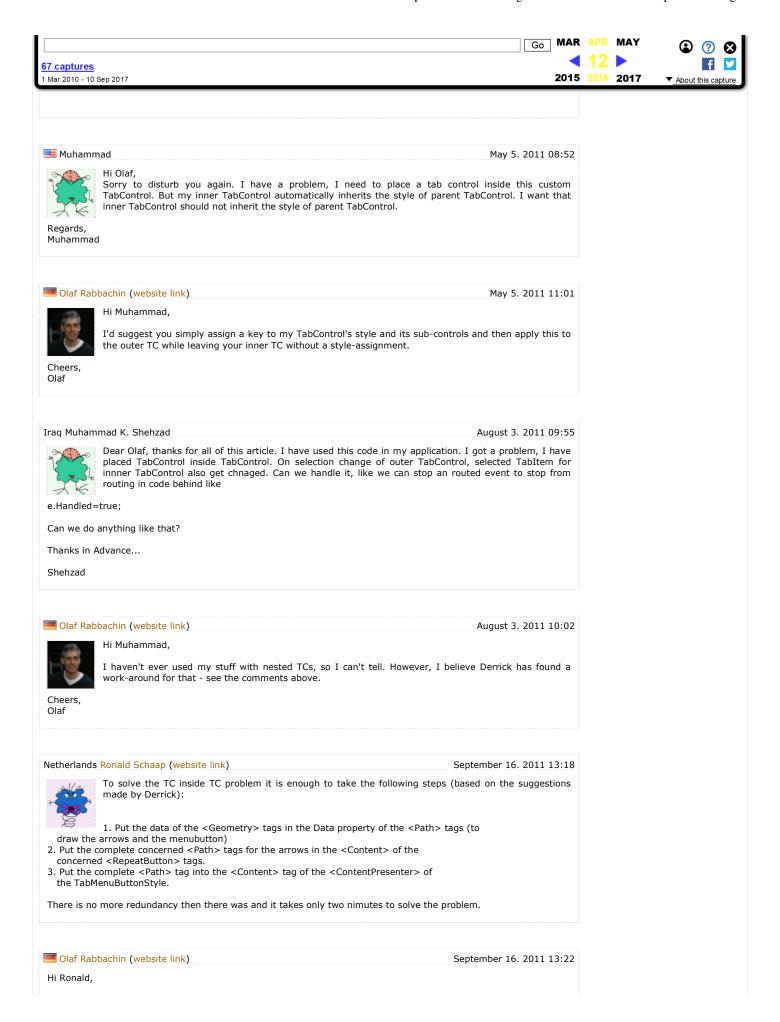












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67 captures
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1 Mar 2010 - 10 Sep 2017

    About this capture

                                                                                              October 8. 2011 03:30
Niels Jensen
             Thank you so much to Olaf for sharing. Great work!
             Also, thank you very much to Derrick and Ronald for fixing the nested tab control problem.
             It took me a bit longer than two minutes, \stackrel{ullet}{\smile}, to put in the fix suggested by Ronald, so I am listing it
 here for others to save time. I only moved the three path tags. I don't think it was necessary to change the static
 resources in the data tags.
 Left button:
 <RepeatButton.Content>
    <Path Margin="4,3"
      Data="{StaticResource ArrowLeft}"
      Stroke="{StaticResource LineButtonBrush}"
      Fill="{StaticResource LineButtonBrush}"
      Stretch="Fill"
      VerticalAlignment="Center"
      HorizontalAlignment="Center"/>
 </RepeatButton.Content>
 Right button:
 <RepeatButton.Content>
   <Path Margin="4,3"
Data="{StaticResource ArrowRight}"</pre>
      Stroke="{StaticResource LineButtonBrush}"
      Fill="{StaticResource LineButtonBrush}"
      Stretch="Fill"
      VerticalAlignment="Center"
      HorizontalAlignment="Center"/>
 </RepeatButton.Content>
 Tab menu button:
 <ContentPresenter.Content>
   <Path Margin="2"
      Data="{StaticResource TabMenuButton}"
      Stroke="{StaticResource LineButtonBrush}"
      Fill="{StaticResource TabMenuButtonBrush}"
      Stretch="Fill"
      VerticalAlignment="Center"
      HorizontalAlignment="Center"/>
 </ContentPresenter.Content>
Thanks again,
Niels
Niels Jensen
                                                                                             October 30. 2011 02:38
             I just spent a little while searching for the cause of the tab selection problem, when you have more than
             one tab control in your app, and I believe I found it.
    Find the following border definition under the scroll viewer of the tab control style:
 <Border BorderThickness="1"
      Border Brush = "\{Static Resource\ Tab Page\_Inner Border Brush Bright\}"
      CornerRadius="2"
      Margin="0"
      Padding="2,2,3,3">
   This is where the Content of the selected TabPage
   will be rendered.
   <ContentPresenter x:Name="PART_SelectedContentHost"</pre>
                ContentSource="SelectedContent"
                Margin="0"/>
 </Border>
Simply delete the bold and underlined name property above, and the tab selection in one tab control no longer
```

