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CMDITabs

By **Christian Rodemeyer**

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A CTabCtrl control to switch comfortably between MDI views

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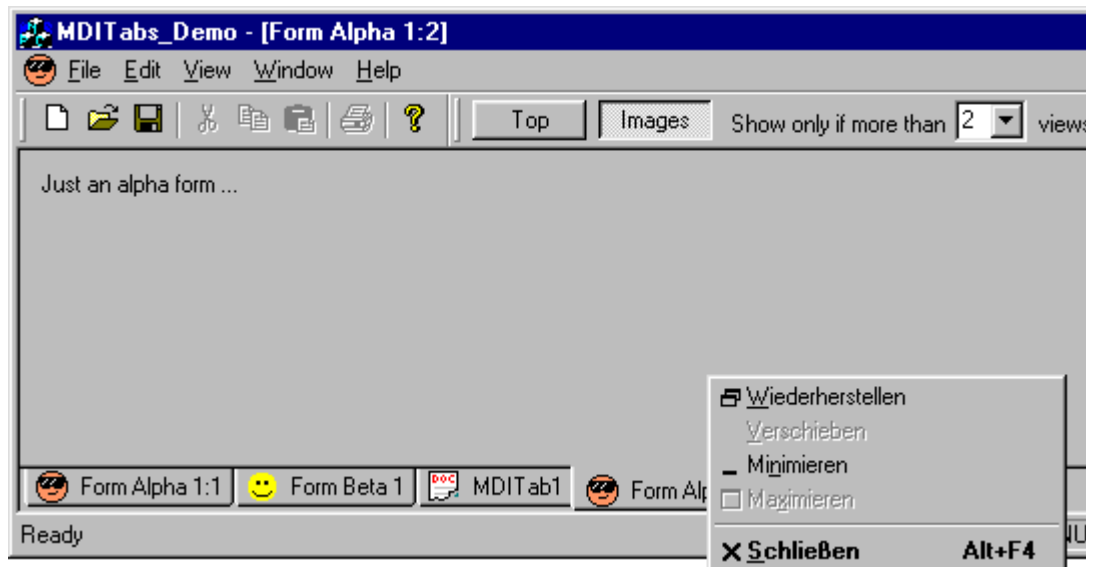
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Overview

A feature I always missed in most MDI products (like Microsoft Word or Microsoft FrontPage) was a simple means to see which views/docs are currently open and easily between them. Using the 'Window' menu can be quite cumbersome. I wanted something like [Oz Solomonovich's Window Tabs Add-In](#). In my current project I do an MDI application with several different views and I don't want my users to be as frustrated as me about this topic. So I decided to make my own CTabCtrl demo. As it turns out, it was very easy to do so.

CMDITabs is a little control that adds 'tabs' to an MFC MDI application with which you can switch between views. The appearance can also be customized to display thumbnails or icons. This is useful if you have different types of views, otherwise I would suggest turning the icons off. The tabs can be placed at the bottom or at the top of the views. The control is smart enough to reflect all changes in the views (open, close, new, change title, etc.).



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After writing this article I discovered, that there is a [similar solution](#) for tabbing MDI views in the [doc/view](#) section of Code Project. First I was a little bit frustrated thinking I had reinvented the wheel again ;-). But on a closer look I liked my MDI better because of three reasons:

1. it looks nicer and hasn't got a space wasting double border frame
2. it is more stable due to its simpler implementation ;-) (read the bug list in comments)
3. it is smaller, you have only one class to use, not three

So I sent this article into the Code Project.

How to use

Using `CMDITabs` in your code is extremely simple. Add `MDITabs.h` and `MDITabs.cpp` to your project. In your `CMainFrame` class add a new member `m_wndMDITabs` of class `CMDITabs` (don't forget to include 'MDITabs.h'). Insert `m_mdiTabs.Create(this)` in `CMainFrame::OnCreate()` after all toolbars and status bars have been set up. It is important for proper layout that the MDI tabctrl is created last. To synchronize view operations with the MDI Tabs, it is necessary to override `OnUpdateFrameTitle` of the base class `CMDIFrameWnd` of our `CMainFrame` class. After calling the base class implementation you have to call the `Update()` function of `m_wndMDITabs`.

```
// MainFrm.h
class CMainFrame : public CMDIFrameWnd
{
    [...]
    CMDITabs m_wndMDITabs;

    virtual void OnUpdateFrameTitle(BOOL bAddToTitle);
    [...]
};

// MainFrm.cpp
void CMainFrame::OnUpdateFrameTitle(BOOL bAddToTitle)
{
    CMDIFrameWnd::OnUpdateFrameTitle(bAddToTitle);
    m_wndMDITabs.Update(); // sync the mditabctrl with all views
}
```

That's it! Build and start your application, open some views and enjoy switching them ;-)

Other features

- Double clicking on a tab maximizes the view.
- Right clicking on a tab displays the view's system menu. You can change it by simply changing the views system menu, if you like (see demo project `CChildFrame::OnCreate()`). If you need to supply a total different (independent) menu, your view can answer the `WM_GETTABSYSMENU` message.
- The tabs are hidden when there are less than one (two) view(s) open. Use `SetMinViews()` or the style `MT_HIDEWLT2VIEWS` to change this behaviour.
- In the `Create()` function you can supply some styles to customize the appearance of the control:

MT_BOTTOM	tabs appear at bottom
MT_TOP	tabs appear at top
MT_IMAGES	use view icons as images
MT_HIDEWLT2VIEWS	hide tabs when there are less than two views (default)

```
m_wndMDITabs.Create(this, MT_TOP|MT_IMAGES|MT_HIDEWLT2VIEWS);
```

Internals

Layout

The private MFC message `WM_SIZEPARENT` provides a way to attach windows to the client area of a doc/view app. `CMDITabs` implements `OnSizeParent` to attach its bottom to the bottom of the MDI client area. If you want another layout you need to change this function. The Z-order of the MDIClient siblings is important for the layout algorithm. Siblings are asked to position themselves in Z-order (search for `WM_SIZEPARENT` to get more info). That's the reason why `CMDITabs` must be created after all other windows and status bars have been done in `CMainFrame::OnCreate()`. Otherwise the status bar would appear above the tabs, destroying proper layout.

Synchronizing Views and Tabs

The tab control must always reflect the list of views. Instead of monitoring all possible view changing events (close, open, new, changing titles/icons) I hooked into the `CMainFrame::OnUpdateFrameTitle()` function. I discovered, that this function is called when something view-related happens. Here you have to call `CMDITabs::Update()` in response completely rebuilds its tab list. It does so by querying the child windows of the MDIClient window, circumventing the complex doc/view organization of MFC. This is a simpler the solution the robuster it works!

About Christian Rodemeyer

will be supplied soon ...

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Hi,

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thanks

-- narm

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17:51 28 May '03

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Kannan Ramanathan

2:26 18 Nov '02 **Is there any way not to let to close the MDI tab by pressing Ctrl+F4**

PL

0:38 23 Oct '02 **Flicking problem**

Anonymous

3:58 17 Oct '02

Re: Flicking problem

kimdaejeong

14:14 28 Apr '03

Title sync problem

Obliterator

15:44 14 Aug '02

Re: Title sync problem

Anonymous

16:12 15 Aug '02

Re: Title sync problem

Obliterator

6:38 16 Aug '02

Re: Title sync problem *FIX*

Albert van Peppen

8:32 11 Dec '02

Re: Title sync problem *FIX*


Obliterator

10:15 11 Dec '02

Re: Title sync problem *FIX*

Albert van Peppen

10:26 11 Dec '02

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