
Subject: Howto create control-collection -control? [SOLVED -good example]

Posted by [wilho](#) on Tue, 07 Mar 2006 21:45:45 GMT

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Hi!

Edit: this was a way too hasty question now slowly becoming tutorial it seems I'm creating simple control by combining splitter, button and user defined control. Couple of these SplitterButtons could create something like there's in outlook's left pane. So here's what I got so far:

```
class SplitterButton : public ParentCtrl{
    Splitter splitter;
    Button button;
    typedef SplitterButton CLASSNAME;
public:
    SplitterButton();
    void Vert(Ctrl&);
    void Toggle();
    void SplitterButton::SetSplitPos(int);
};
SplitterButton::SplitterButton(){
    button <=<= THISBACK(Toggle);
    Add(splitter);
}
void SplitterButton::Vert(Ctrl& ctrl){
    splitter.Vert(ctrl, button);
}
void SplitterButton::Toggle(){
    splitter.Zoom(splitter.GetZoom() == 1 ? -1 : 1);
    //todo:resize code
}
void SplitterButton::SetSplitPos(int newpos){
    splitter.SetPos(newpos);
}
```

Next thing is to create code for the control to resize itself...I suppose that there's no way link controls position into another one, so I have to move other controls out of the way and back by hand?

If you think this is wrong approach or here's something wrong, feel free to open up. I'll be back.

Subject: Re: Howto create control-collection -control?

Posted by [mirek](#) on Tue, 07 Mar 2006 22:32:34 GMT

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Quote:

Next thing is to create code for the control to resize itself...I suppose that there's no way link controls position into another one, so I have to move other controls out of the way and back by hand?

Sometimes you can use regular layout for compositeCtrls (it is not limited for dialogs only). Of course, sometimes you have to deal with it with your code (which usually is quite easy too).

Mirek

Subject: Re: Howto create control-collection -control?

Posted by [wilho](#) on Sat, 11 Mar 2006 17:09:07 GMT

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Ahh, sweet weekend - time for hobby-coding. I had to play with MFC a bit during a week and I must say it's pleasure get back with upp again

This is how I solved the thing above:

```
class dummy{};
class SButton : public Button{
    typedef SButton CLASSNAME;
    Splitter* container;
    Ctrl* slaveCtrl;
    bool visible;

public:
    void Toggle(){
        if (visible){
            container->RemoveChild(slaveCtrl);
            container->RefreshLayout();
        }
        else{
            *container << *slaveCtrl;
            container->RefreshLayout();
        }
        visible = visible == true ? false:true;
    }
    SButton(Splitter* splitter, Ctrl* slave ){
        container = splitter;
        slaveCtrl = slave;
        visible = false;
        *this <=< THISBACK(Toggle);
    }
};
```

```

#define LAYOUTFILE <localizer/empty.lay>
#include <CtrlCore/lay.h>
class SButtons : public WithEmptyLayout<ParentCtrl>, public dummy{

    static const int BTN_SPACE = 25;
    Vector<SButton*> buttons;
    int btnIndx;
    Splitter vert;
    ParentCtrl container;
public:
    SButtons();
    ~SButtons();
    void Vert(Ctrl&);
};
SButtons::SButtons(){
    CtrlLayout(*this);
    Add(container);
    vert.Vert();
    Add(vert);
}
SButtons::~SButtons(){
    Vector<SButton*>::Iterator bpi = buttons.Begin();
    for (;bpi < buttons.End();bpi++) {
        delete *bpi;
    }
}
void SButtons::Vert(Ctrl& ctrl){
    SButton* button = new SButton(&vert, &ctrl);
    Add(*button);

    button->HSizePosZ(0, 0).BottomPosZ(BTN_SPACE * btnIndx++, BTN_SPACE -2);
    vert.HSizePosZ(0, 0).VSizePosZ(0, BTN_SPACE * btnIndx);
    buttons.Add(button);
}

```

Couple of questions though:

- 1) How in the hell my buttons won't get visible with that derived dummy class? Doesn't make sense to me...
- 2) Is there a way to derive a class from layout without defining empty layout as above?

Subject: Re: Howto create control-collection -control?

Posted by [mirek](#) on Sat, 11 Mar 2006 17:43:17 GMT

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Well, a couple of comments first:

```
Vector<SButton*> buttons;  
.....  
new SButton(&vert, &ctrl);
```

This is "non-U++" way - forces you to take care of deleting in destructor.

U++ way is to:

- use member function in SButton instead of constructor
- use Array<SButton>
- not use pointers here
- (and, for the record, use indexes instead of iterators....)

What is "dummy" class for?

Why Empty layout?

To me it seems like you could simply derive from ParentCtrl...

(also: visible = !visible

Now, I was not sure what exactly is the goal, until I run (after long time) Outlook express. Well, I am afraid that the solution will have to be a bit different - what you do here has problem with ordering of those subpanes.

I guess the right solution should be single class like

```
class ExpressPane : public Ctrl {  
    Array<Button> closer;  
    Vector<Ctrl *> slave;  
    Splitter    splitter;  
  
    void CloseButton();  
    void Rearrange();  
public:  
    void Add(const char *text, Ctrl& slave);  
};
```

The important part is that Rearrange should reset the splitter and add all subpanes again. And both Add and CloseButton should call Rearrange....

Mirek

Subject: Re: Howto create control-collection -control?
Posted by [wilho](#) on Sat, 11 Mar 2006 18:33:23 GMT
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Thanks for the tips. I'll have some ultimizing to do.

luzr wrote on Sat, 11 March 2006 12:43
Well, a What is "dummy" class for?

It shouldn't change a thing shouldn't it? But anyway, if I removed it, the toggle buttons just didn't appear and I don't know why... I made new separate cpp/h -files for the classes, derived SButtons class from ParentCtrl as you suggested, and now it works fine without it. And please, don't think I've lost my marbles, I retested this couple of times

luzr wrote on Sat, 11 March 2006 12:43
Why Empty layout?

I bet I once had a good reason for this...

luzr wrote on Sat, 11 March 2006 12:43Well, a What is
The important part is that Rearrange should reset the splitter and add all subpanes again. And both Add and CloseButton should call Rearrange....

I was pondering if I'm going to do this or not, I will if this seems messy in actual context.

Subject: Re: Howto create control-collection -control?
Posted by [mirek](#) on Sat, 11 Mar 2006 19:39:02 GMT
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Quote:

luzr wrote on Sat, 11 March 2006 12:43Well, a What is
The important part is that Rearrange should reset the splitter and add all subpanes again. And both Add and CloseButton should call Rearrange....

I was pondering if I'm going to do this or not, I will if this seems messy in actual context.
[/quote]

Do not hesitate, it is the simplest and cleanest thing to do...

Mirek

Subject: Re: Howto create control-collection -control?
Posted by [wilho](#) on Sun, 12 Mar 2006 10:25:00 GMT
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OK, you convinced me.

```

class ExpressPane : public Ctrl {
    struct SlaveControl {
        bool isInSplitter;
        Ctrl* slave;
    };
    Array<Button> closer;
    Array<SlaveControl> slaves;
    Splitter splitter;

    static const int BTN_SPACE = 22;
    typedef ExpressPane CLASSNAME;

    int btnIndx;
    void Toggle(int);
public:
    void Add(const char *text, Ctrl& slave);
    ExpressPane();
};

ExpressPane::ExpressPane(){
    Ctrl::Add(splitter);
    splitter.Vert();
}
void ExpressPane::Toggle(int indx){
    slaves[indx].isInSplitter = slaves[indx].isInSplitter == true ? false:true;

    for(int loopI=slaves.GetCount()-1; loopI>-1; loopI--){
        splitter.RemoveChild( slaves[loopI].slave );
        if (slaves[loopI].isInSplitter == true){
            splitter << *slaves[loopI].slave;
        }
    }
    splitter.RefreshLayout();
}
void ExpressPane::Add(const char *text, Ctrl& slave){

    Button* button = new Button;
    Callback argCB = callback1(this,Toggle, btnIndx++);
    *button <=< argCB;
    button->SetLabel(text);
    button->HSizePosZ(0, 0).BottomPosZ(BTN_SPACE * (btnIndx-1), BTN_SPACE -2);
    splitter.HSizePosZ(0, 0).VSizePosZ(0, BTN_SPACE * btnIndx);
    Ctrl::Add(*button);
    closer.Add(button);

    SlaveControl slvCtrl;

```

```
slvCtrl.isInSplitter = false;
slvCtrl.slave = &slave;
slaves.Add(slvCtrl);
}
```

Thank you, this has ben very...educational

Subject: Re: Howto create control-collection -control?
Posted by [mirek](#) on Sun, 12 Mar 2006 11:47:58 GMT
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```
Callback argCB = callback1(this,Toggle, btnIndx++);
```

usually, we now prefer to place

```
typedef ExpressPane CLASSNAME;
```

inside ExpressPane declaration and then

```
Callback argCB = THISBACK1(Toggle, btnIndx++);
```

(pays off if you are about to assing more callbacks.

Avoid btnIndex, use "closer.GetCount()".

Also, avoid "new":

```
Button& button = closer.Add();
```

means:

```
void ExpressPane::Add(const char *text, Ctrl& slave){
    int btnIndx = closer.GetCount();
    Button& button = closer.Add();
    button <=< THISBACK1(Toggle, btnIndx);
    button.SetLabel(text);
    button.HSizePosZ(0, 0).BottomPosZ(BTN_SPACE * (btnIndx-1), BTN_SPACE -2);
    splitter.HSizePosZ(0, 0).VSizePosZ(0, BTN_SPACE * btnIndx);
    Ctrl::Add(button);
    SlaveControl& slvCtrl = slaves.Add();
    slvCtrl.isInSplitter = false;
    slvCtrl.slave = &slave;
}
```

Even more optimal would be to place Button inside SlaveControl and manage just a single array...

(I am still missing Rearrange, just toying with the code as it is)

Mirek

Subject: Re: Howto create control-collection -control?

Posted by [wilho](#) on Mon, 13 Mar 2006 19:42:10 GMT

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Ok, here we go again:

```
class DbIClkBtn : public Button {
public:
    Callback WhenLeftDouble;
    virtual void DbIClkBtn::LeftDouble(Point, dword);
};
class ExpressPane : public Ctrl {
    struct SlaveControl {
        bool isInSplitter;
        DbIClkBtn button;
        Ctrl* slave;
    };
    Array<SlaveControl> slaves;
    Splitter splitter;
    static const int BTN_SPACE = 22;
    typedef ExpressPane CLASSNAME;
    void Toggle(int);
    void OpenOne(int);
public:
    void Add(const char *text, Ctrl& slave);
    void Rearrange();
    ExpressPane();
};
void DbIClkBtn::LeftDouble(Point p, dword) {
    if(IsReadOnly()) return;
    WhenLeftDouble();
}
ExpressPane::ExpressPane(){
    Ctrl::Add(splitter);
    splitter.Vert();
}
void ExpressPane::OpenOne(int indx){
    for(int loopl=slaves.GetCount()-1; loopl>-1; loopl--){
        slaves[loopl].isInSplitter = false;
    }
    slaves[indx].isInSplitter = true;
```

```

Rearrange();
}
void ExpressPane::Toggle(int indx){
    slaves[indx].isInSplitter = !slaves[indx].isInSplitter;
    Rearrange();
}
void ExpressPane::Rearrange(){
    for(int loopl=slaves.GetCount()-1; loopl>-1; loopl--){
        splitter.RemoveChild( slaves[loopl].slave );
        if (slaves[loopl].isInSplitter == true){
            splitter << *slaves[loopl].slave;
        }
    }
    splitter.RefreshLayout();
}
void ExpressPane::Add(const char *text, Ctrl& slave){
    SlaveControl& slvCtrl = slaves.Add();
    int btnIndx = slaves.GetCount()-1;
    slvCtrl.button <=< THISBACK1(Toggle,btnIndx);
    slvCtrl.button.WhenLeftDouble << THISBACK1(OpenOne,btnIndx);
    slvCtrl.button.SetLabel(text);
    slvCtrl.button.HSizePosZ(0, 0).BottomPosZ(BTN_SPACE * (btnIndx), BTN_SPACE -2);
    slvCtrl.isInSplitter = false;
    slvCtrl.slave = &slave;
    splitter.HSizePosZ(0, 0).VSizePosZ(0, BTN_SPACE * (btnIndx+1));
    Ctrl::Add(slvCtrl.button);
}

```

Here's rearrange and some use for it in form double-click feature. And I finally got the !visible hint

Subject: Re: Howto create control-collection -control?

Posted by [mirek](#) on Mon, 13 Mar 2006 21:04:53 GMT

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wilho wrote on Mon, 13 March 2006 14:42Ok, here we go again:

```

class DbIClckBtn : public Button {
public:
    Callback WhenLeftDouble;
    virtual void DbIClckBtn::LeftDouble(Point, dword);
};
class ExpressPane : public Ctrl {
    struct SlaveControl {
        bool isInSplitter;
        DbIClckBtn button;
        Ctrl* slave;
    };
};

```

```

Array<SlaveControl> slaves;
Splitter splitter;
static const int BTN_SPACE = 22;
typedef ExpressPane CLASSNAME;
void Toggle(int);
void OpenOne(int);
public:
void Add(const char *text, Ctrl& slave);
void Rearrange();
ExpressPane();
};
void DbtClckBtn::LeftDouble(Point p, dword) {
if(IsReadOnly()) return;
WhenLeftDouble();
}
ExpressPane::ExpressPane(){
Ctrl::Add(splitter);
splitter.Vert();
}
void ExpressPane::OpenOne(int indx){
for(int loopl=slaves.GetCount()-1; loopl>-1; loopl--){
slaves[loopl].isInSplitter = false;
}
slaves[indx].isInSplitter = true;
Rearrange();
}
void ExpressPane::Toggle(int indx){
slaves[indx].isInSplitter = !slaves[indx].isInSplitter;
Rearrange();
}
void ExpressPane::Rearrange(){
for(int loopl=slaves.GetCount()-1; loopl>-1; loopl--){
splitter.RemoveChild( slaves[loopl].slave );
if (slaves[loopl].isInSplitter == true){
splitter << *slaves[loopl].slave;
}
}
splitter.RefreshLayout();
}
void ExpressPane::Add(const char *text, Ctrl& slave){
SlaveControl& slvCtrl = slaves.Add();
int btnIndx = slaves.GetCount()-1;
slvCtrl.button <=< THISBACK1(Toggle,btnIndx);
slvCtrl.button.WhenLeftDouble << THISBACK1(OpenOne,btnIndx);
slvCtrl.button.SetLabel(text);
slvCtrl.button.HSizePosZ(0, 0).BottomPosZ(BTN_SPACE * (btnIndx), BTN_SPACE -2);
slvCtrl.isInSplitter = false;
slvCtrl.slave = &slave;

```

```
splitter.HSizePosZ(0, 0).VSizePosZ(0, BTN_SPACE * (btnIndx+1));  
Ctrl::Add(slvCtrl.button);  
}
```

Here's rearrange and some use for it in form double-click feature. And I finally got the !visible hint

Well, now this actually looks like some U++ code

Mirek

Subject: Re: Howto create control-collection -control?
Posted by [fudadmin](#) on Tue, 14 Mar 2006 17:05:29 GMT
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wilho, would you mind placing this your complete package into "Extra libraries..." -> "U++ users applications..." forum?

Subject: Re: Howto create control-collection -control?
Posted by [wilho](#) on Tue, 14 Mar 2006 18:23:54 GMT
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sure

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
Posted by [kbyte](#) on Tue, 07 Apr 2009 08:53:09 GMT
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Any simple app example to show the way how we use this new control?

Alex

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
Posted by [mrjt](#) on Tue, 07 Apr 2009 10:10:38 GMT
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kbyte wrote on Tue, 07 April 2009 09:53Any simple app example to show the way how we use this new control?

Alex
It's very easy:

```

class CtrlLibTest : public WithCtrlLibTestLayout<TopWindow> {
public:
    typedef CtrlLibTest CLASSNAME;
    WithTestLayout<ParentCtrl> c1, c2;
    ExpressPane pane;

    CtrlLibTest::CtrlLibTest()
    {
        CtrlLayout(*this, "Window title");
        Sizeable();
        CtrlLayout(c1);
        CtrlLayout(c2);
        pane.Add("Child 1", c1);
        pane.Add("Child 2", c2);
        Add(pane.SizePos());
    }
};

```

It's basically a Splitter with a set of buttons at the bottom for different Ctrl's that can be dynamically added/removed by the user. A nice concept.

My suggestions for improvement:

- Instead of having the buttons in the Splitter put them in a FrameSplitter. This will make your layout simpler and also give you the option of having the buttons on the left, right or top of the ctrl.
- The buttons would look better if you used a ButtonOption, maybe with a custom Style, and no spacing between them. This would also remove the need for the isInSplitter member.
- Inherit from ParentCtrl, not Ctrl.
- I'm not entirely convinced a Splitter is the best way here, Outlook seems to just swap the controls (only having one visible at a time).
- You may also be interested in this package, which is a different approach to a similar problem.

James

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
 Posted by [kbyte](#) on Tue, 07 Apr 2009 13:29:49 GMT
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I already tried that package your mention on the end of the message but that control fills all the client area and i am looking for one that draws only on the left side of the client area, like outlook

Alex

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
 Posted by [kbyte](#) on Tue, 07 Apr 2009 13:36:06 GMT

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When i try this control following the steps you referred i can see nothing on the main dialog

Alex

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
Posted by [mrjt](#) on Wed, 08 Apr 2009 08:52:28 GMT

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kbyte wrote on Tue, 07 April 2009 14:29I already tried that package your mention on the end of the message but that control fills all the client are and i am lookinf for one that draws only on the left side of the client are, like outlookThats because in the example the ExpanderCtrl is added with SizePos to deliberately fill up the whole wndow (since there's nothing else to see). If you want it just on the left add it with LeftPos(0, 150) or whatever.

Quote:When i try this control following the steps you referred i can see nothing on the main dialog
Sorry, my mistake. The last line should be:Add(pane.SizePos())I've updated the original post.

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
Posted by [kbyte](#) on Wed, 08 Apr 2009 09:46:25 GMT

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now it works but i have to use the both lines:

```
Add(expander.SizePos());
```

```
Add(expander.LeftPos(0, 150));
```

If i just use the

```
Add(expander.LeftPos(0, 150));
```

The control in not drawn

Thanks
Alex

Subject: Re: Howto create control-collection -control? [SOLVED -good example]
Posted by [mrjt](#) on Wed, 08 Apr 2009 14:05:00 GMT

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LeftPos() only sets the horizontal size/position, so if you haven't set the vertical size/position it will not be visible. Try using VSizePos(). SizePos() is the equivalent of VSizePos().HSizePos().

Subject: Re: Howto create control-collection -control? [SOLVED -good example]

Posted by [kbyte](#) on Thu, 09 Apr 2009 08:26:06 GMT

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Great!

Alex
