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Subject: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 12 Jun 2007 20:31:01 GMT  
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I have two issues... but don't want two threads (I'm lazy...).

First, let me setup the problem:

1) I have an ArrayCtrl which I populate dynamically (I read the values from a database based on search criteria entered elsewhere).

2) My ArrayCtrl has an Index column (via `AddIndex("primary_key","id")`), a column of options (via `AddColumn("use","Use").Ctrls<Option>()`), and a name column (via `AddColumn("name","Name")`).

3.a) I need to SOMETIMES assign a callback to the option column that will uncheck all other options (like a radio ctrl), other times multiple selections are OK. I can do this if I can reliably figure out in which row the option that triggered the callback resides (I need people to be able to select via mouse or keyboard).

3.b) In some cases I may want one option completely disabled (in other words one row disabled). However, I still need the row to list. In these cases removing the option ctrl is acceptable.

I have found two threads which appear to have similar needs / problems:

<http://www.ultimatepp.org/forum/index.php?t=msg&th=602>

<http://www.ultimatepp.org/forum/index.php?t=msg&th=605>

I am not so clear on what exactly the GridCtrl does... but I gather that it may allow me to accomplish this? As a note, I think I would prefer to leave this as an ArrayCtrl.

I have used the `WhenCtrlsAction` callback on the ArrayCtrl, but can not reliably decided which row tripped the callback.

Thanks for your help / thoughts,  
Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Tue, 12 Jun 2007 21:02:29 GMT  
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In GridCtrl when control does its action the cursor is always moved to the cell that owns it (this is one of the main difference to the ArrayCtrl). Knowing that you can easily determine control (cell) position in `WhenUpdateCell` using `GetCursorPos()` or `GetCursor()` if you're intrested only in row position.

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 12 Jun 2007 21:04:27 GMT  
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Here is a general question: why ArrayCtrl and GridCtrl? Why not merge the two to simplify the library?

-- Added --

And here is my favorite part: where is the documentation on GridCtrl, and is it actually maintained? I see that it is segregated from the other controls... so I assume it is not maintained with the rest of the UPP code?

Is it possible to accomplish my needs using ArrayCtrl? I previously had the functioning by creating the Options using SetCtrl(..., new Option) then setting the details.

When I upgraded to the new upp version the Ctrls appears as gray boxes (in Windows, Linux, and Mac). My beta testers were less than pleased with the prospect of having to resize a column to check the box each time. I need to get an updated version of my software rolled out so I need to find a [quick] reliable solution.

Thoughts?

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Tue, 12 Jun 2007 21:36:20 GMT  
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kcabobert wrote on Tue, 12 June 2007 17:04Here is a general question: why ArrayCtrl and GridCtrl? Why not merge the two to simplify the library?  
They can't be merged (at least now). ArrayCtrl is the base array control from the very beginning and is used in many applications. I have created GridCtrl just to fit my needs (read about its features at my page).

Quote:

And here is my favorite part: where is the documentation on GridCtrl, and is it actually maintained? I see that it is segregated from the other controls... so I assume it is not maintained with the rest of the UPP code?

Documentation is the weakest point of GridCtrl. There is only unfinished tutorial (in GridCtrl package) and HomeBudget as an example. As for maintaining - you're wrong It's actively developed. My time is very limited right now but I'll try to write better documentation soon.

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Wed, 13 Jun 2007 00:05:31 GMT  
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I wasn't trying to demean the project... it sounds very good. I was simply concerned that it may have dwindled and be no longer developed.

Am I correct in assuming then that GridCtrl is my only option?

Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Wed, 13 Jun 2007 02:57:25 GMT  
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Is this correct? Why not add it to GridCtrl.h?

```
void Set(int r, Id c, const Value &val)
{
    Set(r,aliases.Get(c),val);
}
```

The asm code doesn't compile right... but I assume that is on my end.

I get an error about line 918 ("inline Item& GetItem(int n, int m);"). It seems the function body is missing....

Aside from that it seems like it might work well.

Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [mirek](#) on Wed, 13 Jun 2007 07:33:51 GMT  
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kcabobert wrote on Tue, 12 June 2007 16:31

2) My ArrayCtrl has an Index column (via AddIndex("primary\_key","id")), a column of options (via AddColumn("use","Use").Ctrls<Option>()), and a name column (via AddColumn("name","Name")).

Just a note: This was supposed to use those Id (or SqlId) things, like:

```
Id PRIMARY_KEY("PRIMARY_KEY"); // possibly global, "Id constant"
....
AddIndex(PRIMARY_KEY, "id");
```

Using char \* there works as well, but it is a but more error prone (you can mistype the string) and

U++ has to perform char \* -> Id conversion. That is especially not very helpful if you are looping through the ArrayCtrl values.

3.a) I need to SOMETIMES assign a callback to the option column that will uncheck all other options (like a radio ctrl), other times multiple selections are OK. I can do this if I can reliably figure out in which row the option that triggered the callback resides (I need people to be able to select via mouse or keyboard).

3.b) In some cases I may want one option completely disabled (in other words one row disabled). However, I still need the row to list. In these cases removing the option ctrl is acceptable.

Well, Ctrls part of ArrayCtrl seems to be really deficient.

I was thinking about the issue a lot and really the problem seems to be that we have stepped out of U++ paradigm here, introducing class factory, which is nice to solve simple problems, but fails with more complicated ones.

I plan to add some other interface for embedding widgets into ArrayCtrl that will rather use widgets that belong outside the ArrayCtrl (e.g. in the dialog). Something like:

```
struct MyDialog {
    Array<Option> option;

    void OptionColumn(Ptr<Ctrl>& ctrl, int index)
    {
        ctrl = &option.At(index);
    }

    MyDialog() {
        list.AddColumn("Options").Ctrls(THISBACK(OptionColumn));
    }
};
```

This way, you would have the full access to the list of options.

What do you think?

Mirek

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [mirek](#) on Wed, 13 Jun 2007 07:39:01 GMT  
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kcabobert wrote on Tue, 12 June 2007 17:04 Here is a general question: why ArrayCtrl and GridCtrl? Why not merge the two to simplify the library?

I believe they are solving slightly different problem domains. E.g. ArrayCtrl is used even in DropList, it is just generic simple list designed to be used in various compositions, while GridCtrl has much richer interface, but sort of more specialized.

The reason it resides in separate package is more or less because it is too big to fit into CtrlLib. It is the same story as RichEdit...

Quote:

When I upgraded to the new upp version the Ctrl appears as gray boxes (in Windows, Linux, and Mac). My beta testers were less than pleased with the prospect of having to resize a column to check the box each time. I need to get an updated version of my software rolled out so I need to find a [quick] reliable solution.

Ops. Can you be more specific? What are grey boxes?

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Subject: Re: Ctrl<>() Callback / Disable some rows  
Posted by [unodgs](#) on Wed, 13 Jun 2007 08:37:54 GMT  
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Quote: I wasn't trying to demean the project...

Why did you think I thought so? I did not.

Quote:

Is this correct? Why not add it to GridCtrl.h?

```
void Set(int r, Id c, const Value &val)
{
    Set(r, aliases.Get(c), val);
}
```

Ok, I will add it. But you can use now:

```
grid(COLUMN_ID) = val
```

or

```
grid.Set(COLUMN_ID, val);
```

to set value of cell in row pointed internally by rowidx. rowidx changes automatically if you add new row or change cursor position.

Quote:

The asm code doesn't compile right... but I assume that is on my end.

I get an error about line 918 ("inline Item& GetItem(int n, int m);"). It seems the function body is missing....

Please use latest dev package. All those problems should be corrected there.

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [mirek](#) on Wed, 13 Jun 2007 08:53:04 GMT  
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OK, after more thinking, what about this simple (U++-ish solution:

```
#include <CtrlLib/CtrlLib.h>

using namespace Upp;

struct App : TopWindow {
    Array<Option> option;
    ArrayCtrl a;

    void Do(int ii)
    {
        option[ii].SetFocus();
        for(int i = 0; i < option.GetCount(); i++)
            option[i].Enable(i == ii || option[ii]);
    }

    typedef App CLASSNAME;

    App() {
        a.AddColumn("Option");
        for(int i = 0; i < 300; i++) {
            a.Add(i & 4);
            a.SetCtrl(i, 0, option.Add().SetLabel("Test"));
            option.Top() <=< THISBACK1(Do, i);
        }
        a.SetLineCy(Draw::GetStdFontCy() + 8);
        Add(a.SizePos());
        Sizeable();
    }
};

GUI_APP_MAIN
{
    App().Run();
}
```

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Wed, 13 Jun 2007 21:36:42 GMT  
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This is my response to several posts:

Quote:OK, after more thinking, what about this simple (U++-ish) solution:

That is very similar to what I was previously doing... when I was getting the grey boxes. See the attached image.

I liked that method and everything was fine... expect the funky boxes.

Quote:Ok, I will add it. But you can use now:

```
grid(COLUMN_ID) = val
```

or

```
grid.Set(COLUMN_ID, val);
```

to set value of cell in row pointed internally by rowidx. rowidx changes automatically if you add new row or change cursor position.

Well, that is fine, but it does not address my issue. I need to be able to set a cell's value that is in a different row than the cursor. I do not always know the column position... but I do know the column name. Hence the need for a Set( row, col\_id, value ) method.

Is there another way to do this that I missed? If so please let me know.

Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows

Posted by [unodgs](#) on Thu, 14 Jun 2007 06:18:41 GMT

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Quote:Well, that is fine, but it does not address my issue. I need to be able to set a cell's value that is in a different row than the cursor. I do not always know the column position... but I do know the column name. Hence the need for a Set( row, col\_id, value ) method.

Set(row, Id, value) is already in UVS.

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Subject: Re: Ctrls<>() Callback / Disable some rows

Posted by [kcabobert](#) on Mon, 18 Jun 2007 17:00:18 GMT

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Is there a SetCtrlValue methods in the new version as well?

rk

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Mon, 18 Jun 2007 17:44:01 GMT  
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My initial suggestion was wrong. It should rather be something like:

```
void Set(int r, Id c, const Value &val)
{
    Set(r,aliases.Get(c)-fixed_cols,val);
}
```

---

Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Mon, 18 Jun 2007 18:27:38 GMT  
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I also think you have some inconsistent behavior with Get{...} and Set{...}. Some appear to auto-adjust for the Fixed{Column,Row} count and some do not.

For example, when using a index from 0 to GetCount to check the value of a particular column, and set the cell equal to zero if the cell value is one, I have to specify the FixedCount offset when getting values... but not when setting values.

Consider the below snippet:

```
const int offset = gridctrl.GetFixedCount(),
pos = gridctrl.GetCursor();

if ( atoi(gridctrl.Get("checked").ToString())==1 )
for ( int t=0; t<gridctrl.GetCount(); t++ )
    if ( (t!=pos) && (atoi(gridctrl.Get(t+offset,"checked").ToString())==1)) {
        gridctrl.Set(t,"checked",0);
    }
```

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Mon, 18 Jun 2007 19:52:49 GMT  
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You're right as long as you use Set(), but inside GridCtrl I use Set0 which counts columns/rows with fixed ones, so aliases.Get(c) is perfectly fine in my case.

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Mon, 18 Jun 2007 19:57:30 GMT



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Quote:I also think you have some inconsistent behavior with Get{...} and Set{...}. Some appear to auto-adjust for the Fixed{Column,Row} count and some do not.

You're right. It looks like I missed this one:

Value GridCtrl::Get(int r, const char \* alias)

```
{  
    return Get0(r, aliases.Get(alias));  
}
```

It's fixed now! Thanks.

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Subject: Re: Ctrls<>() Callback / Disable some rows

Posted by [kcabobert](#) on Mon, 18 Jun 2007 21:40:18 GMT

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Your code snippet it how it looks now... so I don't get it. Do I need to modify Get0?

Or, better yet, is there a newer (at least as stable) version I can download and use?

Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows

Posted by [unodgs](#) on Mon, 18 Jun 2007 21:50:56 GMT

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I put here current implementation of GridCtrl::Get(row, Id) to show there is no r + fixed\_rows as you suggested, but only r. I modified it and now it's in current uvs (internal versioning system of U++). I will release a new dev release and update SVN as only I get my main computer working. Sorry for shortcuts in my answers

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Subject: Re: Ctrls<>() Callback / Disable some rows

Posted by [kcabobert](#) on Mon, 18 Jun 2007 21:54:47 GMT

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I think I have found another glitch... possibly in my code, but I don't think so.

I have two columns, one with checkboxes, one with names. Sometimes when I press the space bar is checks the PREVIOUSLY selected rows checkbox, not the currently selected row.

This behaviour is spuradic, and as I type this I can not reproduce it. Encountered this before?

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Tue, 19 Jun 2007 08:58:28 GMT  
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kcabobert wrote on Mon, 18 June 2007 17:54I think I have found another glitch... possibly in my code, but I don't think so.

I have two columns, one with checkboxes, one with names. Sometimes when I press the space bar it checks the PREVIOUSLY selected rows checkbox, not the currently selected row.

This behaviour is sporadic, and as I type this I can not reproduce it. Encountered this before? It seems like cursor pos is not changed in some rare situations. Could you post your test case? And what version of grid do you use?

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 19 Jun 2007 13:05:07 GMT  
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I am using the version bundled with UPP-2007.1, I am not exactly sure what the version number is. Judging from the changelog I would say 2007.1rc3?

I will try to find a some simple test code / instructions to replicate as I finish updating my code to use GridCtrl.

As I recall it is when selections are made using a combination of the mouse (to enter GridCtrl), then using <enter> and <space> to make selections. As I said, I do not recall the specific sequence.

Now that a few little bugs have been ironed out it seems like GridCtrl will accomplish what I need. Nice work!!

Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 19 Jun 2007 13:24:22 GMT  
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Except one (hopefully easy) thing: how can I disable one row? Or, at the minimum, one cell which I just inserted?

Verbal example: I have a gridctrl with a column of check boxes and a column of names, when I populate (as I Add(sql result vector)) the grid I need to disable some checkboxes. I tried calling NoEditable and NoClickable with no luck.

Is there an easy way to achieve this?

Thanks,  
Robert

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Tue, 19 Jun 2007 13:56:42 GMT  
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Quote:Verbal example: I have a gridctrl with a column of check boxes and a column of names, when I populate (as I Add(sql result vector)) the grid I need to disable some checkboxes. I tried calling NoEditable and NoClickable with no luck.

Generally NoEditable should prevent creating embeded control. However it works well before the window with grid is displayed. Later GridCtrl::Add(..) call SyncCtrls() (method responisble for creating/updating embeded controls) immediately after creating row. You have to call Add() before NoEditable() which does not update controls' positions and you still see them able to be edited. So as a workaround make SyncCtrls() in GridCtrl class public and call it after adding rows and making some of them uneditable. I'll try to find correct solution to this problem before new dev release (Add()/AddRow() call SyncCtrls and I would like to avoid clling it a second time in NoEditable() somehow).

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [unodgs](#) on Tue, 19 Jun 2007 13:58:39 GMT  
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Quote:I am using the version bundled with UPP-2007.1, I am not exactly sure what the version number is. Judging from the changelog I would say 2007.1rc3?

There were some important changes/bugs fixed after it. So I will make current snapshot of GridCtrl available on this forum today. Please check it.

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 19 Jun 2007 15:13:17 GMT  
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I know calling SyncCtrls in NoEditable is less than ideal... but is something similar not the 'cleanest' solution?

What about creating some type of 'stripped' SyncCtrls that only affects the row being set to NoEditable?

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 19 Jun 2007 15:44:29 GMT

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This still does not quite look right. The Ctrl is not getting totally disabled (it still displays and is sometimes able to be checked). I think the SyncCtrls function needs a small tweak. I think if the row is set to NoEditable the Ctrl should be disabled. What are your thoughts on that?

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [mirek](#) on Tue, 19 Jun 2007 20:01:19 GMT  
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kcabobert, this thread starts to be confusing, dealing with ArrayCtrl and GridCtrl without specification.

Please at least add "ArrayCtrl" or "GridCtrl" somewhere in your post

Or start a new one...

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Subject: Re: Ctrls<>() Callback / Disable some rows  
Posted by [kcabobert](#) on Tue, 19 Jun 2007 22:41:00 GMT  
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Yeah, I thought about that... it sort of took a turn for the confusing.

Basically the thread focuses on GridCtrl after about the fourth post, with occasional references to ArrayCtrl after.

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