Subject: TreeGrid Control - Update 6
Posted by slashupp on Thu, 26 Nov 2015 11:53:08 GMT
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Hope someone will find the attached control useful.
The control seems fairly stable & release-ready...(feedback please)
If you check it out, please let me know what you think, and also any bugs, improvements, etc ...

Update 6:
Improved control: Show/Hide treelines & header
Small changes to Demo (added options to R-click menu)
Bug fixes and improved useability of the simple file manager (Linux-only)

The 'TG6.zip' file contains all three projects.

Usage Example

1. Add the TreeGrid package to your project.
2. Add: #include <TreeGrid/treegrid.h> to your source-file.
3. Example:

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

using namespace Upp;

#include <TreeGrid/treegrid.h>

struct MyClass : public TopWindow
{
 typedef MyClass CLASSNAME;
 TreeGrid TG;
 MyClass();
 virtual ~MyClass() {}
};

MyClass::MyClass()
{
 Title("MyClass");
 SetRect(0,0,600,600);
 Sizeable();

 Add(TG.HSizePos().VSizePos());

 TG.AddColumn("Column 1", 200).Sorting();
 TG.AddColumn("Column 2", 200);
 TG.AddColumn("Column 3", 200);

 //indentation is just for readability..
```

```
//AddNode can fail in two cases: a supplied key is already used, and when out-of-memory
Node N=TG.AddNode(0, "tree-label (column 1-cell)", /*0 => at root of tree */
                     "key (if you want one)",
                     "column2-cell",
                     "column3-cell");

 TG.AddNode(N, "tree sub-node label", /*N => parent of new node*/
                      "", /*empty user-key - keys are auto-generated if empty*/
                      "col2-cell",
                      "col3-cell");

 TG.AddNode(N, "sub label1",
                       "",
                      "col2-cell",
                      "col3-cell");

 TG.AddNode(N, "sub label2"); /*no key and you can have blank values*/
  //must give key (even empty string) if you want values
  //empty cells corresponding to the columns will be silently created

N=TG.AddNode(0, "another tree-label",
                    "",
                    "cell2",
                    "cell3",
                    "cell4 - you can have extra cells for private data");

 TG.AddNode(N, "tree sub-node label", "", "col2-cell", "col3-cell");

 Node N1=TG.AddNode(N, "tree sub-node label", "", "col2-cell", "col3-cell");

  TG.AddNode(N1, "node n1", "", "value", "value");

 TG.AddNode(N, "A Label", "", "col2-cell", "col3-cell");

TG.RefreshTreeGrid();
}

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

File Attachments

1) TG6.zip, downloaded 501 times

Subject: Re: Tree-Grid-Widget
Posted by cbpporter on Thu, 26 Nov 2015 12:57:30 GMT
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Hi!

I did a quick test and was not able to compile the sample. A few observations:

1. srandom and random are POSIX functions, so it will not run on Windows. I'm not sure exactly how rich U++'s random number generation is, but I remember having seen support for random numbers somewhere...
2. C++11x more advanced features, like variadic templates might be a bit of an overkill for widgets .
3. It is kind of a custom for U++ packages to be achieved in their respective folder, together with the project file.

I'll gladly test it again if it is compilable under Windows.

Subject: Re: Tree-Grid-Widget
Posted by koldo on Thu, 26 Nov 2015 13:13:01 GMT
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Quote:1. srandom and random are POSIX functions, so it will not run on Windows. I'm not sure exactly how rich U++'s random number generation is, but I remember having seen support for random numbers somewhere...You may try one of these U++ functions:
dword Random()
qword Random64()
double Randomf()

Subject: Re: Tree-Grid-Widget
Posted by slashupp on Thu, 26 Nov 2015 13:49:47 GMT
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Thx for feedback. I did look for the Upp random()-func's - new they were there- but not hard enough I suppose Thx koldo.

I don't have Windows available, purely Linux, so I cannot test for Windows compatability.
I tried to stay with standard functions but some POSIX things may have slipped through.

Edit: Updated demo-and-control attachment in original message

Subject: Re: Tree-Grid-Widget

Posted by cbpporter on Mon, 07 Dec 2015 09:23:19 GMT
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Hmmm, interesting control.

And it compiles fine now.

But you may wish to add the TreeGrid package as a dependency to the ThreeGridDemo package.

One note though: the control is very slow on my system. Takes second for a tree node to open.

Subject: Re: Tree-Grid-Widget
Posted by slashupp on Sat, 12 Dec 2015 14:09:07 GMT
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thx
I am busy cleaning-up and "upp-ising" the source (getting rid of most of the STL replacing with Upp equivalents),
and also doing some refactoring, optimizing and quite a few bug-fixes ...

Also wrote a simple file-manager (Linux-only) to help test the control (along with the demo).

Subject: Re: Tree-Grid-Widget - Update 3
Posted by slashupp on Mon, 21 Dec 2015 08:03:45 GMT
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updated (3)

Subject: Re: Tree-Grid-Widget - Update 4
Posted by slashupp on Tue, 22 Dec 2015 13:46:09 GMT
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update 4
fixed bugs in sfm
& some other odds & ends

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Tue, 29 Dec 2015 07:16:04 GMT

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Update 6 - I think the control is now release-ready ...

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Thu, 31 Dec 2015 14:20:36 GMT
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improved simple file manager

File Attachments
1) sfm.zip, downloaded 465 times

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Fri, 01 Jan 2016 21:56:19 GMT
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Hello slashupp

There are some errors when compiling in Windows:

treegrid.cpp, line 134
char s[n]; while (i<n) s[i++]=0;
MSC does not like arrays with variable dimension

treegrid.h, line 141
Column& Sorting(Gate2<const Node&, const Node&> sortfunc=nullptr);
error: could not convert 'nullptr' from 'std::nullptr_t' to 'Upp::Gate2<NodeData* const&, NodeData* const&>

sfm/main.cpp can only be compiled in Linux

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Sat, 02 Jan 2016 10:30:45 GMT
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thx koldo

seems I'll have to get a copy of windows from somewhere to test/repair this and whatever else ...

is it possible to temporarily install windows on a stand-alone box without any internet connection?
(I will _never_ allow this spyware to connect to my local network)

Subject: Re: TreeGrid Control - Update 6
Posted by Novo on Sat, 02 Jan 2016 15:58:20 GMT
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slashupp wrote on Sat, 02 January 2016 05:30
is it possible to temporarily install windows on a stand-alone box without any internet connection?

Try to install Wine on Linux. It is a Windows emulator. It is not using anything native from Windows.

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Sun, 03 Jan 2016 09:48:17 GMT
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Some proposals

Quote:treegrid.cpp, line 134
char s[n]; while (i<n) s[i++]=0;
MSC does not like arrays with variable dimension
You can just replace char s[n] with Buffer<char> s(n);

Quote:treegrid.h, line 141
Column& Sorting(Gate2<const Node&, const Node&> sortfunc=nullptr);
error: could not convert 'nullptr' from 'std::nullptr_t' to 'Upp::Gate2<NodeData* const&, NodeData* const&>
Could you replace std::nullptr_t with U++ Null?

Quote:sfm/main.cpp can only be compiled in Linux
This because main.cpp uses Linux includes. This could be solved by just putting U++ includes.

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Thu, 07 Jan 2016 06:14:30 GMT
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thx koldo

I've started putting #ifdefs into my sources and your suggestions are really useful

I know Wine exists, have never used it (some research coming my way..)
Some questions:
- I assume I can install Upp for Windows under Wine (else you would not have suggested Wine)
- what do I use for compiler/linker - are they bundled with Wine, Upp, ??
- if my Upp-apps run in Wine can I safely assume they are OK for Windows?
- are there any other Upp-developers using Wine this way that can give me pointers/warn about

'gotcha's'?
If this works it'll be brilliant!

PS: Concerning Windows itself: insecurities, calling home, unasked/automatic updating, ... and add that you can call the americans many things, but stupid is not one of them, and I will not believe anybody that says Microsoft is not in bed with the NSA. I don't have anything to hide, but I feel using Windows is like inviting a peeping-tom in, or exposing yourself in public

---

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Thu, 07 Jan 2016 18:04:28 GMT
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Hello slashupp

I would like to use only Linux but my final customers require me to supply Windows exes

Anyway please adapt the "Linux" areas of your code to U++, upload your code here or to Bazaar and I can fix for you all the rest of pending details using portable U++ code .

Subject: Re: TreeGrid Control - Update 6
Posted by Novo on Fri, 08 Jan 2016 03:28:06 GMT
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slashupp wrote on Thu, 07 January 2016 01:14
- I assume I can install Upp for Windows under Wine (else you would not have suggested Wine)

Yes, that is correct.
slashupp wrote on Thu, 07 January 2016 01:14
- what do I use for compiler/linker - are they bundled with Wine, Upp, ??
If this works it'll be brilliant!

You need to install a Microsoft Windows SDK.
SDKs include compilers, headers and libraries.
slashupp wrote on Thu, 07 January 2016 01:14
- if my Upp-apps run in Wine can I safely assume they are OK for Windows?

Yes, Wine is a subset of Windows. If your apps works with Wine it will work in Windows. Wine is just a loader of COFF executables and reimplementation of a million of different Windows DLLs.
slashupp wrote on Thu, 07 January 2016 01:14
- are there any other Upp-developers using Wine this way that can give me pointers/warn about 'gotcha's'?

Wine usually doesn't support latest .NET versions, latest D3Dxx API's, and so on. If an SDK installed uses unsupported .NET version, then you can have problems, but you can always install an older version of SDK.

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Fri, 08 Jan 2016 08:07:41 GMT
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@koldo: will do as much as I can, may take a few days though..
@Novo: thx, this is excellent!

Have installed ubuntu 15.10 in a VirtualBox VM, and is now installing Wine
following the guidelines on http://wiki.winehq.org/Ubuntu

Will then figure out how to install Upp, windows sdk, etc

umm.. koldo, add a day or two ...

(have always been worried that the big market for apps is on windows
and now I'll have access to that market without compromising my computer)

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Sun, 10 Jan 2016 06:03:35 GMT
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Quote:You can just replace char s[n] with Buffer<char> s(n);

Nope - can't be handled with sprintf: easiest to just use s[50] - the 50 is enough to accommodate '%llu'-size

Quote:Could you replace std::nullptr_t with U++ Null?

Nope - compiler complaint is for the type, not the value. Need to remove the default '=nullptr' like this:

```
//treegrid.h line 141:
...
Column& Sorting(); // <<<--- add this
Column& Sorting(Gate2<const Node&, const Node&> sortfunc); // <<<--- remove =nullptr
```

and in treegrid.cpp line 41:

```
//add this:
Column& Column::Sorting()
{
 b_sort=true;
 return *this;
}
```

this is just a quick-fix for the problem.

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Sun, 10 Jan 2016 06:19:28 GMT
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U15.10 - loads of difficulties to get wine working with 32-bit apps...
result:
yet-another-vm - U14.04 32-bit
this works, got wine going, installed upp-mingw+toolchain, addressbook-app worked "out-of-the-box"
then copied TreeGrid in and tested - works
now need to install Visual Studio-stuff ...

NB: ultimatepp-home-page: the 'Windows Vista SDK'-link should be 'https...' not http...

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Mon, 11 Jan 2016 09:10:31 GMT
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hi koldo

I attach TreegridDemo which I think fits Upp-standards ...
If you think it is worthy you can add it either to Bazaar or include it in your Controls4U-package, and point to me for any queries & bugs. Had a look at your post re uploading to Bazaar with svn & getting permission & etc and saw much hassle and that you are the boffin, so I make it your decision

The sfm-package is purely intended as another demo (Linux-only) and if someone wants to play on with it, I wish them well & have fun.

File Attachments

1) TreegridDemo.zip, downloaded 413 times

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Mon, 11 Jan 2016 14:08:05 GMT
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Hello slashupp

You have included in the zip just the demo but not the library. Please send the last version of the library.

Checking the code there are many things to be U++-ized:
- Sometimes it is used Upp::String and others std::string
- Loop indentation (for, if, while) is different
- Some function names does not begin with capital letter
- Some variable names does not begin with lower letter
- There is no space before/after "=", "==", "?", ":"

If you want I can do the changes for you.

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Tue, 12 Jan 2016 06:58:59 GMT
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I attached TreeGrid.zip - contains treegrid as upp-project, hope that's what you meant with 'library'?

I used std::string mainly for expedience and knowing it better than String, using the latter where Upp-functions needs it, again for expedience.

Re: indentation, names (caps/lower-case, variables), spaces/spacing - is there a Upp-standards document you can point me too please?

Quote:If you want I can do the changes for you.
That would be very kind, and if you can put a copy of the fixed sources here so I can do comparison with mine and use as reference.

PS: Just an explanation for what you see in my source-code:
My personal 'standards' for coding are applied at the end when the code nears release(able)-status; before then I use the RAD-technique of Evolutionary Development (some-what similar to 'agile') and do not worry much about standards & style, the purpose being to test my algorithms and earliest detection of design issues, also: everything is public using structs or globals at the start, only later as things clarify do I convert them to classes and templates as needed; I use CamelCaseNames names for public properties and

lower_case_with_underscores for private ones - I find for me this works better than any other standards-scheme I've encountered, and I try to let the names be 'documentation' as well; also differentiation between methods and attributes is a gray area, especially with the up-comming dot-operator (operator.()) which is going to cause all kinds of havoc...

File Attachments

1) TreeGrid.zip, downloaded 425 times

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Tue, 12 Jan 2016 07:41:57 GMT
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Hello slashupp

I meant that there is a TreeGridDemo package and a TreeGrid package and I needed both. Now they are

About coding style standards, I do not remember if there is a manual, but however U++ code looks pretty similar even in packages done by different people. You can just open any package and compare it with your coding way.

I will remove all warnings and errors in Windows (3 errors with MinGW, 3 errors (different) and 26 warnings with MSC) and restyle your sources (I promise not to be very aggressive), but only if you are going to accept the majority of changes as it will require me hours of work.

Subject: Re: TreeGrid Control - Update 6
Posted by omari on Tue, 12 Jan 2016 09:48:03 GMT
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Ultimate++ code style:
http://www.ultimatepp.org/www$uppweb$codestyle$en-us.html

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Tue, 12 Jan 2016 15:48:46 GMT
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Hi koldo

omari posted a link (thanks) I recognized it when I opened it, seen before but forgotten
I'll use that as basis to fixing up my code to upp-standards or at least reduce conflicts.

Please post the errors (both MingW & Windows) and all the warnings from Windows.

(I've tested it in Wine with MingW and it compiled clean)

thx for your input & patience

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Wed, 13 Jan 2016 07:52:19 GMT
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Hello slashupp

I posted some of the errors some posts before. It is more difficult to explain them than solving it, as there are many things to change. Here I enclose the new files. Please check the differences.

Coding style is different from what I am used, and std:: is used a lot.

File Attachments
1) TreeGrid.7z, downloaded 430 times

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Wed, 13 Jan 2016 12:23:20 GMT
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hi koldo

I spotted one error: Cell::operator=(..) - return-type should be void not Cell&

Did you do a global replace of size_t with int? Why? I'm a bit baffled by this. I know that I sometimes rely on size_t being always >= 0 ... can't remember if I do in this code, more likely than not.
<s>I do use STL quite a lot - mainly because I know it well enough and also because I write modules that I can re-use in non-Upp apps/environments. For the treegrid-package I removed those modules, but you'll find some of them in the sfm-package as an example. As for Upp::String, Upp::Vector, Upp::others.. I'm fine with using them in Upp-UI-environment, but elsewhere?-the jury is still out on that. (on this topic: I normally delete the line "using namespace Upp;" and use Upp::.. - it is the better/conventional practice and it gives back those nice names Upp has used)</s>

edit:
needed to write a custom editor & had to use unicode extensively, and then I found that the String

and LineEdit classes already
does everything I need - having had a look at what is required to implement unicode compliance from scratch I can now
truly appreciate the effort that went into creating these classes - so I guess the jury came back all positive for the Upp::*classes
(also am realizing how mush effort & time I wasted on reinventing stuff)
Will soonish republish the refactored ctrl here

Subject: Re: TreeGrid Control - Update 6
Posted by koldo on Thu, 14 Jan 2016 07:30:02 GMT
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Hello slashupp

The problem is that U++ uses int instead of size_t to index arrays, so your code generated many warnings in many different places. Initially I went fixing it carefully but after I while, I finished removing all size_t.

Please check other error (like the use of va_start and functions without return).

Subject: Re: TreeGrid Control - Update 6
Posted by slashupp on Tue, 16 Aug 2016 07:30:05 GMT
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if anyone is looking at the sfm package, just this:
the way to use lambdas as callbacks has changed (for the better!)
on line 697 [dircontent.cpp][void DirContent::OnCustomize(Bar &bar)]
old code:

```
 bar.Add("Expandable nodes first",
   Callback(lambda([&]{ custom.exd=EXD_FIRST;
      Pan.SelectNTBN('T');
      custom.bdirty=true;
      TG.ListExpandingNodes(custom.exd);
      WhenCustomized(); })));
```

change this to:

```
 bar.Add("Expandable nodes first", [&]{ custom.exd=EXD_FIRST;
      Pan.SelectNTBN('T');
      custom.bdirty=true;
      TG.ListExpandingNodes(custom.exd);
```

WhenCustomized(); });

as well as for the other entries below it.
