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Subject: [solved] Can we get the private members of TreeCtrl made protected?

Posted by [cbporter](#) on Tue, 16 Jun 2015 13:59:57 GMT

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I created a custom TreeCtrl than only overrides Paint for prettier display of a list of trees and some members used by Paint are private.

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [koldo](#) on Wed, 17 Jun 2015 07:04:57 GMT

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Could you show some pictures of it?

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [cbporter](#) on Wed, 17 Jun 2015 09:10:30 GMT

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Sure!

I created a custom TreeCtrl. Normally, the tree control is designed for a single root kind of structure. Even when not displaying the root node, there is still a line pointing upwards and it looks like a tree.

My change is about making it behave like a list of trees. Each entry in that list is a root of a tree, but they do not have a parent. I also changed the way lines are displayed for children nodes, enhanced IMHO for minor aesthetics.

In my particular case, I use this tree control to display folders from a classpath. That's why some folders are marked with an "x", to show that they are invalid.

I implemented this only changing a few lines in the TreeCtrl::Paint override.

If you wish, I can give you the exact members than need to be made protected.

#### File Attachments

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1) [tree.png](#), downloaded 822 times

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [cbporter](#) on Thu, 02 Jul 2015 12:01:01 GMT

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Here is the list of things I need protected for my Paint:

```
protected:
struct Item : Node {
    union {
        int      parent;
        int      frealink;
    };
    bool      free;
    bool      isopen;
    bool      sel;
    Vector<int> child;
    int      linei;

    Size GetValueSize(const Display *treedisplay) const;
    Size GetCtrlSize() const;
    Size GetSize(const Display *treedisplay) const;

    Item() { isopen = false; linei = -1; parent = -1; canselect = true; sel = false; free = false; }
};

struct Line : Moveable<Line> {
    int level;
    int itemi;
    int ll;
    int y;
};

ScrollBars sb;
Scroller scroller;
bool nobg;
int levelcx;
bool noroot;
Vector<Line> line;
Array<Item> item;
int dropitem, dropinsert;
bool highlight_ctrl;
int cursor;
bool nocursor;
bool multiselect;

const Display *display;

int FindLine(int y) const;
const Display *GetStyle(int i, Color& fg, Color& bg, dword& st);
```

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [mirek](#) on Sun, 12 Jul 2015 07:51:08 GMT

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I do not know. Generally, things are private to maintain narrow interface. If they become protected, they become part of interface.

OTOH, I like the functionality you propose. I suggest adding this to regular TreeCtrl as option... (files please?)

Mirek

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [cbporter](#) on Thu, 16 Jul 2015 08:37:04 GMT

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How about this?

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File Attachments

- 1) [TreeCtrl.cpp](#), downloaded 354 times
- 2) [TreeCtrl.h](#), downloaded 635 times

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Subject: Re: Can we get the private members of TreeCtrl made protected?

Posted by [mirek](#) on Fri, 28 Aug 2015 06:33:32 GMT

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Sorry for the delay... applied.

However:

```
op -= CtrlImg::cross().GetSize() / 2;
w.DrawImage(op.x, op.y, imgEmpty);
```

Should not that be rather

```
op -= imgEmpty.GetSize() / 2;
w.DrawImage(op.x, op.y, imgEmpty);
```

?

Also, perhaps RenderMultiRoot should call NoRoot?

I have added docs, please check them too...

Mirek

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**Subject: Re: Can we get the private members of TreeCtrl made protected?**

Posted by [cbporter](#) on Fri, 28 Aug 2015 10:51:08 GMT

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Thanks!

Use any name that you think is best. I can adapt. Now if we resolve the TimeStopHR, I can use stock U++ again :).

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**Subject: Re: Can we get the private members of TreeCtrl made protected?**

Posted by [mirek](#) on Sat, 29 Aug 2015 05:15:04 GMT

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cbporter wrote on Fri, 28 August 2015 12:51Thanks!

Use any name that you think is best. I can adapt. Now if we resolve the TimeStopHR, I can use stock U++ again :).

Ops, looks like I have not explained myself well... (english not being my native language).

Please, what I ask about is not about names, but semantics:

- using imgEmpty dimension for calculation in TreeCtrl::Paint instead of surrogate 'cross'
- calling ('executing') NoRoot in RenderMultiRoot (because I believe that you need to call NoRoot anyway to make it active).

Mirek

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**Subject: Re: Can we get the private members of TreeCtrl made protected?**

Posted by [cbporter](#) on Mon, 31 Aug 2015 10:35:16 GMT

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Oh, I see now.

Using "imgEmpty" for size calculations is indeed better.

As for calling NoRoot, this will have the side effect of forcing the display of the empty node icon for all users who call NoRoot right? That's partially why I added a new flag.

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