Subject: TreeCtrl Scroll triggers Parent Refresh
Posted by nixnixnix on Mon, 03 Sep 2007 13:50:28 GMT
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I use a SplitterFrame to split my window into a tree view and a map view (GIS-style app). My map view can take a while to draw sometimes. I have noticed that dragging the scroll bar in the tree view gets slower as my map view takes longer to draw and so it seems that the tree view is triggering a Refresh in the SplitterFrame. Is there any way to disable this please? I've searched through TreeCtrl.cpp and can't find any obvious call to parent to refresh.

Nick

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by mirek on Mon, 03 Sep 2007 16:23:14 GMT
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Can be a bug.

BTW, there is nice way how to examine these issues. Put into your MAIN:

Ctrl::ShowRepaint(50);

(the number is in milliseconds).

If your hypothesis is proved true, do you think you could gather a simple testcase?

Mirek

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by nixnixnix on Mon, 03 Sep 2007 16:34:23 GMT
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Hi Mirek,

I didn't put a test case together yet as my hypothesis was false.

What is actually happening is my nodes are set at width 300 and the initial width of my TreeCtrl is 250 so the nodes are overlapping onto the other window and invalidating that window triggering a repaint. (they are also invalidating the toolbar and menu bar above the TreeCtrl and the status bar below it)

IMO anything in the TreeCtrl should be clipped to the TreeCtrl. What do you think? Is there a command to do this or is this a bug?

Want a test case?

Nick

p.s. nice trick with the bright red invalidation

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by mirek on Mon, 03 Sep 2007 18:38:56 GMT
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Ooops, a bug. U++ default behaviour for Display is to Clip.

Quick fix:

```
void TreeCtrl::Paint(Draw& w)
{
 SyncTree();
 Size sz = GetSize();
 Point org = sb;
 scroller.Set(org);
 if(!nobg)
  w.DrawRect(sz, SColorPaper);
 int levelcx2 = levelcx >> 1;
 for(int i = 0; i < line.GetCount(); i++) {
  Line& l = line[i];
  if(l.ll >= 0) {
   int yl = line[i].y + item[l.itemi].GetSize().cy - org.y;
   int yh = line[l.ll].y + item[line[l.ll].itemi].GetSize().cy / 2 - org.y;
   if(yh >= 0 && yl < sz.cy) {
    int x = levelcx + levelcx * l.level + levelcx2 - org.x;
    w.DrawRect(x, yl, 1, yh - yl, SColorShadow);
   }
  }
 }
 Rect dri;
 for(int i = FindLine(org.y); i < line.GetCount(); i++) {
  Line& l = line[i];
  const Item& m = item[l.itemi];
  Size msz = m.GetSize();
  Size isz = m.image.GetSize();
  Size vsz = m.GetValueSize();
  int y = l.y - org.y;
  if(y > sz.cy)
   break;
  int x = 0;
  x = levelcx + l.level * levelcx - org.x;
```

```
  Point op = Point(x - levelcx2, y + msz.cy / 2);
  Rect r = RectC(x, y, vsz.cx + 2 * m.margin, msz.cy);
  if(l.itemi == dropitem) {
   dri = r;
   if(i == 0)
    dri.top++;
  }
  if(w.IsPainting(0, y, sz.cx, msz.cy)) {
   w.DrawRect(op.x, op.y, levelcx2, 1, SColorShadow);
   if(m.canopen || m.child.GetCount()) {
    Image im = m.isopen ? CtrlImg::treeminus() : CtrlImg::treeplus();
    op -= im.GetSize() / 2;
    w.DrawImage(op.x, op.y, im);
   }
   w.DrawImage(x, y + (msz.cy - isz.cy) / 2, m.image);
   x += isz.cx;
   Color fg, bg;
   dword st;
   const Display *d = GetStyle(i, fg, bg, st);
   if(!(m.ctrl && m.ctrl->IsWantFocus())) {
    w.DrawRect(x, y, vsz.cx + 2 * m.margin, msz.cy, bg);
    Rect r = RectC(x + m.margin, y + (msz.cy - vsz.cy) / 2, vsz.cx, vsz.cy);
    w.Clip(r);
    d->Paint(w, r, m.value, fg, bg, st);
    w.End();
    if(i == cursor && !nocursor && multiselect && GetSelectCount() != 1 && HasFocus()
       && !IsDragAndDropTarget())
     DrawFocus(w, r, st & Display::SELECT ? SColorPaper() : SColorText());
   }
  }
 }
 if(dropitem >= 0 && dropinsert)
  DrawHorzDrop(w, dri.left - 2, dropinsert < 0 ? dri.top : dri.bottom - 1,
               sz.cx - dri.left + 2);
}
```

Mirek

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by nixnixnix on Tue, 04 Sep 2007 16:06:14 GMT
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Hi Mirek,

I copied and pasted your code into my TreeCtrl.cpp (did a bomb) and it still overpaints. Did you try it with Option Ctrls?

Nick

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by mirek on Wed, 05 Sep 2007 19:45:16 GMT
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Do you think you can provide a testcase?

Mirek

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by nixnixnix on Wed, 05 Sep 2007 22:36:46 GMT
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Absolutely, here is the simplest I can find (I added the frames to show it overpainting - they are not necessary).

```
#include "CtrlLib/CtrlLib.h"

using namespace Upp;


struct App : TopWindow {
 TreeCtrl   tree;
 SplitterFrame m_sf;
 ToolBar tools;
 StatusBar status;
 MenuBar menu;

 typedef App CLASSNAME;

 void DropInsert(int parent, int ii, PasteClip& d)
 {
  tree.AdjustAction(parent, d);
  if(AcceptInternal<TreeCtrl>(d, "mytreedrag")) {
   tree.InsertDrop(parent, ii, d);
   tree.SetFocus();
   return;
  }
  if(AcceptText(d)) {
   tree.SetCursor(tree.Insert(parent, ii, Image(), GetString(d)));
   tree.SetFocus();
```

```
   return;
  }
 }

 void Drag()
 {
  if(tree.DoDragAndDrop(InternalClip(tree, "mytreedrag"),
                        tree.GetDragSample()) == DND_MOVE)
   tree.RemoveSelection();
 }

 App() {
  Ctrl::ShowRepaint(50);

  AddFrame(TopSeparatorFrame());
  AddFrame(menu);
  AddFrame(TopSeparatorFrame());
  AddFrame(tools);
  AddFrame(TopSeparatorFrame());
  AddFrame(status);


  AddFrame(m_sf.Left(tree.SizePos(),250));
  AddFrame(InsetFrame());

//  Add(tree.SizePos());

  Vector<int> parent, parent2;
  Option* option = new Option[10000]; // mine
  parent.Add(0);
  tree.SetRoot(Image(), "The Tree");
  for(int i = 1; i < 10000; i++)
  {
   option[i].SetLabel(FormatIntRoman(i, true)); // mine

   TreeCtrl::Node node(CtrlImg::File(),option[i],300);

   parent.Add(tree.Add(parent[rand() % parent.GetCount()], node)); // mine

//   parent.Add(tree.Add(parent[rand() % parent.GetCount()], CtrlImg::File(),
//                FormatIntRoman(i, true)));
   if((rand() & 3) == 0)
    tree.Open(parent.Top());
  }
  tree.Open(0);
  tree.WhenDropInsert = THISBACK(DropInsert);
  tree.WhenDrag = THISBACK(Drag);
  tree.MultiSelect();
```

```
  Sizeable();

 }
};



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

Please let me know if you need more info.

Nick

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by mirek on Wed, 12 Sep 2007 10:08:16 GMT
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Should be fixed, sorry for delay, took quite a lot of time to find it....

Quick fix:

```
Ctrl *Ctrl::GetTopRect(Rect& r, bool inframe)
{
 if(!inframe) {
  r &= Rect(GetSize());
  r.Offset(GetView().TopLeft());
 }
 if(parent) {
  r.Offset(GetRect().TopLeft());
  return parent->GetTopRect(r, InFrame());
 }
 return this;
}
```

Subject: Re: TreeCtrl Scroll triggers Parent Refresh
Posted by nixnixnix on Wed, 12 Sep 2007 12:54:25 GMT
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No worries. Yup that does the trick.

Thanks,

Nick
