Subject: Painter: writes to free blocks detected
Posted by ManfredHerr on Mon, 19 May 2014 14:31:35 GMT
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Hi,

when using painter - it's path feature - my application crashes deep in the internals of Painter with the error message given above. I reduced the code as much as possible and have now two functions generating a simple painting: ShowSymbolfulldh and ShowSymbolfulldh1. The first generates a painting that can be drawn without problems. The second gives the identical instructions to PaintingPainter: 1. Move(point) 2. Cubic(point1, point2, point) and 3. Cubic(point1, point2, point). But when drawing the painting the error happens. Here is the code of the CtrlLib - application (wfbd.h and main.cpp):

```
#ifndef _wfbd_wfbd_h
#define _wfbd_wfbd_h

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

using namespace Upp;

#define STATUS_CTRL  0X0002
#define STATUS_MOVETO  0X0100
#define STATUS_LINETO  0X0200
#define STATUS_QUADRB  0X0400
#define STATUS_CUBICB  0X0800
#define STATUS_CONNECT  0X0F00


struct Grapoint: Moveable<Grapoint>{
 int status;
 Pointf p;

 void Serialize(Stream& s)
 {
  s % status % p;
 }

 String ToString() const
 {
  String s;
  s << "status = " << status << ", Point = " << p;
  return s;
 }
 void Xmlize(XmlIO& xml)
 {
  xml
```

```
   ("Status", status)
   ("Point",p)
  ;
 }
};


#define LAYOUTFILE <wfbd/wfbd.lay>
#include <CtrlCore/lay.h>

class wfbd : public WithwfbdLayout<TopWindow> {
public:
 typedef wfbd CLASSNAME;
 wfbd();
 void Paint(Draw& w);
 Painting ShowSymbolfullhd(Size s,double x,double y);
 Painting ShowSymbolfullhd1(Size s,double x,double y);

 bool symbols_loaded;
};

#endif
```

and

```
#include "wfbd.h"

wfbd::wfbd()
{
 CtrlLayout(*this, "Window title");
}

void wfbd::Paint(Draw& w)
{
 Size sz = GetSize();
 w.DrawRect(0,0,sz.cx,sz.cy,White());
 if (symbols_loaded)
 {
  Painting paint;
//  paint = ShowSymbol(sz,100,100,"fullhd");
  paint = ShowSymbolfullhd(sz,100,100);
  StoreAsXMLFile(paint,"ShowSymbolfullhd","ShowSymbolfullhd.txt");
  w.DrawPainting(0,0,sz.cx,sz.cy,paint);
  paint = ShowSymbolfullhd1(sz,100,100);
  StoreAsXMLFile(paint,"ShowSymbolfullhd","ShowSymbolfullhd1.txt");
  w.DrawPainting(0,0,sz.cx,sz.cy,paint);
 }
}
```

```
Painting wfbd::ShowSymbolfullhd(Size s, double x,double y)
{
 PaintingPainter pn(s);
 Pointf p1,p2,pto;

 pn.Translate(x,y);
 pto = Pointf(1.87352941176471, 41.5257352941176);
 pn.Move(pto);
 p1 = Pointf(0.48142640747286, 39.0895550366069);
 p2 = Pointf(8.31200580661449, 34.3912073971219);
 pto = Pointf(9.87812168644282, 37.0014005301691);
 pn.Cubic(p1,p2,pto);
 p1 = Pointf(11.7922633173441, 39.7856065387528);
 p2 = Pointf(3.26563241605655, 44.3099413027013);
 pto = Pointf(1.87352941176471, 41.5257352941176);
 pn.Cubic(p1,p2,pto);
 pn.Fill(Gray());
 pn.Stroke(1,Black());

 return pn.GetResult();

}

Painting wfbd::ShowSymbolfullhd1(Size s, double x,double y)
{
 Grapoint g;
 Vector<Grapoint> extgrap;
 g.status = 272;
 g.p = Pointf(1.87352941176471, 41.5257352941176);
 extgrap.Add(g);
 g.status = 2 ;
 g.p = Pointf(0.48142640747286, 39.0895550366069);
 extgrap.Add(g);
 g.status = 2;
 g.p = Pointf(8.31200580661449, 34.3912073971219);
 extgrap.Add(g);
 g.status = 2080;
 g.p = Pointf(9.87812168644282, 37.0014005301691);
 extgrap.Add(g);
 g.status = 2;
 g.p = Pointf(11.7922633173441, 39.7856065387528);
 extgrap.Add(g);
 g.status = 2;
 g.p = Pointf(3.26563241605655, 44.3099413027013);
 extgrap.Add(g);
 g.status = 2048;
 g.p = Pointf(1.87352941176471, 41.5257352941176);
```

```
extgrap.Add(g);
PaintingPainter pn(s);
double magnify = 1.0;
int n1 = extgrap.GetCount();
int l = 0;
int curstatus =0;
Pointf p1,p2,pto;
bool movewas = false;
pn.Translate(x,y);
for (int i = 0; i < n1 ; i++)
{
 DLOG("Point "<<i <<" status " << extgrap[i].status << " : " << magnify * extgrap[i].p);
 if (extgrap[i].status & STATUS_CTRL)
 {
  if (l == 0) p1 = magnify * extgrap[i].p;
  else p2 = magnify * extgrap[i].p;
  l++;
 }
 else
 {
  pto = magnify * extgrap[i].p;
  curstatus = extgrap[i].status & STATUS_CONNECT;
  switch (curstatus)
  {
  case STATUS_MOVETO:
   DLOG(" pn.Move " <<pto);
   pn.Move(pto);
   movewas = true;
   break;
  case STATUS_LINETO:
   if (!movewas)
   {
    DLOG(" pn.Move " <<pto);
    pn.Move(pto);
    movewas = true;
   }
   else
   {
    DLOG(" pn.Line " <<pto);
    pn.Line(pto);
   }
   break;
  case STATUS_QUADRB:
   if (!movewas)
   {
    DLOG(" pn.Move " <<pto);
    pn.Move(pto);
    movewas = true;
```

```
   break;
  }
  if (l)
  {
   DLOG(" pn.Quadratic "<<p1<<" , " <<pto);
   pn.Quadratic(p1,pto);
  }
  else
  {
   DLOG(" pn.Quadratic " <<pto);
   pn.Quadratic(pto);
  }
  break;
 case STATUS_CUBICB:
  if (!movewas)
  {
   DLOG(" pn.Move " <<pto);
   pn.Move(pto);
   movewas = true;
   break;
  }
  if (l>1)
  {
   DLOG(" pn.Cubic " <<p1<<" , " <<p2 <<" , " <<pto);
   pn.Cubic(p1,p2,pto);
  }
  else if (l>0)
  {
   DLOG(" pn.Cubic " <<p1<<" , "<<pto);
   pn.Cubic(p1,pto);
  }
  else
  {
   DLOG(" pn.Move " <<pto);
   pn.Move(pto);
   movewas = true;
  }
  break;
 default:
  DLOG(" pn.Move " <<pto);
  pn.Move(pto);
  movewas = true;
 }
 l=0;
}
pn.Fill(Gray());
pn.Stroke(1,Black());
```

```
 }
 return pn.GetResult();
}

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

The two files generated by the Paint function exhibit that the paintings are different indeed. If I use a separate program to read and display a painting (xmlized) then I see the same behaviour: One can be displayed without problems, the other generates the error Writes to free blocks detected.

BTW, I used the Newbie Corner as I didn't find a forum dedicated to Painter.

Thanks for hints and
Regards

Manfred

Subject: Re: Painter: writes to free blocks detected
Posted by ManfredHerr on Mon, 19 May 2014 14:42:52 GMT
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I am using LINUX (Ubuntu 12.04LTS) and have a strange effect with GTK. If I specify NOGTK then the window with the error message "writes to free blocks detected" appears instantly. If I use the default, with GTK, the window appears but remains empty. After an asynchronous break I get the following stack trace:

File Attachments
1) wfbd_gtkpoll.png, downloaded 389 times

Subject: Re: Painter: writes to free blocks detected
Posted by ManfredHerr on Tue, 27 May 2014 13:34:10 GMT
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Solution for those trying to omit learning the hard way:
In the function creating the crashing painting the Fill and Stroke instructions are one closing bracket (}) to high. So the path is continued after it was filled and stroked. But you have to start a new path after these instructions with a move. Best you enclose each path with Begin() and End().
