
Subject: Re: gtk rendering improvements, BufferPainter::PaintOnceHint

Posted by [Tom1](#) on Fri, 04 Jun 2021 11:25:03 GMT

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Hi Mirek,

I did some testing of SetSurface on Linux/Gtk and noticed that it does not work well when using only a part of a larger image. Offset does not seem to work at all there. On Windows, it works very well and can update a 4k screen at 40-50 FPS with SetSurface and 13 FPS with DrawImage. On Linux I get 11-12 FPS for DrawImage.

Please try this testcase:

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

```
using namespace Upp;
```

```
class ResponsiveDrag : public TopWindow {
public:
    Image im;
    Point offset;
```

```
    ResponsiveDrag(){
        Sizeable().MaximizeBox().MinimizeBox();
        Maximize();
        offset=Point(0,0);
        leftdown=false;
    }
```

```
    virtual void Paint(Draw &w){
        static int64 last;
        int64 now=usecs();
        double fps=1000000/(now-last);
        last=now;
```

```
        // In Windows SetSurface is about 3x faster than Drawimage on 4k UHD screen
        // However, in Gtk SetSurface fails to display the image correctly
        // and offset is not taken into account at all
```

```
        SetSurface(w,Rect(GetSize()),~im,im.GetSize(),offset); // Only works on Windows
        // w.DrawImage(Rect(GetSize()),im,Rect(offset,GetSize())); // Works on both Linux and Windows
```

```
        w.DrawText(10,10,Format("FPS = %.1f",fps));
    }
```

```
    virtual void Layout(){
        Size sz(GetSize()*3);
```

```

ImageBuffer ib(sz);
BufferPainter p(ib);
p.Clear(SColorPaper());
for(int i=0;i<50;i++){
    p.Move(Random(sz.cx),Random(sz.cy));
    p.Line(Random(sz.cx),Random(sz.cy));
    p.Stroke(3,SColorText());
}
im=ib;
offset=Point(GetSize());
Refresh();
}

```

```

bool leftdown;
Point leftdownp;

```

```

virtual void LeftDown(Point p, dword keyflags){
    SetCapture();
    leftdown=true;
    leftdownp=p;
}

```

```

virtual void LeftUp(Point p, dword keyflags){
    ReleaseCapture();
    leftdown=false;
    offset=Point(GetSize());
    Refresh();
}

```

```

virtual void MouseMove(Point p, dword keyflags){
    if(leftdown){
        offset=Point(GetSize())+leftdownp-p;
        Refresh();
    }
}
};

```

```

GUI_APP_MAIN
{
    ResponsiveDrag().Run();
}

```

Best regards,

Tom

Update: PaintOnceHint() almost doubles the DrawImage() FPS on Linux/Gtk to about 20 FPS. On

Windows PaintOnceHint() does not have any effect on DrawImage() performance.
