The alpha channel is not correctly initialised on X11. This causes corruption (second image is what it should look like):

Everything works correctly for Win32. The code below exibits the problem:

```
class ImageDrawTest : public TopWindow {
public:
 typedef ImageDrawTest CLASSNAME;
 Image img;

 ImageDrawTest() {
  Sizeable();
  GenerateImage();
 }

 void GenerateImage() {
  Size sz(100, 100);
  ImageDraw w(sz);
//  w.Alpha().DrawRect(sz, Black());
  w.Alpha().DrawRect(30, 30, 40, 40, White());
  w.DrawRect(sz, Red);
  img = w;
 }

 virtual void Paint(Draw &w) {
  w.DrawRect(GetSize(), SColorFace());
  w.DrawImage(0, 0, img);
 }

 virtual void LeftUp(Point p, dword keyflags) {
  GenerateImage();
  Refresh();
 }
};
```

If you uncomment the line above, the channel is initialised and everything works correctly.

Edit: Looking at the manual for XCreatePixmap, it says the pixmap contents are undefined, which I guess is fair enough. My main issue here is the inconsistency between Win32/Linux, both should be either defined or undefined.

File Attachments
1) ImageDrawTest.png, downloaded 956 times
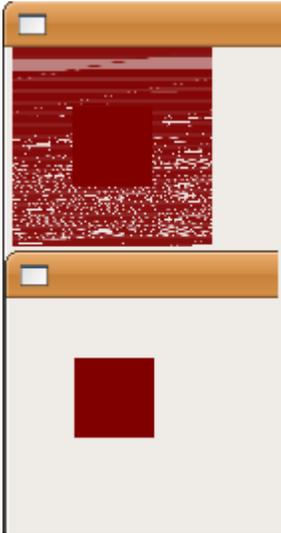
Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mirek on Tue, 29 Apr 2008 17:33:12 GMT
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mrjt wrote on Tue, 29 April 2008 08:34The alpha channel is not correctly initialised on X11. This causes corruption (second image is what it should look like):

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Edit: Looking at the manual for XCreatePixmap, it says the pixmap contents are undefined, which I guess is fair enough. My main issue here is the inconsistency between Win32/Linux, both should be either defined or undefined.

Well, this is rather missing docs... It was intended to have both "body" and "alpha" uninitialized, the same situation as with e.g. Paint. After all, you never know whether for specific use it is better to have alpha =0 or 255 (or even something else).

OTOH, if you believe it should be initialized, we can do that too.

Mirek

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mrjt on Wed, 30 Apr 2008 09:23:37 GMT
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To be honest it doesn't make much difference to me now since I know about the problem . But IMO ImageDraw should behave in exactly the same way on both platforms, it's annoying to write code that works on Win32 but not X11.

IMO the ideal solution would be to have it undefined in Win32 too. But if you think that is a bad idea for backwards-compatability reasons then yes, ImageDraw::alpha should be initialized to 0. Perhaps this could be done on the first call to Alpha() so there is no additional overhead for none-alpha situations?

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mirek on Wed, 30 Apr 2008 09:55:42 GMT
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mrjt wrote on Wed, 30 April 2008 05:23
IMO the ideal solution would be to have it undefined in Win32 too.

Should I draw random data into alpha? Win32 clears it for me.

Quote:
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so there is no additional overhead for none-alpha situations?

Should not it be rather 255?

Mirek

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mrjt on Wed, 30 Apr 2008 10:56:57 GMT

luzr wrote on Wed, 30 April 2008 10:55Should I draw random data into alpha? Win32 clears it for me.
You could write in Jesus's face for a Turrin shroud effect, that'd be cool

luzr wrote on Wed, 30 April 2008 10:55Should not it be rather 255?
Windows clears it to 0 does it not? So unless you want to change that behaviour too then use 0. I agree it's more intuitive for it to be 255 but we write software, I think we can handle it

---

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mirek on Wed, 30 Apr 2008 11:21:21 GMT

OK then.

Image.cpp:


```
Draw& ImageDraw::Alpha()
{
 if(!has_alpha) {
  alpha.DrawRect(size, GrayColor(0));
  has_alpha = true;
 }
 return alpha;
}
```


Mirek

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11

Posted by mr_ped on Wed, 30 Apr 2008 14:00:39 GMT

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luzr wrote on Wed, 30 April 2008 11:55
Should I draw random data into alpha? Win32 clears it for me.

In case it is supposed to be uninitialized, and the OS does initialize it for you, I suggest to use random bytes in DEBUG mode trough #ifdef.
That will make such errors to appear in debug mode, yet it will not slow down release.

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mrjt on Wed, 30 Apr 2008 14:24:00 GMT

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mr_ped wrote on Wed, 30 April 2008 15:00luzr wrote on Wed, 30 April 2008 11:55
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In case it is supposed to be uninitialized, and the OS does initialize it for you, I suggest to use random bytes in DEBUG mode trough #ifdef.
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I hadn't thought of that, it's a good compromise IMO.

Subject: Re: Bug: ImageBuffer::alpha not initialised on X11
Posted by mirek on Wed, 07 May 2008 15:07:44 GMT

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mrjt wrote on Wed, 30 April 2008 10:24mr_ped wrote on Wed, 30 April 2008 15:00luzr wrote on Wed, 30 April 2008 11:55
Should I draw random data into alpha? Win32 clears it for me.

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That will make such errors to appear in debug mode, yet it will not slow down release.
I hadn't thought of that, it's a good compromise IMO.

Well whatever, it is now cleared in X11. I guess it does not hurt much, ImageDraw is not supposed to be the performance king anyway.

Mirek