
Subject: Re: 24-bit color Postscript
Posted by [davidf](#) on Sun, 06 Sep 1998 07:00:00 GMT
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Kenneth P. Bowman (bowman@null.tamu) writes:

> I have an IDL application that creates 24-bit X displays consisting of a
> grayscale image with points plotted on top in color using PLOTS. (Yes, it
> really is preferable to do this using 24-bit color.) Color works fine on
> the screen, but everything comes out grayscale in Postscript. This is
> direct graphics, BTW.
>
> I have read the Reference manual section on color Postscript, but it is
> less than clear. It only addresses color images, not 24-bit color created
> with things like PLOTS.
>
> My copy of David Fanning's book is at work, so I have not been able to
> check it (will do so in the morning).
>
> Any suggestions?

Buy another book for home.

Oh!? You mean about color PostScript? :-)

Well, you might think, since this is a 24-bit PostScript printer you've got here, that you can draw a line in a color like you would on your display device (i.e., specify the color as a 24-bit integer value). For example, if I am working on a 24-bit display with color decomposition turned on and I want to draw a line in a yellow color, I would type this:

```
PlotS, [0,1], [0,1], /Normal, Color=65635
```

Or, more likely, since I don't normally think in binary arithmetic, I might type:

```
PlotS, [0,1], [0,1], /Normal, Color='00ffff'x
```

But, unfortunately, this does NOT work in PostScript. Even though you can display 24-bit color images in PostScript, you can't for some reason write 24-bit colors like this. In fact, you MUST use the INDEXED color model to draw a line in a color. But this is not much of a problem in a 24-bit world, since you aren't really using the color table for anything else. (Your 24-bit image colors were expressed **directly** through the actual

pixel values of the image and didn't go *through* the color table.)

So, I can display a grayscale image and put a yellow line on top of this image like this:

```
TV, image ; or TV, image24, True=1, etc.  
TVLCT, 255, 255, 0, 10  
PlotS, [0,1], [0,1], /Normal, Color=10  
Device, /Close_File
```

This is not the most lucid explanation I've even written (I've had a few beers to celebrate the worker's cause), so let me know if you have any questions. :-)

Cheers,

David

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Subject: Re: 24-bit color Postscript
Posted by [bowman](#) on Mon, 07 Sep 1998 07:00:00 GMT
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In article <MPG.105cfb2b4b2f224e98969d@news.frii.com>, davidf@dfanning.com (David Fanning) wrote:

- > Well, you might think, since this is a 24-bit PostScript
- > printer you've got here, that you can draw a line in a color
- > like you would on your display device (I.e., specify the
- > color as a 24-bit integer value).
- > But, unfortunately, this does NOT work in PostScript.
- > Even though you can display 24-bit color images in PostScript,
- > you can't for some reason write 24-bit colors like this.
- > In fact, you MUST use the INDEXED color model to draw a
- > line in a color. But this is not much of a problem in a
- > 24-bit world, since you aren't really using the color
- > table for anything else.

My thanks to David. I have already replied to him by e-mail.

Is this a Postscript limitation or an IDL limitation? In either case, it sucks. I need to plot points, not just images, using 24-bit color. That is, I want to plot thousands of points using more than 256 different colors. Is there no workaround for this?

I just spent a lot of time developing an IDL application only to find out I can't print with it. You tell me if you could have learned that from the description of the Postscript device in the reference manual.

I suppose I'll have to do a high-resolution X image and dump it to the printer, which defeats the whole point of using Postscript.

Ken Bowman

Subject: Re: 24-bit color Postscript
Posted by [Mark Hadfield](#) on Tue, 08 Sep 1998 07:00:00 GMT
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> This is not the most lucid explanation I've even written (I've
> had a few beers to celebrate the worker's cause)

Actually, David, that is the most lucid explanation you've even [sic, hic] written.

> , so let
> me know if you have any questions. :-)

What was the beer?

--

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