Subject: Re: Baffled by color postscript
Posted by Martin Schultz on Thu, 11 Mar 1999 08:00:00 GMT
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David Fanning wrote:
>
> Kenneth P. Bowman (bowman@null.tamu) writes:
>
>> I think you can use *colors* in the "PLOT" part of the program, but not
>> 256^3 *different* colors (i.e., 24-bit).
>
> Exactly. And the question is "why not?". My usual clandestine
> sources are unusually quiet. :-)
>
> But I'm still not sure a printer can PRINT 24-bit color.
> It seems to me that even with the top-of-the-line color
> printers that there must be a translation between whatever
> color system into CMYK. Is it the contention of some of
> the PostScript experts here that this is a function of
> the printer's RIP?
sure. But CMYK doesn't have anything to do with 8 or 24 bit a priori.
Ideally, you could mix any portion of C with any amount of M with any
amount of Y and any amount of B to get *exactly* the color that you want
(then, one would have to specify color amounts as float numbers instead
of bytes). Just think of the painter who squeezes some tiny amopunt of
blue into the big white can ;-)
In fact, postscript allows you to do just this in process color mode.
Here is an excerpt from the following document:
http://www.adobe.com/supportservice/devrelations/PDFS/TN/500 2.EPSF_Spec_v2.0.pdf

4.4 COLOR COMMENTS
[...]

%%CMYKCustomColor: cyan magenta yellow black keyword
This provides an approximation to the custom color specified by keyword.
The four
components of cyan, magenta, yellow, and black must be specified as
numbers from 0 to
1 representing the percentage of that process color. These numbers are
exactly analogous
to the arguments to the setcmykcolor PostScript language operator. The
keyword follows
the same custom color naming conventions for the %%DocumentCustomColors
comment.
%%RGBCustomColor: red green blue keyword
This provides an approximation to the custom color specified by keyword.
The three
components of red, green, and blue must be specified as numbers from 0

to 1 representing
the percentage of that process color. These numbers are exactly
analogous to the arguments
to the setrgbcolor PostScript language operator. The keyword follows the
same custom
color naming conventions for the %%DocumentCustomColors comment.

On the hardware side, it's probably a matter of the price tag whether
you can get more than about 256 colors out of a printer. Browsing the
web, I read about some new Agfa machine that will actually produce
"photographs" of your digital data. Ordinary laser or ink printers (to
my knowledge) control the color brightness by the size of the dot
(rasterization), not the actual density of the toner or ink. Although
this is principally no limitation, in practice it is obviously very hard
to *reproducibly* create more than order 10 dot sizes at 300 or 600 dpi.

>
> Perhaps what we should be asking for is not 24-bit
> PostScript printing, but something that converts 24-bit
> colors into appropriate CMYK colors.
This is definitively what RSI could do. Take a look at Corel Draw or
Frame maker for example: they allow you to create color seperations in
CMYK mode. You can take those postscript files to a litho agency and
they will make printable transperancies out of it (4 per page of
output). That's the ultimate in quality.

>
> Cheers,
>
> David
>
> --
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