
Subject: Re: display many color images

Posted by [davidf](#) on Sun, 26 Jan 1997 08:00:00 GMT

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Ding Wu <dwu@larry.cc.emory.edu> writes:

- > Anyone knows how to display many color images simultaneously.
- >
- > Splitting the color table will badly damage the color, and almost
- > impossible for many, say 20, images.
- >
- > I am thinking writing something using fixed the color table, using 256
- > colors to approximate all the colors, then images pixels looking for its
- > most close representations in the color table. It definitely changes the
- > colors of the image, just fools human's eyes.

I gave Ding a rather flippant suggestion about purchasing a 24-bit graphic card in an earlier post, but Paul Sorenson sent me a suggestion that had never occurred to me. (This is something Paul has a knack for doing!) He suggested this might be accomplished by using the COLOR_QUAN procedure with the CUBE keyword set.

Since I didn't even know the COLOR_QUAN procedure *had* a CUBE keyword, I read up on it. This is a really good suggestion! But, unfortunately, in the little example program I wrote below, I am not too keen on the result. I think the problem is that the COLOR_QUAN procedure cannot dither the resulting images when it calculates the image values from the color cube. This results in images that look "spotty" to me.

But I thought others might be interested in this novel approach. I did the color table loading in the Z-buffer to take advantage of its 256 colors

Thanks again to Paul.

David

PRO EXAMPLE

image = BYTSCL(DIST(256), TOP=255)

thisDevice = !D.NAME

SET_PLOT, 'Z'

 ; Gray-scale Colors

LOADCT, 0

TVLCT, r, g, b, /GET

```
image1 = COLOR_QUAN(r(image), g(image), b(image), r, g, b, CUBE=6)
```

```
; Standard Gamma II Colors
```

```
LOADCT, 5
```

```
TVLCT, r, g, b, /GET
```

```
image2 = COLOR_QUAN(r(image), g(image), b(image), r, g, b, CUBE=6)
```

```
; Blue-Red Colors
```

```
LOADCT, 11
```

```
TVLCT, r, g, b, /GET
```

```
image3 = COLOR_QUAN(r(image), g(image), b(image), r, g, b, CUBE=6)
```

```
SET_PLOT, thisDevice
```

```
; Load the COLOR_QUAN colors.
```

```
TVLCT, r, g, b
```

```
WINDOW, 1, XSize=256, YSize=256
```

```
TV, BYTSCL(image1, TOP=215)
```

```
WINDOW, 2, XSize=256, YSize=256
```

```
TV, BYTSCL(image2, TOP=215)
```

```
WINDOW, 3, XSize=256, YSize=256
```

```
TV, BYTSCL(image3, TOP=215)
```

```
END
```

```
*****
```

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David Fanning, Ph.D.
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Coyote's Guide to IDL Programming: http://www.dfanning.com  
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