Subject: COLOR_QUAN question
Posted by Daniel Peduzzi on Wed, 18 Aug 1999 07:00:00 GMT
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My question concerns the R, G, and B arrays returned by the COLOR_QUAN function. I've noticed that I don't receive the same RGB values if I call the function multiple times with the same input arguments. This isn't very noticeable upon visual inspection of the resulting images, unless the differences are exaggerated by color map operations such as histogram equalization.

Here is a test program that illustrates what I'm seeing:

```
device,true_color=24, decomposed=0

; Create 3 square arrays with values in range [0,255]
bw1 = bytscl(indgen(100,100))
bw2 = rotate(bw1,1)
bw3 = rotate(bw1,2)

; STEP 1:  Quantize an image where the R, G, and B image components are the same
image = color_quan(bw1, bw1, bw1, r1, g1, b1, colors=256)
tvlct,r1,g1,b1
window, 1, xsize=100, ysize=100
tv,image

; STEP 2:  Quantize an image with different RGB components
image = color_quan(bw1, bw2, bw3, r2, g2, b2, colors=256)
tvlct,r2,g2,b2
window, 2, xsize=100, ysize=100
tv, image

;STEP 3:  Repeat STEP 1
image = color_quan(bw1, bw1, bw1, r3, g3, b3, colors=256)
tvlct,r3,g3,b3
window, 3, xsize=100, ysize=100
tv,image

; Print out any indices with differences in the palettes of STEP 1 and 3.
print,'Red   differences:', where(r1 ne r3)
print,'Green differences:', where(g1 ne g3)
print,'Blue  differences:', where(b1 ne b3)

end
```

When I run this on a UNIX Sun Workstation, I get a list of several differences with each PRINT statement.

If I include the /MAP_ALL keyword with each call to COLOR_QUAN, the discrepancies disappear. However, the documentation indicates that /MAP_ALL should be used only if /GET_TRANSLATION is also present (which I don't think I need.)

Should I expect to see the differences above, and is it safe to use the /MAP_ALL keyword to eliminate those differences?

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