Subject: Re: color_quan - how for exactly 256 colors?
Posted by JD Smith on Fri, 24 Oct 2003 15:55:43 GMT
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On Fri, 24 Oct 2003 08:34:06 -0700, David Fanning wrote:

> Folks,
>
> Ok, I'm confused.
>
> JD Smith wrote the other day in response to Mr. Thilmann:
>
>>> What I mean is: I know that my image contains not more than 256
>>> different RGB colors (out of 16.7 million) - I created the RGB image
>>> from an indexed image and now I want to transform it back. This can
>>> be done exactly and I wondered whether IDL provides a method to get
>>> that done. Cheers,
>>
>> Yes, with HISTOGRAM:
>>
>>   rgb_image=r+256L*(g+256L*b)
>>   h=histogram(rgb_image,OMIN=om)
>>   wh=where(h gt 0,cnt) # Should be fewer than 256 h[wh]=bindgen(cnt)
>>   index_image=h[rgb_image-om]
>>   colors=om+wh ; these are your <=256 colors r_vec=colors AND 255L
>>   g_vec=ishft(colors,-8) AND 255L
>>   b_vec=ishft(colors,-16) AND 255L
>>   tvlct,r_vec,g_vec,b_vec
>>   tv,index_image
>>
>> Probably not the most efficient method in the universe, given the
>> sparseness of the histogram, but it gets the job done.
>
> To which Oliver responded with this:
>
>> Impressive :)
>> Works like a charm. Thank you!
>
> But,... it's not working like a charm for me. :-(
>
> In fact, when I run this code, I find that index_image is a LONG
> *vector*, not the 2D image I was expecting. What am I missing here?
>
> In line three:
>
>   wh=where(h gt 0,cnt) # Should be fewer than 256
>
> I used:

>
>   wh=where(h gt 0,cnt) # 255

Sorry, this is a Perl comment character slipping in... too much Perl'ing for IDLWAVE lately (hidden IDLWAVE rumor of the week: an IDL6 version with full doc support should be out early next week). It should read:

```
wh=where(h gt 0,cnt) ; Should be fewer than 256
```

That is, you'd better have fewer than 256 colors in your rgb image if you'd like to create an exact indexed image from it. Also note that the original r,g, & b were intended to be *images*, one for each color plane of your 24bit image, i.e. I should have written:

```
rgb_image=r_image+256L*(g_image+256L*b_image)
```

Got Charm?

JD