
Subject: Re: Array Subscripting Puzzle

Posted by [Paul Van Delst\[1\]](#) on Thu, 23 May 2002 13:07:40 GMT

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JD Smith wrote:

>

> On Fri, 17 May 2002 10:53:08 -0700, David Fanning wrote:

>

>> Folks,

>>

>> I have a 24-bit image. You can interleave it anyway you like that will
>> make the problem described below trackable. At the moment it is 800 by
>> 600 by 3.

>>

>> I have the indices of something I want to draw on the image. Say they
>> are the indices of the outlines of some continents. For example, like
>> this:

>>

>> window, xsize=800, ysize=600

>> map_set, /Cylindrical, position=[0,0,1,1] map_continents, /fill a =

>> tvrd()

>> indices = where(a GT 0)

>>

>> I want to make all the outline pixels yellow. I *could* do this:

>>

>> r = Reform((image[*,*,0]))

>> g = Reform((image[*,*,1]))

>> b = Reform((image[*,*,2]))

>> r[indices] = 255

>> g[indices] = 255

>> b[indices] = 0

>> image[*,*,0] = r

>> image[*,*,1] = g

>> image[*,*,2] = b

>>

>> That seems wasteful and inelegant. There must be a way to do this in one
>> go. I'm sure it uses REBIN and REFORM, but I'm not sure in which order.

>> :-(

>>

>> Can anyone help?

>

> An excellent exercise for the reader of the rebin/reform tutorial ;)

>

> Here's what I used:

>

> inds=where(a GT 0,n) & s=size(a,/DIMENSIONS)

> image[rebin(inds,n,3)+rebin(1#(s[0]*s[1]*lindgen(3)),n,3)]= \$

> rebin(1#[255,255,0],n,3)

Holy cow!

For my (relatively pokey) PC:

DF's method execution time: 0.65045297seconds

JD's method execution time: 0.28429806seconds

For my (_extremely_ pokey) sultana:

DF's method understanding time: oh, about 5-10seconds or so

JD's method understanding time: uh... still working on it.

And now, for some more syntactical gymnastics, I'm off to comp.lang.c..... :o)

paulv

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