Subject: Re: Image overlapping
Posted by Mike[2] on Fri, 07 Sep 2007 14:26:55 GMT

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On Sep 7, 4:54 am, Wox <nom...@hotmail.com> wrote:
> I was actually looking at something like alpha blending, but
> then for more then two images. Any ideas? Remark: the
> distributions are just 2D arrays (i.e. no RGB)

Alpha blending can easily be extended to more than two images. The
only requirements are that all the alphas be positive and that they
are normalized so their sum is one. I've experimented with this a bit
for medical imaging data and found that it often just results in
confusing pictures. I think it is used fairly often for combining
microscopy images using multiple filters. I'll append an example.

Mike

alpha [0.33, 0.33, 0.33]

;; Make sure alpha is normalized:
alpha = alpha/total(alpha)

;; Some sample images:
files = filepath(['mr_brain.dcm', 'mr_knee.dcm', 'mr_abdomen.dcm'],
subdirectory=['examples','data'])

Nx = 256
Ny = 256
Nimages = 3

R = bytarr(Nx,Ny)
G = bytarr(Nx,Ny)
B = bytarr(Nx,Ny)

color_tables = [1,3,8]

for i = 0, Nimages-1 do begin
  ;; Load the ith color table and get the RGB values:
  loadct, color_tables[i]
  tvlct, Ri, Gi, Bi, /get

  ;; Load the ith image and byte scale it:
  image = read_image(files[i])
  scaled = bytscl(image)

  ;; Display the ith image

```
    tv, scaled, i

    ;; Add the RGB values for the ith image, weighted by the ith alpha:
    R = R + alpha[i]*Ri[scaled]
    G = G + alpha[i]*Gi[scaled]
    B = B + alpha[i]*Bi[scaled]

endfor

;; Display the result
tvscl,[[[R]],[[G]],[[B]]], Nimages, true=3
```

Subject: Re: Image overlapping
Posted by Wox on Fri, 07 Sep 2007 16:08:49 GMT

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On Fri, 07 Sep 2007 07:26:55 -0700, Mike <Michael.Miller5@gmail.com>
wrote:

> Alpha blending can easily be extended to more than two images. The
> only requirements are that all the alphas be positive and that they
> are normalized so their sum is one. I've experimented with this a bit
> for medical imaging data and found that it often just results in
> confusing pictures. I think it is used fairly often for combining
> microscopy images using multiple filters. I'll append an example.

You're right, it tends to give confusing pictures. However several
overlap pictures with different alpha's (so different compounds get
highlighted) will be usefull. Thanks for your help!