
Subject: Re: weighted average for label_region
Posted by [ben.bighair](#) on Wed, 24 Oct 2007 21:01:06 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Oct 24, 11:17 am, "rpert...@gmail.com" <rpert...@gmail.com> wrote:

```
> Hi,  
> I need to perfect a working algorithm to make it more accurate. I have  
> an image that consists of many spots. I need to find where the center  
> of each spot is. This is the algorithm I am using:  
>  
> ncol=image_size[0]  
> regions = label_region(SpotsMask, /All_NEIGHBORS)  
> n_spots=max(regions)  
> print,"There are",n_spots," spots on image"  
>   window,4,xsize=image_size[0],ysize=image_size[1], title="Positions of  
> Spots on Image"  
>   tvscl,final_image  
>  
> temp=0  
> spotscoord = make_array(2,n_spots)  
>  
>   for j = 1, n_spots DO BEGIN  
>     ind = where(regions eq j, count)  
>     spotscoord[0,temp]=(mean(ind) mod nCol)  
>     spotscoord[1,temp]=(mean(ind) / nCol)  
>     temp=temp+1  
>   endfor  
>  
> This leaves me with my spotscoord array with x,y coordinates. However,  
> I need to find the center of each spot with some weighted  
> average...i.e. if the cluster of pixels (for one spot) is more bright  
> on one side, then the center will be skewed there...is there a way for  
> me to do that?  
>  
> Thanks,  
> RP
```

Hi,

I think you want to weight in your spotscoord calculation by the (presumably) grayscale value of the original image pixels for that blob. Brighter pixels will carry more weight. I don't know if it is the correct term, but I call this "center of mass" as opposed to the unweighted "centroid". Thus you would change

```
spotscoord[0,temp]=(mean(ind) mod nCol)
```

to

```
spotscoord[0,temp]=mean((ind mod nCol) * origImage[ind])
```

Cheers,
Ben
