
Subject: Re: Best way to move a window

Posted by [marc schellens\[1\]](#) on Thu, 28 Feb 2002 06:15:13 GMT

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Ned Horning wrote:

```
>
> I am writing a program that move a 3 x 3 window through an image. From
> what I can tell IDL isn't well suited for the way I have programmed it
> but I can't figure out how to improve it. I expect I'm missing a
> fundamental concept.
>
> The way I currently have it written is to move the window, one pixel at
> a time and process it like this:
>
> FOR y=1, num_tile_lines - 2 DO BEGIN
>   out_tile[y*num_tile_samples] = 0
>   FOR x=1, num_tile_samples - 2 DO BEGIN
>     IF (((tile_data[x,y] gt 179.99999) AND (tile_data[x,y] lt
> 180.0001)) OR $
>       ((tile_data[x+1,y] gt 179.99999) AND (tile_data[x+1,y] lt
> 180.0001)) OR $
>       ((tile_data[x-1,y] gt 179.99999) AND (tile_data[x-1,y] lt
> 180.0001)) OR $
>       ((tile_data[x,y+1] gt 179.99999) AND (tile_data[x,y+1] lt
> 180.0001)) OR $
>       ((tile_data[x,y-1] gt 179.99999) AND (tile_data[x,y-1] lt
> 180.0001)) OR $
>       ((tile_data[x+1,y+1] gt 179.99999) AND (tile_data[x+1,y+1] lt
> 180.0001)) OR $
>       ((tile_data[x-1,y-1] gt 179.99999) AND (tile_data[x-1,y-1] lt
> 180.0001)) OR $
>       ((tile_data[x-1,y+1] gt 179.99999) AND (tile_data[x-1,y+1] lt
> 180.0001)) OR $
>       ((tile_data[x+1,y-1] gt 179.99999) AND (tile_data[x+1,y-1] lt
> 180.0001)))) THEN $
>     out_tile[y*num_tile_samples+x] = 0 ELSE BEGIN
>
> Is there a faster way to do this?
```

Indeed there is:

```
;;here we go -----
kernel=bytarr(3,3)
kernel[*]=1
```

```
boolArr=bytarr(num_tile_samples,num_tile_samples)
w=where(abs(tile_data - 180.0) lt 0.0001)
;; check (if necessary)
```

```
if w[0] eq -1 then return ;; or whatever
boolArr[w]=1
```

```
res=convol(boolArr,kernel,/EDGE_TRUNCATE)
```

```
;; these are the indices you want
w1=where(res ge 1)
```

```
;; w9=where(res ge 9) ;; these are the ones if you would AND instead of
OR
;; in the example above
```

```
out_tile[w1]=0
;;finish -----
```

you may want to check out also the dilate or erode function...

cheers,
marc
