
Subject: Re: Speed Improvement

Posted by [Jeremy Bailin](#) on Tue, 25 Jan 2011 12:59:24 GMT

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On Jan 25, 4:24 am, Rony K Varghese <ronykvargh...@gmail.com> wrote:

> Dear All,
>
> How can i improve the speed of below IDL source through code
> optimizing..Now the performance is not satisfactory..
>
> ;Processing a picture
> for sCount = 0, 9 do begin
> for sRow = UpperRow, LowerRow do begin
> for sCol = sLeftCol, sRightCol do begin
> ; Check whether high pixels.
> if E_F_ATTNMAP_HIGH_PIXEL eq PixelArr[sCol, sRow] then
> begin
> sXCol = sCol
> sYRow = sRow
> endif
> ; from the center to the left
> for sIndex = 0, sHalfWid do begin
> if HIGH_PIXEL eq vTemp[sXCol - sIndex, sYRow] then
> begin
> PixelArr[sXCol - sIndex, sYRow] = HIGH_PIXEL
> endif else begin
> break ; break from for sIndex
> endelse
> endfor
> ; from the center to the right
> for sIndex = 0, sHalfWid do begin
> if HIGH_PIXEL eq vTemp[sXCol + sIndex, sYRow] then
> begin
> PixelArr[sXCol + sIndex, sYRow] = HIGH_PIXEL
> endif else begin
> break ; break from for sIndex
> endelse
> endfor
> ; from the center to down
> for sIndex = 0, sHalfHght do begin
> if HIGH_PIXEL eq vTemp[sXCol, sYRow+ sIndex] then
> begin
> PixelArr[sXCol, sYRow+ sIndex] = HIGH_PIXEL
> endif else begin
> break ; break from for sIndex
> endelse
> endfor
> ; from the center to up

```
>           for sIndex = 0, sHalfHght do begin
>             if HIGH_PIXEL eq vTemp[sXCol, sYRow - sIndex] then
> begin
>               PixelArr[sXCol, sYRow - sIndex] = HIGH_PIXEL
>             endif else begin
>               break ; break from for sIndex
>             endelse
>             endfor
>           endfor; end for sCol
>         endfor; end for sRow
>       endfor;end for sCount
>
> Thanks in advance..
> Rony
```

It might help if you could get a sketch of what this is supposed to do.

-Jeremy.

Subject: Re: Speed Improvement
Posted by [jeanh](#) on Tue, 25 Jan 2011 13:03:31 GMT
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Hi,

first, you are not using sCount anywhere... remove this loop

Instead of looping through all pixels, look for the needed ones

`pixelsToProcess = where(PixelArr eq E_F_ATTNMAP_HIGH_PIXEL,
countPixToProcess)`

`sXYcol = array_indices(pixelArr, pixelsToProcess) ;get the 2D coords`

`for i=0L, countPixToProcess -1 do begin
;process
endfor`

Jean

On 25/01/2011 4:24 AM, Rony K Varghese wrote:

> ;Processing a picture
> for sCount = 0, 9 do begin
> for sRow = UpperRow, LowerRow do begin
> for sCol = sLeftCol, sRightCol do begin
> ; Check whether high pixels.

```

>         if E_F_ATTNMAP_HIGH_PIXEL eq PixelArr[sCol, sRow] then
> begin
>             sXCol = sCol
>             sYRow = sRow
>         endif
>         ; from the center to the left
>         for sIndex = 0, sHalfWid do begin
>             if HIGH_PIXEL eq vTemp[sXCol - sIndex, sYRow] then
> begin
>                 PixelArr[sXCol - sIndex, sYRow] = HIGH_PIXEL
>             endif else begin
>                 break ; break from for sIndex
>             endelse
>         endfor
>         ; from the center to the right
>         for sIndex = 0, sHalfWid do begin
>             if HIGH_PIXEL eq vTemp[sXCol + sIndex, sYRow] then
> begin
>                 PixelArr[sXCol + sIndex, sYRow] = HIGH_PIXEL
>             endif else begin
>                 break ; break from for sIndex
>             endelse
>         endfor
>         ; from the center to down
>         for sIndex = 0, sHalfHght do begin
>             if HIGH_PIXEL eq vTemp[sXCol, sYRow+ sIndex] then
> begin
>                 PixelArr[sXCol, sYRow+ sIndex] = HIGH_PIXEL
>             endif else begin
>                 break ; break from for sIndex
>             endelse
>         endfor
>         ; from the center to up
>         for sIndex = 0, sHalfHght do begin
>             if HIGH_PIXEL eq vTemp[sXCol, sYRow - sIndex] then
> begin
>                 PixelArr[sXCol, sYRow - sIndex] = HIGH_PIXEL
>             endif else begin
>                 break ; break from for sIndex
>             endelse
>         endfor
>     endfor; end for sCol
>     endfor; end for sRow
> endfor;end for sCount

```

Subject: Re: Speed Improvement

Posted by [rogass](#) on Wed, 26 Jan 2011 20:53:50 GMT

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On 25 Jan., 13:59, Jeremy Bailin <astroco...@gmail.com> wrote:

> On Jan 25, 4:24 am, Rony K Varghese <ronykvargh...@gmail.com> wrote:

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> > Dear All,
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> > optimizing..Now the performance is not satisfactory..
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> > ;Processing a picture
> > for sCount = 0, 9 do begin
> > for sRow = UpperRow, LowerRow do begin
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> > ; Check whether high pixels.
> > if E_F_ATTNMAP_HIGH_PIXEL eq PixelArr[sCol, sRow] then
> > begin
> > sXCol = sCol
> > sYRow = sRow
> > endif
> > ; from the center to the left
> > for sIndex = 0, sHalfWid do begin
> > if HIGH_PIXEL eq vTemp[sXCol - sIndex, sYRow] then
> > begin
> > PixelArr[sXCol - sIndex, sYRow] = HIGH_PIXEL
> > endif else begin
> > break ; break from for sIndex
> > endelse
> > endfor
> > ; from the center to the right
> > for sIndex = 0, sHalfWid do begin
> > if HIGH_PIXEL eq vTemp[sXCol + sIndex, sYRow] then
> > begin
> > PixelArr[sXCol + sIndex, sYRow] = HIGH_PIXEL
> > endif else begin
> > break ; break from for sIndex
> > endelse
> > endfor
> > ; from the center to down
> > for sIndex = 0, sHalfHght do begin

```

>> if HIGH_PIXEL eq vTemp[sXCol, sYRow+ sIndex] then
>> begin
>>     PixelArr[sXCol, sYRow+ sIndex] = HIGH_PIXEL
>> endif else begin
>>     break ; break from for sIndex
>> endelse
>> endfor
>> ; from the center to up
>> for sIndex = 0, sHalfHght do begin
>>     if HIGH_PIXEL eq vTemp[sXCol, sYRow - sIndex] then
>> begin
>>     PixelArr[sXCol, sYRow - sIndex] = HIGH_PIXEL
>> endif else begin
>>     break ; break from for sIndex
>> endelse
>> endfor
>> endfor; end for sCol
>> endfor; end for sRow
>> endfor; end for sCount
>
>> Thanks in advance..
>> Rony
>
> It might help if you could get a sketch of what this is supposed to
> do.
>
> -Jeremy.

```

Same to me. If you want to perform a pattern matching maybe this works:

```

width = 2*halfwid+ (((halfwid mod 2) eq 0?) 1 :0)
wh = where(convol(/edge_zero,vtemp,rebin([high_pixel],width,width ,
samp)) $
eq (width*highpixel^2),c)
if c gt 0 then pixelarr[wh]=high_pixel

```

Cheers

CR

Subject: Re: Speed Improvement
 Posted by [Rony K Varghese](#) on Thu, 27 Jan 2011 03:56:57 GMT
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On Jan 25, 10:03 pm, jeanh
 <jghasb...@DELETETHIS.environmentalmodelers.ANDTHIS.com> wrote:

```
> Hi,  
>  
> first, you are not using sCount anywhere... remove this loop  
>  
> Instead of looping through all pixels, look for the needed ones  
>  
> pixelsToProcess = where(PixelArr eq E_F_ATTNMAP_HIGH_PIXEL,  
> countPixToProcess)  
>  
> sXYcol = array_indices(pixelArr, pixelsToProcess) ;get the 2D coords  
>  
> for i=0L, countPixToProcess -1 do begin  
>     ;process  
> endfor  
>  
> Jean  
>  
> On 25/01/2011 4:24 AM, Rony K Varghese wrote:  
>  
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> >> ;Processing a picture  
>> for sCount = 0, 9 do begin  
>>     for sRow = UpperRow, LowerRow do begin  
>>         for sCol = sLeftCol, sRightCol do begin  
>>             ; Check whether high pixels.  
>>             if E_F_ATTNMAP_HIGH_PIXEL eq PixelArr[sCol, sRow] then  
>> begin  
>>     sXCol = sCol  
>>     sYRow = sRow  
>>     endif  
>>     ; from the center to the left  
>>     for sIndex = 0, sHalfWid do begin  
>>         if HIGH_PIXEL eq vTemp[sXCol - sIndex, sYRow] then  
>> begin  
>>             PixelArr[sXCol - sIndex, sYRow] = HIGH_PIXEL  
>>         endif else begin  
>>             break ; break from for sIndex  
>>         endelse  
>>     endfor  
>>     ; from the center to the right  
>>     for sIndex = 0, sHalfWid do begin  
>>         if HIGH_PIXEL eq vTemp[sXCol + sIndex, sYRow] then  
>> begin
```

```

>>           PixelArr[sXCol + sIndex, sYRow] = HIGH_PIXEL
>>       endif else begin
>>           break ; break from for sIndex
>>       endelse
>>   endfor
>>   ; from the center to down
>>   for sIndex = 0, sHalfHght do begin
>>       if HIGH_PIXEL eq vTemp[sXCol, sYRow+ sIndex] then
>>   begin
>>       PixelArr[sXCol, sYRow+ sIndex] = HIGH_PIXEL
>>   endif else begin
>>       break ; break from for sIndex
>>   endelse
>>   endfor
>>   ; from the center to up
>>   for sIndex = 0, sHalfHght do begin
>>       if HIGH_PIXEL eq vTemp[sXCol, sYRow - sIndex] then
>>   begin
>>       PixelArr[sXCol, sYRow - sIndex] = HIGH_PIXEL
>>   endif else begin
>>       break ; break from for sIndex
>>   endelse
>>   endfor
>>   endfor; end for sCol
>>   endfor; end for sRow
>>   endfor;end for sCount

```

Thank you all for the help to me.....

This function is to scan and process each pixel of the 128*128 picture
as in the source code.

I cannot remove the for loop of scount, because that much times the
code needs to be executed.
