Subject: Re: Filling a contour
Posted by Jeremy Bailin on Sat, 07 Jun 2008 13:19:34 GMT
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> I have created a single contour and converted it into a 'contour
> image'. That is to say that I have created an N x M image array and
> populated it with 0's and placed a 1 where a contour point resides. I
> would like to be able to fill the interior of the contour with 1's.
> Any ideas? Thanks

If the contour is closed in the image, then an interior point is defined as having an odd number of contour crossings to the edge in each direction. So I would create a new NxM array of "number of contour crossings between x=0 and this point" and the same for y (which, since everything is either 0 or 1, is simply the cumulative sum). Then test for positions where both of these are odd and set those to 1.

```
xcrossings = total(contour_image, 1, /cumulative)
ycrossings = total(contour_image, 2, /cumulative)
interior = where(xcrossings mod 2 and ycrossings mod 2, ninterior)
if ninterior gt 0 then contour_image[interior]=1
```

-Jeremy.

Subject: Re: Filling a contour
Posted by Jeremy Bailin on Sun, 08 Jun 2008 16:59:51 GMT
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> xcrossings = total(contour_image, 1, /cumulative)
> ycrossings = total(contour_image, 2, /cumulative)
> interior = where(xcrossings mod 2 and ycrossings mod 2, ninterior)
> if ninterior gt 0 then contour_image[interior]=1

Actually, that's going to fall down badly where the contour is tangent to the x or y axis. So you probably need to resort to some sort of iterative scheme of finding one interior point and then searching for points around it.

-Jeremy.

Subject: Re: Filling a contour
Posted by Jye on Wed, 11 Jun 2008 23:32:10 GMT
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On Jun 7, 8:11 am, "mzagu...@gmail.com" <mzagu...@gmail.com> wrote:
> I have created a single contour and converted it into a 'contour
> image'. That is to say that I have created an N x M image array and
> populated it with 0's and placed a 1 where a contour point resides. I
> would like to be able to fill the interior of the contour with 1's.
> Any ideas? Thanks

Check out POLYFILLV. It will return the subscripts of the array within
the contour which you can then set to 1.

array[subscripts] = 1

Cheers
Jye

Subject: Re: Filling a contour
Posted by Loren Anderson on Thu, 12 Jun 2008 01:02:01 GMT
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You could also create a ROI object and use the compute_mask function.

contour, image, Path_XY = path_xy ....
roi = Object_New('IDLANROI', path_xy)
mask = roi->Compute_Mask(dimensions = size(image, /Dim))
indices = where(mask EQ 255B)

There is a run_length keyword to compute_mask that you can use if you
don't want to create the entire mask.

-Loren

Subject: Re: Filling a contour
Posted by Robbie on Thu, 12 Jun 2008 02:00:29 GMT
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As discussed in previous threads, Polyfillv has unusual behavior.

"PolyFillV is not using the provided polygons coordinates but a fix()
of them.... which induce an extra line on the left and at the bottom."

Some people recommend applying round() to your polygon coordinates so
that it returns better results. I tend to think that using
IDLanROI::ComputeMask is a good idea.

Robbie
