Subject: Re: Line index
Posted by pit on Fri, 15 Mar 1996 08:00:00 GMT
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In article <31499FB9.2F6D@dlr.de>,
Hermann Mannstein <H.Mannstein@dlr.de> writes:
> Hello,

> is there a robust function which returns the indices within an image
> (like the where function) belonging to a line defined by two or more
> points.

for shure there is, even built-in IDL:
Index=polyfillv(xx,yy,xsize,ysize)
will give you the indices of the indices of the points surrounded by
the polygon given in the two vectors xx and yy for the x and y
coordinates, resp.
Read the manpage for further reference.

Peter

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Peter "Pit" Suetterlin http://www.kis.uni-freiburg.de/~ps
Kiepenheuer Institut fuer Sonnenphysik
Tel.: +49 761 3198-210 ps@kis.uni-freiburg.de
-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * -- * ...-- * --
Come and see the stars! http://www.kis.uni-freiburg.de/~ps/SFB
Sternfreunde Breisgau e.V.
Tel.: +49 761 73571 or 278588

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Subject: Re: Line index
Posted by David Foster on Fri, 22 Mar 1996 08:00:00 GMT
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pit@asterix.kis.uni-freiburg.de (Peter Suetterlin) wrote:
>
> In article <31499FB9.2F6D@dlr.de>,
> Hermann Mannstein <H.Mannstein@dlr.de> writes:
>
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>> (like the where function) belonging to a line defined by two or more
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> Read the manpage for further reference.
>

According to the "manpage", POLLYFILLV() expects at least 3
points so it would never work for a simple line. Also, it
connects each successive line and the first with the last,
to make a polygon, and then returns the indices of the
points within this polygon.

You wouldn't be getting the indices of the points on the line(s),
but of the points within the polygon defined by the points.

Dave Foster
foster@bial1.ucsd.edu

Subject: Re: Line index
Posted by David Foster on Fri, 22 Mar 1996 08:00:00 GMT
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Hermann Mannstein <H.Mannstein@dlr.de> wrote:
>
> Hello,
> is there a robust function which returns the indices within an image
> (like the where function)
> belonging to a line defined by two or more points.

I don't have a function, but I can suggest a possible solution.
Given your two points, if you use the familiar Y = mX + B formula
to calculate the (X,Y) coordinate pairs for either each X or for
each Y along the "span" of the line (use the one that gives you
more points), and then convert these pairs to one-dimensional
indices using the formula

 Indices = (Y_coors * Xdim) + X_coors

where the "image" is Xdim x Ydim. Obviously you'll have to do
some checking to make sure the points are within the image.

Hope this is useful.

Dave Foster
foster@bial1.ucsd.edu
