Subject: Re: intersecting polygons
Posted by David Fanning on Mon, 18 Feb 2002 01:38:08 GMT
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Jonathan Pearce (jvp10@psu.edu) writes:

> Does anybody know of, or have a routine that could take polygonal
> areas and find the common area between them? Consider the first
> polygon defined by the set of points x1,y1 where x1 and y1 are arrays.
> The second polygon is defined by the set of points x2 and y2. What I
> am looking for is the points where the lines given by x1,y1 and x2,y2
> intersect. Owing to limited time I am wondering if anybody has written
> such a routine, that would return a polygon describing the area common
> to both polygons.

This probably falls under the category of the world's biggest hack, but I've used it to good effect.

I use POLYFILLV with the two polygons to get a list of indices (or pixels) that belong to the two polygons. I then find the intersection of the two sets of pixels with the SetIntersection program (modified with some error checking in my real-world program), that you can find here:

http://www.dfanning.com/tips/set_operations.html

Knowing the pixel "size" allows me to calculate areas, etc. You can probably use IDLanROI for the same purpose. It's worked for me, although I don't make any claims as to its elegance. :-)

Cheers,

David

--
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Fanning Software Consulting
Phone: 970-221-0438, E-mail: david@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: intersecting polygons
Posted by jvp10 on Mon, 18 Feb 2002 12:03:03 GMT
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David,

It's elegant enough! Many thanks.

Jon Pearce.

David Fanning <david@dfanning.com> wrote in message
news:<MPG.16da08ed83e1ed8a98980b@news.frii.com>...
> Jonathan Pearce (jvp10@psu.edu) writes:
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>
> Cheers,
>
> David

Subject: Re: intersecting polygons
Posted by Pavel A. Romashkin on Mon, 18 Feb 2002 22:40:21 GMT
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Have you tried IDLanROI? It has ContainsPoints method. It looks to me you can call it twice setting ROI to one polygon, then another, and using the

remaining poilygon as data points to test. Then, once you have the results
from the two ContainsPoints operations, join tham to get the polygon
defining the intersection area.
Pavel

"Jonathan Pearce" <jvp10@psu.edu> wrote in message
news:e8de391d.0202171458.294f04@posting.google.com...
> Hi,
>
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> such a routine, that would return a polygon describing the area common
> to both polygons.
>
> I'd be most grateful for any responses!
>
> Jon Pearce.

Subject: Re: intersecting polygons
Posted by meron on Mon, 18 Feb 2002 23:45:20 GMT
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In article <e8de391d.0202171458.294f04@posting.google.com>, jvp10@psu.edu (Jonathan
Pearce) writes:
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> such a routine, that would return a polygon describing the area common
> to both polygons.
>
I happen to have a set of routines which operate on 2D shapes and,
yes, there is one there that given two polygons will return the
vertices of their intersection, and there is another which will
calculate the area of any polygon.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"
