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Subject: Re: intersection/union of two polygons  
Posted by [David Fanning](#) on Thu, 23 Jan 2003 16:10:33 GMT  
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Roberto Monaco (rmonaco@coresw.com) writes:

- > Does anyone know where I can find intersection and union between two
- > polygons in IDL?
- >
- > Ideally a function that returns the polygon resulting of the intersection
- > (union) of the input polygons. If not, the area (intersection / union) would
- > be helpful.

If the polygons are in the same plane, and you want a purely graphical solution (in the sense of pixel values), then you could try this:

1. Find the indices in each polygon with POLYFILLV.
2. Find the intersection or union of the two indices vectors with SetIntersection or SetUnion from my web page:

[http://www.dfanning.com/tips/set\\_operations.html](http://www.dfanning.com/tips/set_operations.html)

You will probably have to add some rudimentary error checking to the programs you find here.

3. Find the boundary around this set of pixels with Find\_Boundary. (And, possibly, Label\_Region if there is more than one contiguous region in the union. Ben Tupper has send me a program that does this automatically, I think, if I can find it in the chaos around here. Let me know if you think you need it.)

[http://www.dfanning.com/programs/find\\_boundary.pro](http://www.dfanning.com/programs/find_boundary.pro)

Find\_Boundary can return the area as well as the perimeter, in addition to specifying the polygon of the result.

This idea may not be anything like what you want, but the advantage is that it is simple. :-)

Cheers,

David

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David W. Fanning, Ph.D.

Fanning Software Consulting, Inc.  
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

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