## Subject: Area intersection of two trapezoids with given coordinates Posted by mrosimmel on Sat, 17 Nov 2007 02:44:51 GMT

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Hello all,

I was wondering if there is a function in IDL that I can find the intersection area of two trapezoids with given corner coordinates. Briefly I have two trapezoids where the first one has corners of (x1,y1), (x2,y2), (x3,y3), (x4,y4) and the second one has corners of (a1,b1), (a2,b2), (a3,b3), (a4,b4)...I know ARCGIS has such functions (like union/intersection).. If not could anyone have an idea how can I do it in IDL?

Thanks all,

Mario

Subject: Re: Area intersection of two trapezoids with given coordinates Posted by Vince Hradil on Mon, 19 Nov 2007 03:22:44 GMT View Forum Message <> Reply to Message

Can't this be solved analytically using trigonometry? If you want to do it numerically you could just make two masks using WHERE() then do AND to the get the intersection.

mrosim...@gmail.com wrote:

- > Hello all,
- >
- > I was wondering if there is a function in IDL that I can find the
- > intersection area of two trapezoids with given corner coordinates.
- > Briefly I have two trapezoids where the first one has corners of
- > (x1,y1), (x2,y2), (x3,y3), (x4,y4) and the second one has corners of
- > (a1,b1), (a2,b2), (a3,b3), (a4,b4)...I know ARCGIS has such functions
- > (like union/intersection).. If not could anyone have an idea how can I
- > do it in IDL?
- > Thanks all,

>

> Mario

Subject: Re: Area intersection of two trapezoids with given coordinates Posted by David Fanning on Mon, 19 Nov 2007 03:27:57 GMT View Forum Message <> Reply to Message

mrosimmel@gmail.com writes:

- > I was wondering if there is a function in IDL that I can find the
- > intersection area of two trapezoids with given corner coordinates.
- > Briefly I have two trapezoids where the first one has corners of
- > (x1,y1), (x2,y2), (x3,y3), (x4,y4) and the second one has corners of
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- > (like union/intersection).. If not could anyone have an idea how can I
- > do it in IDL?

If these trapezoids have to do, for example, with images, you can use POLYFILLV to get a list of all the vertices inside them. Then you can perform set operations on the vertices:

http://www.dfanning.com/tips/set\_operations.html

Cheers.

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.dfanning.com/

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Area intersection of two trapezoids with given coordinates Posted by David Fanning on Mon, 19 Nov 2007 03:31:41 GMT View Forum Message <> Reply to Message

## David Fanning writes:

- > If these trapezoids have to do, for example, with
- > images, you can use POLYFILLV to get a list of
- > all the vertices inside them. Then you can perform
- > set operations on the vertices:

>

> http://www.dfanning.com/tips/set\_operations.html

Read "indices" for "vertices". Too much hiking combined with painting today. :-(

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Area intersection of two trapezoids with given coordinates Posted by Bringfried Stecklum on Tue, 20 Nov 2007 11:22:39 GMT View Forum Message <> Reply to Message

mrosimmel@gmail.com wrote:

- > Hello all,
- >
- > I was wondering if there is a function in IDL that I can find the
- > intersection area of two trapezoids with given corner coordinates.
- > Briefly I have two trapezoids where the first one has corners of
- > (x1,y1), (x2,y2), (x3,y3), (x4,y4) and the second one has corners of
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- > (like union/intersection).. If not could anyone have an idea how can I
- > do it in IDL?
- > Thanks all.

> Mario

Dear Mario,

by accident I came across this page

http://www.mporzio.astro.it/~licausi/IDL\_Library/lib\_index.h tml

which seems to offer what you are looking for (OVERLAP.PRO).

regards,

Bringfried Stecklum

Subject: Re: Area intersection of two trapezoids with given coordinates Posted by mrosimmel on Tue, 27 Nov 2007 17:21:43 GMT

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On Nov 20, 6:22 am, Bringfried Stecklum <steck...@tls-tautenburg.de> wrote:

- > mrosim...@gmail.com wrote:
- >> Hello all,

>

- >> I was wondering if there is a function in IDL that I can find the
- >> intersection area of two trapezoids with given corner coordinates.
- >> Briefly I have two trapezoids where the first one has corners of
- $\Rightarrow$  (x1,y1), (x2,y2), (x3,y3), (x4,y4) and the second one has corners of

```
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>> do it in IDL?
>> Thanks all,
>> Mario
> Dear Mario,
> by accident I came across this page
>
   http://www.mporzio.astro.it/~licausi/IDL_Library/lib_index.h tml
>
  which seems to offer what you are looking for (OVERLAP.PRO).
>
> regards,
       Bringfried Stecklum
```

## Hi Bringfried,

Thank you very much for the web site.

I have been trying to write that script myself for almost two weeks.

The overlap.pro does exactly what I wanted with much better precision than my own script.

Once again thanks everybody for your help.

Regards,

Mario