## Subject: Re: polygon intersection routine in IDL Posted by mmeron on Wed, 14 Feb 2007 10:21:58 GMT

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In article <1171433274.480043.121140@q2g2000cwa.googlegroups.com>, "Weihua FANG"
<weihua.fang@gmail.com> writes:
> Hi, dear mati,
>
> I tested your function by 2 samples. One returned the overlap polygon
> successfully, but the second one failed, is there anything wrong in my
> code?
> thank you in advance.
>
> pro test_polygon_overlap
>
>
   shape1 = 3D fltarr(2,4)
>
   shape2 = 3D fltarr(2,4)
>
   shape1[0,0] = 3D 0.1
   shape1[0,1] = 3D 1.1
>
   shape1[0,2] =3D 1.2
>
   shape1[0,3] = 3D 0.2
>
   shape1[1,0] = 3D 0.2
>
>
   shape1[1,1] = 3D 0.15
   shape1[1,2] =3D 1.1
>
   shape1[1,3] =3D 1.2
>
>
   shape2[0,0] = 3D 0.5
>
   shape2[0,1] = 3D 1.5
>
   shape2[0,2] =3D 1.6
   shape2[0,3] =3D 0.4
>
   shape2[1,0] = 3D 0.5
>
   shape2[1,1] =3D 0.6
>
   shape2[1,2] = 3D 1.7
>
   shape2[1,3] =3D 1.5
>
>
   shape3 =3D shape overlap (shape1, shape2, exists =3D exs)
>
>
   print, exs
>
>
> shape1 =3D fltarr(2,17)
> shape1 [*,0] =3D [116.44991,41.441910]
> shape1 [*,1] =3D [116.57357,41.374821]
> shape1 [*,2] =3D [116.64723,41.312994]
> shape1 [*,3] =3D [116.57488,41.002544]
> shape1 [*,4] =3D [116.36967,40.928878]
```

```
> shape1 [*,5] =3D [116.16840,40.984128]
> shape1 [*,6] =3D [116.21576,41.053847]
> shape1 [*,7] =3D [116.06185,41.099889]
> shape1 [*,8] =3D [116.10263,41.168293]
> shape1 [*,9] =3D [116.13683,41.214334]
> shape1 [*,10] =3D [116.16577,41.264322]
> shape1 [*,11] =3D [116.18156,41.319572]
> shape1 [*,12] =3D [116.22891,41.344565]
> shape1 [*,13] =3D [116.31442,41.357720]
> shape1 [*,14] =3D [116.29337,41.387976]
> shape1 [*,15] =3D [116.34468,41.422178]
> shape1 [*,16] =3D [116.44991,41.441910]
>
> shape2 =3D fltarr(2,6)
> shape2 [*,0] =3D [116.21839,41.528731]
> shape2 [*,1] =3D [116.61698,41.524784]
> shape2 [*,2] =3D [116.72748,41.141984]
> shape2 [*,3] =3D [116.30916,41.203810]
> shape2 [*,4] =3D [116.13552,41.289316]
> shape2 [*,5] =3D [116.21839,41.528731]
> xrange =3D [116.06185 ,116.72748]
> yrange =3D [40.928879 ,41.528732]
> plot, shape1[0,*], shape1[1,*], xrange =3D xrange, yrange =3D yrange
> oplot, shape2[0,*], shape2[1,*]
> shape3=3D shape_overlap (shape1, shape2, exists =3D exs)
>
> print, exs
> end
Well, thank you. I didn't use this routine for nearly a decade,
didn't notice that it has a bug. OK, go to line 72 of the routine.
the one which has a statement starting with
if Shape_area....
And replace it with
if Shape_area(sec) It 0 then sec = reverse(sec,2)
Should work now, let me know if it doesn't
Mati Meron
                        | "When you argue with a fool,
meron@cars.uchicago.edu
                               chances are he is doing just the same"
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