Subject: TRIANGULATE says "Points are co-linear, no solution"
Posted by Jonathan Joseph on Thu, 11 Nov 1999 08:00:00 GMT
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TRIANGULATE says "Points are co-linear, no solution"

This really bugs me, because it's just not true.
Well, it may be true for a subset of the points I'm
trying to triangulate, but certainly not all.

Is the IDL triangulate code just really weak?
I wish I had an example of this with a small
number of points.

I thought I should be able to get a triangulation with
just about any set of points, except for one in which
all of the points lie along the same line. This is
certainly not true for my dataset - in fact, I think
it looks darned reasonable, and I want to
resample onto a regular grid dammit!

Anyway, if anyone wants to take a look, Please!

The data set is a file called test.dat (saved on hp-ux
using writeu. I hope there are no byte swapping problems
for other platforms)

ftp://scorpio.tn.cornell.edu/jj/idl/

```
IDL> x=fltarr(9853)
IDL> y=fltarr(9853)
IDL> openr,unit,'test.dat',/get_lun
IDL> readu,unit,x,
IDL> triangulate,x,y,tr,b

% TRIANGULATE: Points are co-linear, no solution.

;; see the data (doesn't look bad to me)
IDL> plot,xx,yy,/device,psym=3
```

HELP!!

Thanks.

BTW, this was orignally a double array - that didn't work either.

-Jonathan

Subject: Re: TRIANGULATE says "Points are co-linear, no solution"
Posted by cjengo on Fri, 12 Nov 1999 08:00:00 GMT
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I get the same error running IDL 5.2.1 on Solaris...

In article <382C2028.7AD6@scorpio.tn.cornell.edu>,
Jonathan Joseph <jj@scorpio.tn.cornell.edu> wrote:
> Sorry about the IDL code mixup, some cut/paste
> problems - and the fact that I changed variable names from
> from xx and yy to x and y (after pasting) but forgot to change
> them all. In other words, I noticed that in the code I supplied
> that the readu command was missing the "y" at the end of it, and
> the plot command was plotting xx and yy instead of x and y
> (and probably shouldn't have had the /device on it). And
> I left off the "close, unit" command to
> clean up the open file unit - though that shouldn't
> have mattered. Sorry, I was in a rush and can only
> plead incompetancy.
>
> Anyway, I *AM* running idl 5.2 (well, 5,2,1), so presumably,
> I should not have this problem. I have created an IDL save file
> now at the same place ftp://scorpio.tn.cornell.edu/jj/idl/
> The file is called test.sav
>
> The following code should work:
> And by that, I mean (not work).
> At least, it causes the error listed below on my
> system (IDL 5.2.1 running on HP-UX 10.20)
>
> ;; restore the data
> IDL> restore,'test.sav'
> ;; create a window
> IDL> window
> ;; plot the data to see that it looks reasonable
> IDL> plot,x,y,psym=3
> ;; try to triangulate the points
> IDL> triangulate,x,y,tr,b
> % TRIANGULATE: Points are co-linear, no solution.
>
> I have tried the jitter business before to good effect.
> I guess I'll go that route for now, I just didn't want to
> accidentally jitter it too much and get "negative triangles"
> when I applied the triangulation to the real positions.
>
> As for what the data is... Well, it has something to do
> with stereo offsets between images. The interesting coastline
> effect is due to certain (dark) areas of the images are
> not being processed - and there is also a polygonal clipping region

> applied. The actual images are of asteroid 253 Mathilde.
>
> And I apologize for the ranting - I was a bit over the
> edge yesterday afternoon.
>
> -Jonathan
>

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