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Subject: Re: Polygon hull

Posted by [davidf](#) on Sun, 17 Dec 2000 23:57:45 GMT

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Barbara A Cohen (bcohen@lpl.arizona.edu) writes:

> Hi, I have an array of data and I want to plot a polygon that encompasses  
> all the points within it. I have tried JHU's convexhull but it fails to  
> encompass all the data (example below). Does anyone else have a program  
> to do this?

You can find the convex hull with the Triangulate command, like  
this:

```
x=[0.36,0.35,0.39,0.42,0.60,0.41,0.48,0.73,0.46,0.42,0.42,0.42, $  
  0.47,0.44,0.47,0.49,0.54,0.64,0.65]  
y=[0.19,0.26,0.26,0.26,0.14,0.22,0.15,0.10,0.16,0.30,0.27,0.27, $  
  0.23,0.23,0.22,0.16,0.16,0.08,0.08]  
TVLCT, [255, 255, 100], [0, 255, 100], [0, 0, 100], 1  
Device, Decomposed=0  
Plot, x, y, color=2, /nodata, background=3  
Triangulate, x, y, triangles, hull  
Plots, [x[hull],x[hull[0]]], [y[hull],y[hull[0]]], Color=1  
Plots, x, y, psym=4, Color=2
```

Cheers,

P.S. I can't tell whether "encompass" means that the  
points can't exist on the perimeter line. I still can't  
ftp to the JHU site with a browser. I don't know why. :-(

David

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