Subject: Re2: Bug in Trigrid ?
Posted by hahn on Fri, 25 Mar 1994 21:47:42 GMT
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In article <dogru.764572117@pico> dogru@pico.cs.umn.edu (Sait Dogru) writes:

> I too faced this problem a while back, but I am not sure if you can
> call it a *bug*. This is just how trigrid handles so-called
> missing values.

Actually the example program I supplied was too simple. My real application has non-zero values on every point on the border. What I get from trigrid is a matrix with 3 correct sides and one side with zeros. Of course I can always rescale the matrix by

```
zmat = zmat(0:49,*)
```

to get rid of the line of zeros but I feel this should be different. *And* the results on a SUN are o.k. without rescaling.

This is why I would call it a bug!

> There is also an optional keyword that lets you
> change the value to be used for these missing points. (The default
> is 0.)

This doesn't help for me because there are no missing data in my application and if I could extend the data beyond the definition a constant wouldn't help. Acutally, the expected plot should look like a hammock.

> What I did was trim the output matrix of trigrid on all
> 4 sides and eliminate the rows/columns containing all zeros. Then,
> I plotted the smaller matrix using surface or a similar 3D plotting
> function. This usually produces better results, but sometimes the
> improvement is minimal, which was the case for the output of your
> program.

But I have to clip only one row (or column) !! That's to strange to call it a feature.

> Another problem with trigrid is the ranges of the X/Y axes. They
> always default to 50. Although you can change the size of the
> output matrix, X and Y ranges still won't correspond to the actual
> data ranges of your X/Y values, which calls for another set of
> tricks to handle correctly. (In your program, for example, x and y
> values were from 0 to 30 but the ticks on X/Y ranges read 0 to 50.)

If I understand trigrid well enough, it uses the x,y,z triplets to

interpolate a matrix on a regular grid. If you pass only this matrix to surface or a similar routine, this routine has no "knowledge" of the x,y underlaying the z-matrix. Thus, by default, the annotation gives you the index numbers, going from 0 to 50. So I feel it's pretty normal that you have to supply the real x and y values for correct annotation.

> I am using an RS600 and we recently switched from version 3.1. to
> 3.5.1. Both versions have this problem, so I don't know why trigrid
> seems to work fine for you on Suns, though.

Unfortunately I don't have quick and easy access to a sun so I can't tell if the individual zmat-values are identical and there is just an extra row of zeros added on a rs6000 or a pc. I'm scared however, the matrix values may differ between different workstations...

>
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Thanks for your help!
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Germay
