Subject: 3D plot symbols
Posted by rkj on Wed, 26 Jul 2000 07:00:00 GMT
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I would like to be able to create a 3-D scatter plot
with 3-D symbols. It would be nice if I could define
a cube with USERSYM. I can almost get what I want
using PLOTS but the symbols are "flat" in 3-D.

Can I get this functionality using the polygon
rendering routines? I am particularly worried about
speed since the plot will be animated (continuously
updated as symbol values change).

Thanks.

Kyle

Subject: Re: 3D plot symbols
Posted by davidf on Wed, 26 Jul 2000 07:00:00 GMT
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R. Kyle Justice (rkj@dukebar.crml.uab.edu) writes:

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> with 3-D symbols. It would be nice if I could define
> a cube with USERSYM. I can almost get what I want
> using PLOTS but the symbols are "flat" in 3-D.

I have a feeling the PLOTS symbols are "flat"
because you forgot to set a T3D keyword on the
PLOTS command. :-)

I can't see any reason why 3D symbols with PLOTS
would be prohibited, even in PV-Wave, which I
assume you are using.

> Can I get this functionality using the polygon
> rendering routines? I am particularly worried about
> speed since the plot will be animated (continuously
> updated as symbol values change).

I think speed will be a problem using PLOTS. I'd
offer you something in the line of object graphics
3D scatterplots, but I doubt it would apply. :-(

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: 3D plot symbols
Posted by rkj on Thu, 27 Jul 2000 07:00:00 GMT
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Pavel Romashkin (promashkin@cmdl.noaa.gov) wrote:
: Use circles instead of squares. There will be no way to tell if they are
: 2D or 3D, circles or spheres :-)
: Cheers,
: Pavel

Actually, you *can* tell the difference. When viewed in 3-D the "circles" appear as discs, not spheres.

On a related note, it is interesting that a circle is not one of the standard symbols. Maybe it is due to its complexity which leads to slower rendering. Who knows.

Kyle

Subject: Re: 3D plot symbols
Posted by promashkin on Thu, 27 Jul 2000 07:00:00 GMT
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Pavel

"R. Kyle Justice" wrote:
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> Kyle

Subject: Re: 3D plot symbols
Posted by promashkin on Thu, 27 Jul 2000 07:00:00 GMT
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Subject: Re: 3D plot symbols
Posted by rkj on Thu, 27 Jul 2000 07:00:00 GMT
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David Fanning (davidf@dfanning.com) wrote:
: R. Kyle Justice (rkj@dukebar.crml.uab.edu) writes:
:
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: I have a feeling the PLOTS symbols are "flat"
: because you forgot to set a T3D keyword on the
: PLOTS command. :-)

I am using the T3D keyword. The reason the symbols are flat is because they have no depth. USERSYM only takes x and y vertices. The plot is rendered properly, even the symbols. They appear flat because they only have 1 side (actually 2, I guess; front and back).

: I can't see any reason why 3D symbols with PLOTS
: would be prohibited, even in PV-Wave, which I
: assume you are using.

Yep, I am primarily using PV-Wave but I don't really see a way to get 3-D symbols in IDL either, at least not with USERSYM. Is there a way to make 3-D symbols? This would be a nice feature, especially since the 2-D symbols appear to be rendered as if they are 3-D.

: > Can I get this functionality using the polygon
: > rendering routines? I am particularly worried about
: > speed since the plot will be animated (continuously
: > updated as symbol values change).

: I think speed will be a problem using PLOTS. I'd
: offer you something in the line of object graphics
: 3D scatterplots, but I doubt it would apply. :-(

It appears to be fast enough for my purposes with 2-D symbols. If I have to use the polygon routines I'm sure to get a big slowdown, even if I knew what I was going (and I don't).

Why does the object graphics suggestion not surprise me ;-)

: Cheers,

: David

Kyle

Subject: Re: 3D Plot
Posted by btt on Thu, 08 Feb 2001 21:24:25 GMT
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Hi,

You might try http://www.dfanning.com/tips/scatter3d.html. On that page, David describes how to accomplish just what you want using direct graphics. I think he has a routine called FSC_Scatter that does the same but in object graphics. Object graphics really shine in the 3d realm.

Ben

Mike Garrett wrote:

> Hey all,
>
> I have been trying to create a 3D plot. I have a two dimensional array
> that holds the z values. I just want to plot a point at that point in 3D
> space, so if I have data(1,2) = 3 then i want to put a point at x = 1, y
> =2 and z = 3. However, with the surface command a line is always drawn to
> connect this point with other points. Is there another command I am not
> familiar with or any other ideas?
>
> Thanks
>
> Mike

--
Ben Tupper
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btupper@bigelow.org