Subject: Re: Elevation Shading in Object Graphics
Posted by Struan Gray on Mon, 09 Nov 1998 08:00:00 GMT
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David Fanning, davidf@dfanning.com writes:

> The only reason I don't like this is that it doesn't
> shade the wire frame surface, just the solid surface.

This is my current main whinge about object graphics, which, as I dig deeper, increasingly betrays a bias towards solids modelling at the expense of other easily-implemented applications. For all the reasons outlined in my surface plotting pages I would like to be able to specify independent colours for ploygon edges and fills when plotting surfaces. It would also be nice to be able to specify an object model as a linestyle, just as you can plot a polyline with an object model used as a symbol at each vertex.

Just dreaming

Struan

Subject: Re: Elevation Shading in Object Graphics
Posted by davidf on Mon, 09 Nov 1998 08:00:00 GMT
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Mirko Vukovic (mirko_vukovic@notes.mrc.sony.com) writes:

> Is it me, or the direct graphics plot in David's examples
> looks much better than the object graphics. Could some additional
> keyword produce a better result?
>
> This is just a bit of teasing from someone that did not venture into
> object grahpics as yet.

Teasing or not, I do notice a difference. I can actually get the solid shaded surface to look a lot better (more like direct graphics) if I turn shading OFF and use a Texture Map (an image object draped onto the surface) made from an image that is very much larger than the actual data. The relevant code might look like this:

```
thisPalette=Obj_New('IDLgrPalette')
thisPalette->LoadCT, 5
s = Size(data, /Dimensions)
bigImage = BytScl(Rebin(data, s[0]*10, s[1]*10))
```

```
  thisImage = OBJ_NEW('IDLgrImage', bigImage, Palette=thisPalette)
  thisSurface = OBJ_NEW('IDLgrSurface', data, x, y, Style=2, $
    Shading=0, Texture_Map=thisImage)
```

The only reason I don't like this is that it doesn't
shade the wire frame surface, just the solid surface.

But, perhaps, another reason to write my own Shade
object that uses direct graphics to display shaded
surfaces. :-)

Cheers,

David

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

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Subject: Re: Elevation Shading in Object Graphics
Posted by mirko_vukovic on Mon, 09 Nov 1998 08:00:00 GMT
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In article <MPG.10af776d8c8c3df098970a@news.frii.com>,
  davidf@dfanning.com (David Fanning) wrote:
> Hi Folks,
>
> Well, naturally, I hadn't posted my "Elevation Shading in
> Object Graphics" example on my web page for more than 10
> minutes when people more knowledgeable than I starting
> pointing out the obvious faults.
>
> In particular (and it is exceedingly odd that neither I
> nor the folks who were helping me at RSI noticed this) it
> is a LOT better to turn shading ON, although it is still
> true that you want to have lights OFF.
>
> I also discovered that it is better to add a color palette
> to the surface (thanks to Struan) than to the window, which
> I was doing previously. (Actually, it works the same, it
> just seems more natural and elegant to add it to the
> surface, where it really belongs.)
>
> Anyway, I think I have it sorted out now and you can view

> the article and code at these URLs:
>
>  http://www.dfanning.com/tips/elevation_object.html
>  http://www.dfanning.com/programs/object_shade_surf.pro
>
> As always, a big thanks to the anonymous lurkers who
> keep me on the straight and narrow. :-)
>
> Cheers,
>
> David
>
> -----------------------------------------------------
> David Fanning, Ph.D.
> Fanning Software Consulting
> E-Mail: davidf@dfanning.com
> Phone: 970-221-0438, Toll-Free Book Orders: 1-888-461-0155
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object grahpics as yet.

mirko



---

Subject: Re: Elevation Shading in Object Graphics
Posted by davidf on Tue, 10 Nov 1998 08:00:00 GMT
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Mirko Vukovic (mirko_vukovic@notes.mrc.sony.com) writes:

> The user interface sucks, but I just don't have the time to finish it up.

Pity to leave all that money on the table, Mirko. :^)

Cheers,

David

---
David Fanning, Ph.D.

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Subject: Re: Elevation Shading in Object Graphics
Posted by mirko_vukovic on Tue, 10 Nov 1998 08:00:00 GMT
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In article <MPG.10b0d2b6168b85c198970d@news.frii.com>,
davidf@dfanning.com (David Fanning) wrote:
> Mirko Vukovic (mirko_vukovic@notes.mrc.sony.com) writes:
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> object that uses direct graphics to display shaded
> surfaces. :-)
>
> Cheers,
>
> David
>

:-)

Actually, that is what I did (although something you wrote once triggered it) for 2D data.

I have this PlotW object. It remembers all the data passed to it, as well as the line styles, colors, etc. Thus it can re-draw itself, store in memory, whatever, even print itself (in that case it can change colors to linetypes and such).

Still rough, but a great replacement for IDL's plot. Actually, as I wrote it, I started seing a ``reason d'etre'' for object graphics, as some OG would nicely plop into this application (like legends).

The user interface sucks, but I just don't have the time to finish it up.

Mirko