Subject: Wish list (was Re: Variable stride)
Posted by Struan Gray on Wed, 19 May 1999 07:00:00 GMT
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Jack Saba, jack@icesat1.gsfc.nasa.gov writes:

> 1. direct access to the routines shade_surf uses to compute the
> shading of a surface and that shade_surf and surface use for
> hidden-line removal.
[snip]
> IDL will fix the problem that causes the wire-frame lines to come
> out below the surface in the Z buffer. Or maybe RSI can come up
> with another way to accomplish this.

Fond as I am of my own code, I have to say that the real solution to this lies in object graphics. I know that some people prefer the direct graphics for speed and simplicity, but it's daft to ignore the power of OpenGL when doing things like plotting multiple shaded, textured, intersecting surfaces.

My wish list would include:

1. Sort out printing from object graphics - or at least give us a workable 3D file format so that we can print from seperate rendering programs.

2. Allow independent setting of the line and fill colour for polygons.

3. Give us some more 3D graphics primitives. A set of Platonic solids would be nice, but at least a scaleable-resolution cylinder along the lines of the spherical 'orb' object.

4. Allow the user to specify a IDLgrModel object as a linestyle.

(1) is necessary to stop me getting fits of the giggles everytime I look in the technical press and see those lovely IDL adverts with the words 'publication-quality output' on them.

(2) is the only reason I occasionally still use the routines in my surface plotting tutorial - coloured grids can be done in object graphics, but I can't find a reliable way to do coloured surfaces with a different colour grid to show the curvature.

(3) 3D plots would be a lot nicer with cylindrical axes and a set

of basic building blocks would, I'm sure, encourage more people to start producing object graphics routines.

(4) sounds weird, but it would simplify plotting nightmares like spin lattices and other complex vector fields; it would allow labelled lines and other 'on-glass' elements such as double-headed dimensioning arrows to be easily included in 3D models; and it would let me use more complex shapes like extruded polygons and spirals to indicate different bonds in molecular models.

That said, if history is anything to go by, 5.3 will leave intact the bugs identified by Moses back in version 0.1b5, while presenting a radical new way to 'simplify' programming on Windows 3.1 (only) which ensures nice long coffee breaks for any user daft enough to plot arrays with more than about ten elements.

Cynical? Moi?

Struan
