Subject: Re: 3-d viz
Posted by Paul Sorenson on Fri, 12 Jul 2002 23:28:08 GMT
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Hello Patrick,

Are you describing a stack of 2D arrays? The stack is not very deep, so you want to interpolate more layers in the stack? CONGRID can do this, but the results are simple, straight "cross fades" as you progress from one known slice to the next. A more sophisticated way to interpolate new slices is to use morphing. There is an example of morphing in the IDL demo program d_people.pro.

Once you have your volume, you can get a "surface of constant value" with the XVOLUME command. For a quick example, you can do IDL> xvolume, /test. Click on the Opaque Isosurface radio button.

-Paul Sorenson

Patrick McEnaney" <patrick@es.ucsc.edu> wrote in message news:1eed0128.0207111543.6718dc31@posting.google.com...
> Folks-
>
> This is a continuation of the note I sent about trying to create a
> volume visualization from three structure data arrays. With the help
> of a couple of more experienced programmers I decided that what I was
> trying to do was heading in the wrong direction. This is what I think
> I need to do but I'm not sure how to go about it without getting very
> tied up with multiple loops and function calls. I have three data
> arrays representing three different CTD profiles (oceanographer types
> will know what this is), the values are monotonically ascending or
> descending with depth depending on the field. For each value in a
> profile I need to interpolate to a similar value in an adjacent
> profile so there will be a surface of constant value. That's not all
> though, to create the volume, I need to interpolate between
> depth/altitude values as well so that the profiles are horizontally
> and vertically interpolated, and then visualized three dimensionally
> similar to a geological block diagram. I don't know if this makes much
> sense but it's what the PIs want. My idea is to somehow perform
> multiple calls to INTERPOL but I'm confused as to how to do this. Any
> suggestions?
>
> Regards,
>
> Patrick

Subject: Re: 3-d viz
Posted by patrick on Sun, 14 Jul 2002 23:17:44 GMT
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Paul-

I suspect what I need may be something like that. I'm a little confused about it myself, hence my post. Since there are only three data sources there isn't much of a way to get any information between the three profiles.

For each of the profiles there are similar values at similar depths, perhaps not the exact depth. What I need to show is a countour between each of the profile positions. So the profile between 1-2, 2-3, and 3-1 will be similar but perhaps at slightly different depths giving the impression of a constant value surface that may have a slope in the water column. The same information can be portrayed just by contouring the three profiles just using the CONTOUR command, but the desire is to visualize it in 3-d. I've thought about trying to use slicer3 but I don't know how to set up the arrays, my abilities aren't that advanced.
Any suggestions?

Patrick

"Paul Sorenson" <aardvark62@msn.com> wrote in message news:<3d2f62fa_1@corp-goliath.newsgroups.com>...
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