Subject: Re: 3-d viz
Posted by Paul Sorenson on Fri, 12 Jul 2002 23:28:08 GMT
View Forum Message <> Reply to Message

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