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Subject: Re: Volume Visualization (PV-Wave)  
Posted by [marc](#) on Fri, 16 Jul 1993 22:44:05 GMT  
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In article <226te5\$84v@Tut.MsState.Edu>, cschris@sunvis2.vislab.olemiss.edu (Chris Buskirk) writes:

|>  
|> I've seen a brochure for "PV-WAVE Advantage" that claims  
|> volume visualization capabilities. What exactly has been done  
|> since version 3.1 of PV-WAVE to enable visualization of 3-D  
|> geometries (i.e. functions of three dimensions not 2-D surfaces)?  
|> And more importantly, just how well do these new features work?  
|> What does the product still lack for your area of interest?  
|>  
|> Being a novice, it may be possible that there are simplistic  
|> methods for visualizing 4-tuples (both evenly & non- uniformly  
|> gridded data) with our current software (PV-WAVE CL v3.1 &  
|> Point & Click v.1.61). At this point, my only option, as I see  
|> it, is to write a program which enables visualization of  
> isosurfaces within a dataset

I'm no PVWave salesperson, but...

Wave 4.0 has tons of visualization features, and yes, some for 4D data. With 4.0 you can do semi-transparent isosurfaces (showing several layers, for example), and data sectioning, ie. "slice and dice". For irregularly gridded data, there are various gridding packages that move it to a regular grid, and they're fairly quick and accurate, provided your data fits into an cude overall. My problem with them so far has been in their lack of support for VERY irregular data, ie. I don't want it on a cube, I have a few hundred points spread out all over, and would otherwise need to interpolate onto a hugely resolved cube. There is flexibility though, as one has a lot of control over polygon and isosurface plotting--its just at such a detailed level here that writing the procedure files and learning the tricks becomes a full-time job (Though certainly MUCH better than writing your own graphics, yuck!).

Don't know about IDL, but I assume they're either parallel, or will be tomorrow.

I recommend you get the upgrade for PVWave, especially because it should be free to a 3.1 user. You might note that their widget library is pretty decent too, so that you can make a little GUI for viewing your junk.

Good Luck,

M

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Subject: Re: Volume Visualization (PV-Wave)  
Posted by [ft](#) on Sat, 17 Jul 1993 16:45:06 GMT

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In article <227avm\$ic9@news.mic.ucla.edu> marc@alisa.ucla.edu (Marc Day) writes:

> In article <226te5\$84v@Tut.MsState.Edu>, cschris@sunvis2.vislab.olemiss.edu (Chris Buskirk) writes:

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> a few hundred points spread out all over, and would otherwise need to  
> interpolate onto a hugely resolved cube.

I'm no salesperson either, but my understanding is that the unbundled package "GT-Grid" from VNI is for just this type of data. I'm not sure what constraints it places on the irregularity of the data, but I'm told it is much better than the "stock" 4.0.1 CL routines.

I have been thinking of adding this on, since I deal with quite a bit of irregularly spaced 3/4D volumetric data, so does anyone have any experience they could enlighten me with?

--

Fred True "My name is Ozymandias, King of Kings:  
AT&T Consumer Information Management Look on my works, ye Mighty,  
ft@maxwell.ccs.att.com and despair!"  
ftrue@attmail.com

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