
Subject: MRI volume visulization

Posted by [partovi](#) on Wed, 23 Apr 1997 07:00:00 GMT

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i admit to being a novice.

i am trying to visualize 92 MR brain slices as a volume (eg. surface map) on a pentium pro, running NT 4.0, and IDL 4.x

the catch is, i am hoping (dreaming?) that i can rotate the volume interactively, or near-interactively. any ideas if this is possible? even just a yes / no would be appreciated so i don't waste time (or waste newgroup space).

thank you kindly.

S. Partovi MD
Neuroradiology Fellow
Barrow Neurological Institute
Phoenix, AZ

Subject: Re: MRI volume visulization

Posted by [davidf](#) on Thu, 24 Apr 1997 07:00:00 GMT

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S. Partovi writes:

> i admit to being a novice.

Oh, no. Here comes trouble. :-)

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I can tell I am getting old when it is the yes or no questions that give me the most trouble!

Well, Dr. Partovi, it *depends*. Do you mean rotate it with two or three degrees of freedom, backwards and forwards, like the spinning tea cups in AVS? Then, no, probably not. Especially with IDL 4. And not as a novice. :-)

But if you mean you want it to *look* like it's rotating at the beck and call of a user with one or perhaps two degrees of freedom, and you don't have moral qualms about performing some programming slight of hand, then *perhaps* you could work something out. (You might have to take one of my IDL programming classes.-)

IDL 5.0 is suppose to help with this whole 3D rotation thing, take advantage of the Open GL 3D acceleration, etc. My personal observation of the released beta is that it seems just a tad on the s-l-o-w side. I hear RSI is working hard to speed things up and that the latest builds are faster. I hope so.

I guess I would suggest that if you have a little time you just hang out and see what IDL 5 brings. In the meantime, plunge into IDL. You might find another way to analyse that data without making yourself dizzy. :-)

Cheers!

David

David Fanning, Ph.D.
Fanning Software Consulting
Customizable IDL Programming Courses
Phone: 970-221-0438 E-Mail: davidf@dfanning.com
Coyote's Guide to IDL Programming: <http://www.dfanning.com>

Subject: Re: MRI volume visulization
Posted by [kspencer](#) on Thu, 24 Apr 1997 07:00:00 GMT
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partovi@theBNI.com (S. Partovi) writes:

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> waste newgroup space).

Yes. I thought IDL has something like what you want already. Check

out the manual...

Kevin

Kevin Spencer
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University of Illinois at Urbana-Champaign
kspencer@s.psych.uiuc.edu

Subject: Re: MRI volume visulization
Posted by [David Foster](#) on Fri, 25 Apr 1997 07:00:00 GMT
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David Fanning wrote:

>
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> with IDL 4. And not as a novice. :-)
>
> <snip>

Dr. Partovi -

I would say your best bet without doing any programming would be to try out the SLICER program that comes with IDL. The interface is not very intuitive, and the documentation even worse, but you can get poor-to-fair volume visualization for MRI, especially if your resolution is good (and 92 slices is pretty good). But the speed is

not impressive, definitely too slow for real-time rotations. IDL 5.0 on our Sun Ultra, which has the OpenGL accelerated graphics that this version is supposed to take advantage of, was not much of an improvement over 4.0.1 .

If you want to play around, I would suggest starting with the Slicer program, or David Fanning's Slice program (<http://www.dfanning.com>). To sum it up, 3D rendering in IDL is a bit of a disappointment, at least for this application.

Dave

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