Subject: Re: Cropping of IDLgrVolume?
Posted by s[1] on Mon, 03 Feb 2003 09:17:34 GMT
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On Fri, 31 Jan 2003, Karl Schultz wrote:

>
> "Sebastian" <s@visita2.die.upm.es> wrote in message
> news:Pine.LNX.4.44.0301311717440.9316-100000@visita2.die.upm .es...
>> Hi all,
>>
>> does anybody know how to crop an IDLgrVolume?
>
> The CUTTING_PLANES property.
> As of 5.6, the CLIPPING_PLANES property.
>
>> What I would like to do is this:
>> Suppose your volume is a cube, then you can subdivide it into 8 equally
>> sized sub-cubes.
>> I would like to blend off one of these cubes.
>
> You can use the CUTTING_PLANES property to cut the volume so that only one
> of the eight sub-cubes are displayed.
> I don't think that you can restrict the extent of the planes to do selective
> cutting that might let you remove one sub-cube, leaving the seven others.
> Is this what you want?

That's exactly what I want. The only way to do this seem to store the
volume data, create a cut-off mask of the same size as the volume, and
create a temporary cut volume by multiplying the original volume with the
cut-off mask.
Not very elegant, but works (I was surprised how fast the multiplication
is).
BTW, what I wanted to render is something like this:
http://www.uke.uni-hamburg.de/institute/imdm/idv/forschung/v
m/images/brainbloodsupplyareas.gif

>
>> And, more advanced, blend off the region of a small cube I position
>> somewhere in my original volume.
>
> The planes can be positioned anywhere.
>
>> In vtk, for example, I can define 6 cropping planes (one parallel to each
>> surface), thus subdividing the volume in 27 rectangular sub-volumes, and
>> switch on or or arbitrary combinations of sub-volumes.
>
> I don't know about being completely arbitrary, but you can certainly do

> something like this with the understanding that each cutting plane defines a
> half-space and successive cutting planes cut the volume in terms of
> half-spaces.
>

Thats just the problem with cutting planes: They always cut the volumes in
half spaces because you cannot restrict their size.

>
>
>