Subject: Re: IDLgrPolygon image map scaling
Posted by b_gom on Mon, 28 Feb 2005 22:55:41 GMT
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Thanks Karl,

problem solved. I misinterpreted the power of two part.

Brad

Karl Schultz wrote:
> On Fri, 25 Feb 2005 11:00:32 -0800, b_gom wrote:
>
>> I'm having a bit of trouble with texture maps on a simple rectangular
>> IDLgrPolygon. I am trying to place a bitmap inside the axes of a custom
>> plot object. I create an IDLgrPolygon with the proper dimensions, and
>> add it to the model with my plot. I'm using a texture map so that I can
>> scale the plot dynamically, and so that it behaves itself in terms of
>> plotting order. The trouble is that IDL doesn't scale the image
>> uniformly. See:
>> http://people.uleth.ca/~brad.gom/texture_map.png
>> The pattern should be a checkerboard of alternating pixels. Is there
>> something I am missing? This effect occurs no matter what image
>> dimensions I use, dimensions of the polygon in data units, or
>> interpolation.
>
> This is *probably* caused by your texture image not having dimensions that
> are a power of 2. OpenGL has a restriction where texture maps have to
> have dimensions that are a power of 2. If you use a texture map that does
> not meet this requirement, IDL resamples the image upwards to the next
> power of 2 dimensions. This resampling step is probably introducing the
> aliasing artifacts.
>
> The way around this is to place your texture data into a larger image that
> has dimensions the next power of 2 higher than your texture data,

leaving
> unused areas in the image. Then use texture coordinates to use only
the
> defined parts of the image.
>
> For example, if your texture data is 500x750, make an image array
that is
> 512x1024 and use it to create your IDLgrImage. Fill the image array
so
> that your texture data fills up the [0:499, 0:749] subset of the
array.
> Use this image as the texture map and set the texture coords
corresponding
> to the rectangle to
>
> [[0,0], [500./512, 0], [500./512, 750./1024], [0, 750./1024]].
>
> Note that IDLgrSurface does this sort of thing for you automatically,
so I
> suppose that you could use the surface object instead.
>
> One of my tasks for the next release of IDL is to make the polygon
object
> do this sort of thing automatically as well. But for now, you'll
have to
> do something along the lines I've described here.
>
> Karl
