Subject: Re: Object graphics output police (iImage)
Posted by David Fanning on Fri, 13 May 2005 15:34:03 GMT
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Randall Skelton writes:

> Can someone explain if there is a way to 'fix' the iTools problem
> demonstrated in the code below. The problem is that the image plotted
> in the iMap call does not export to a vector postscript cleanly
> (File->Export->'To File'->myFile.eps). Instead of getting a white
> masked area outside of the map projection, I get black in the eps file.
> None of the bitmap outputs suffer the same. I've tinkered with the
> CHANNEL and CLIP_PLANES keywords but was unable to make this go away :(

Sadly, this is pretty much what I would have expected
in this case. The truth is, the vector implementation
is just limited when it comes to textured overlays,
which is what I think this is. :-(

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: Object graphics output police (iImage)
Posted by Karl Schultz on Fri, 13 May 2005 16:41:35 GMT
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On Fri, 13 May 2005 09:34:03 -0600, David Fanning wrote:

> Randall Skelton writes:
>
>> Can someone explain if there is a way to 'fix' the iTools problem
>> demonstrated in the code below. The problem is that the image plotted
>> in the iMap call does not export to a vector postscript cleanly
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>
> Sadly, this is pretty much what I would have expected
> in this case. The truth is, the vector implementation
> is just limited when it comes to textured overlays,
> which is what I think this is. :-(

>

I think that is correct. The image uses an alpha channel to mask out the parts not occupied by real data.

Vector devices don't have depth buffers and have other limitations. Many do not support alpha, and that's what is happening here. Not all PostScript versions support alpha. The IDL docs do mention that there are restrictions and that vector output is most valuable for simpler graphics.

Why are you (Randall) using vector output here anyway? If you are generating output where image data is covering 100% of the scene, you are going to end up putting about the same number of bits into the PS file for bitmap and vector output anyway. So there is no size advantage to using vector output. In fact, in a case like this one, the vector output file might be larger because the code to draw the lines and text would have to be in the file along with the image bits.

Karl

Subject: Re: Object graphics output police (iImage)
Posted by Randall Skelton on Fri, 13 May 2005 16:42:14 GMT
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I had really hoped this would work, but I wasn't entirely suprised that it failed. For those of us who need to publish figures, it is rather important that the vector postscript be correct. Karl has made some fantastic improvements with the vector postscript output in OG in 6.1.1 so perhaps he can work some magic with this as well.

Cheers,
Randall

Subject: Re: Object graphics output police (iImage)
Posted by Randall Skelton on Fri, 13 May 2005 17:24:27 GMT
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Many thanks for the replies. However, I thought this was a 'simple' graphic ;) In my real plot, the bitmap image is included to try and give some sense model grid-box size before adding contours, wind vectors, and symbols/text annotations for various observations. Thus, there are real, vectors that I'd like to preserve in the output as well. The truely correct way of doing this probably involves drawing each grid-box as a filled polygon but I was trying to cheat. Yes, the 'square' pixels aren't perfect, but they'd get my point across in this

case.

More generally, my obsession with vector graphics stems from them generally being a more flexible and useful format. Licensing restricts me to using IDL when connected to the net so if I need to edit some text quickly I can fire up Adobe illustrator or Corel draw and simply edit the text. Likewise, with fine adjustments of arrows and axes and the thickness of certain contour lines. Lastly, It is common practice for nice, illustrative figures to be recycled for years--- long after the people/scripts that created them have disappeared.

Trying to quickly edit a bitmap image is an absolute nightmare and it never looks as good as it should when you are done. The default image sizes being output by IDL (and iTools in particular) generally result in very poor quality figures for paper publications. I know it isn't rocket science but, if I had a nickel for every time I've seen a powerpoint talk or a paper with badly scaled bitmap figures, I'd be wearing gold suits.

I'll probably just revert to using filled contour lines and forget about the grid boxes for the moment.

Cheers,
Randall

NB: who do I write to for requesting getting native pdf output again?
