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Subject: Re: True Color Image Manipulation

Posted by [davidf](#) on Mon, 02 Apr 2001 16:06:37 GMT

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Don J Lindler ([lindler@rockit.gsfc.nasa.gov](mailto:lindler@rockit.gsfc.nasa.gov)) writes:

> Does anyone know a way to create a true color image using object graphics  
> such that the three  
> color planes can be manipulated independently (translation, scaling, and,  
> rotation in 2 dimensions).  
> In other words, I need each color (red, green, and blue images) in different  
> IDLgrModel objects.  
>  
> I was able to use IDLgrImage objects with the channel set ('ff0000'x for  
> red, '00ff00'x for green,  
> and '0000ff',x for blue). These IDLgrImage objects were added to three  
> separate  
> model objects. I was able to translate and scale each model separately but  
> not rotate them.  
> Rotation in 2 dimensions does not work properly for a IDLgrImage object.  
> Also this approach  
> has the problem that I need to supply all three color images to each  
> IDLgrImage object even  
> though I am only using one of them.  
>  
> I contacted RSI support and they first suggested using an IDLgrPolygon  
> object with the Texture  
> maps set to the images. This allows rotation in all three dimensions but  
> did not work. The channel  
> property of the IDLgrImage was ignored when used as a texture map and it did  
> not solve the  
> problem of supplying three images to each IDLgrImage object.  
>  
> I contacted RSI again and they suggested using a single IDLgrImage object  
> and performing the  
> image rotations manually with the ROT function and reloading the images into  
> the IDLgrImage  
> object with setproperty. This works but was 50% slower than just using  
> direct graphics instead  
> of object graphics.  
>  
> I would appreciate any suggestions or solutions.

I think you have pretty much covered the ground here.  
But tell me again, what compelling reason do you have  
to use object graphics in the first place?

Cheers,

David

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Toll-Free IDL Book Orders: 1-888-461-0155

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Subject: Re: True Color Image Manipulation  
Posted by [Don J Lindler](#) on Mon, 02 Apr 2001 17:07:22 GMT  
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The reason for using object graphics in this case are:

1) Rotations and scaling will be faster. It would be nice to line up an object on the image with the cursor dragging one color image. This part can easily be done) direct colors. Now select the registered object as the pivot for rotation. Then select a second object in one color and drag it to the object's location in a second color (rotation and scale change). Trying to update the image in direct graphics during the drag operation would be much too slow.

2) We are actually working with more than three spectral bands. Additional bands would be displayed simultaneously as color contour plots. Different colors for different bands. In direct graphics it would be easy to add a single black and white contour plot but not multiple color ones. We will also want to be able to easily add other overlay's (e.g. rubber band boxes and elliptical apertures). Also when scaling all bands simultaneously (e.g. zooming), bookkeeping is easier and with direct graphics we would have to replot all the contours.

3) We will have at least two displays of the results updated simultaneously. A full image and a zoomed image. Use of IDL objects makes this easy. It would be much easier to use the existing IDL graphic objects instead of constructing our own objects from scratch. In a sense, if we used direct graphics we would be basically simulating the capabilities of the IDL graphic objects (Meaning a lot of extra coding) without the added graphic speed available on the computer.

Maybe I can convince David Stern to fix the 2-D transformation for IDLgrImage objects and allow the IDLgrImage object to contain a single color.

Don

"David Fanning" <davidf@dfanning.com> wrote in message  
news:MPG.153251741114a448989db4@news.frii.com...

> Don J Lindler (lindler@rockit.gsfc.nasa.gov) writes:

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