Subject: Re: FLOAT images instead of BYTE ones from IDL Object graphics ?
Posted by David Fanning on Fri, 23 Jan 2009 16:29:20 GMT
View Forum Message <> Reply to Message

Gianluca Li Causi writes:

> Ok, so I think that a practical example could help: the following
> program makes a spherical volume made of concentric shells, following
> a sin(radius) law.
>
> I use a linear grayscale as RGB_TABLE so that the maximum value is
> white and the minimum is black.
> Then I also use a linear Opacity from 0 to 15, because I want to well
> view throug all the shells until the center.
>
> As you see, the final image is a byte array and its maximum value is
> 142.
> In my application the maximum gray is in the range 10 to 20, but I
> want an image with 256 gray levels not only 10 or 20 grays.

OK, two things. First, there is no requirement that the volume argument is required to be a byte array. A float array, scaled from 0 to 65535 works just as well in your example.

To *display* the data, of course, it has to be scaled into the range of 0 to 255, as all data does to be displayed in a graphics window of a normal, off-the-shelf computer. Naturally, the values you read *out* of the window will be in this range.

The *particular* value you read back from the window is indicative of the shade of gray that was used to render that particular pixel. This rendering choice is a function of the color of the objects, the way the opacity table is being used to modify the value of the pixels, the composite function, and the lighting you are using on your model.

I see nothing here to cause me to retract my earlier statement that you are confusing data with the display of the data. Sorry.

Cheers,

David
--
David Fanning, Ph.D.

Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")