
Subject: Re: Display Gifs, each w/diff color tables?
Posted by [davidf](#) on Mon, 12 Jul 1999 07:00:00 GMT
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Rose (rmlongfield@my-deja.com) writes:

> Here's a question I haven't seen discussed yet. I have several
> different GIF files given to me by several sources. I can read and
> display them individually. However, I can't look at them all at the same
> time. This is, I believe, due to the fact that the GIF files come with
> their own color tables. Every time a new one is loaded, the color table
> from the previous one is re-defined. I have tried the
> "split table" technique outlined in DWF's book, but it doesn't work
> because some of the GIF images fill in all the r,g,b arrays.
>
> Now, these are just xy plots and clearly all these colors are
> not necessary. Is there some way of defining which colors are important
> and which are just "pretty"? Maybe a reverse color24 function (DWF)?

Well, as Liam points out, if you had a 24-bit color display things would be easy. But I'm guessing that if you had a 24-bit color display, you wouldn't be needin' us. :-)

So, here is what I would do, assuming that the GIF files really only do use a handful of colors each. I'd create color separations of the GIF image, just as if you were going to create 24-bit JPEG images, for example:

<http://www.dfanning.com/tips/jpeg.html>

Then, I would take these 24-bit images and I would pass them through COLOR_QUAN, but I would use the COLORS keyword and restrict the number of output colors to something like 16 or so. Then, I would use the split color table method you tried previously, but now using the color table vectors you get back from COLOR_QUAN. If all goes well, that should work, although I have definitely NOT tried it just now.

I guess it wouldn't hurt to make a sacrifice and light a candle for the programming gods before you start coding it up, too. Or, you could put the money for the candle into the fund for the 24-bit display. :-)

Cheers,

David

--

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

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [Liam Gumley](#) on Mon, 12 Jul 1999 07:00:00 GMT
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Liam Gumley wrote:

```
> If you have a 24-bit display, try this in a new IDL session:  
>  
> ;- Set display to 24-bit decomposed mode  
> device, true=24, decomposed=0, retain=2  
> if !d.n_colors le 256 then message, '24-bit mode unavailable' <<<< ERROR!
```

I forgot that !d.n_colors is always 256 before you open a window. Just remove this line, and it should work (if you have 24 bit graphics). Or, move it *after* the WINDOW command.

Note to self: test all code examples before posting.

--

Liam E. Gumley
Space Science and Engineering Center, UW-Madison
<http://cimss.ssec.wisc.edu/~gumley>

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [Liam Gumley](#) on Mon, 12 Jul 1999 07:00:00 GMT
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rmlongfield@my-deja.com wrote:

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> from the previous one is re-defined. I have tried the  
> "split table" technique outlined in DWF's book, but it doesn't work  
> because some of the GIF images fill in all the r,g,b arrays.
```

Rose,

If you have a 24-bit display, try this in a new IDL session:

```
;- Set display to 24-bit decomposed mode
device, true=24, decomposed=0, retain=2
if !d.n_colors le 256 then message, '24-bit mode unavailable'
```

```
;- Open a window
window, /free, xsize=950, ysize=700
```

```
;- Display the first GIF
read_gif, 'file1.gif', image, r, g, b
tv!ct, r, g, b
tv, image, 0, 0
```

```
;- Display the second GIF
read_gif, 'file2.gif', image, r, g, b
tv!ct, r, g, b
tv, image, 475, 0
```

Cheers,
Liam.

--

Liam E. Gumley
Space Science and Engineering Center, UW-Madison
<http://cimss.ssec.wisc.edu/~gumley>

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [Liam Gumley](#) on Tue, 13 Jul 1999 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

rmlongfield@my-deja.com wrote:

```
> read_gif, './GIF_FILES/test1.gif',image,r,g,b
> tv!ct,r,g,b
> window,/free, retain=2
> tv,bytscl(image)
> read_gif, './GIF_FILES/test2.gif',image,r,g,b
> tv!ct,r,g,b
> window,/free, retain=2
> tv,bytscl(image)
> read_gif, './GIF_FILES/test3.gif',image,r,g,b
> tv!ct,r,g,b
> window,/free, retain=2
> tv,bytscl(image)
```

Rose,

Please try the following:

1. If you are sitting at the SGI console, logout, then log back in.

2. Start a new IDL session, and enter the following:

```
print, !d.n_colors, !d.table_size
device, true=24, decomposed=0, retain=2
window, /free, /pixmap
wdelete, !d.window
print, !d.n_colors, !d.table_size
```

3. Try displaying a couple of GIFS using this method:

```
read_gif, './GIF_FILES/test1.gif', image, r, g, b
tv!ct, r, g, b
window, /free
tv, image ; NO BYTSCL!
```

Please let us know if it works.

Cheers,
Liam.

--

Liam E. Gumley
Space Science and Engineering Center, UW-Madison
<http://cimss.ssec.wisc.edu/~gumley>

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [davidf](#) on Tue, 13 Jul 1999 07:00:00 GMT
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Rose (rmlongfield@my-deja.com) writes:

```
> I'm beginning to hum Bruce Springsteen's song: "52 channels
> and nothing on". My 24 colors must be brain-dead. I follow exactly
> what David said in a previous post. The first line of my startup file
> I have written: print!d.n_colors and I get 256. However, once I input
> the lines that David said, I get the promised 16777216. Then I run:
> @idlsave.sav , which is the following lines:
>
>
> read_gif, './GIF_FILES/test1.gif', image, r, g, b
> tv!ct, r, g, b
> window, /free, retain=2
> tv, bytscl(image)
> read_gif, './GIF_FILES/test2.gif', image, r, g, b
> tv!ct, r, g, b
> window, /free, retain=2
```

```
> tv,bytsc1(image)
> read_gif, './GIF_FILES/test3.gif',image,r,g,b
> tvlct,r,g,b
> window,/free, retain=2
> tv,bytsc1(image)
>
> The "crazy colors" I referred to earlier looks to me like the color
> table is over-written and the new colors are being loaded into the
> previously plotted image (which should not happen, according to the
> rules).
```

Actually, I think the "crazy colors" are coming from the BYTSC1 command. These GIF files should definitely **NOT** be byte scaled!

Just TV the image and I think you will be fine. :-)

If not, please let use know the results of these two commands after you open a graphics window:

```
Device, Get_Visual_Name=thisName, Get_Visual_Depth=thisDepth
Print, thisName, thisDepth
```

Or, on older versions of IDL:

```
Help, /Device
```

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Display Gifs, each w/diff color tables?
Posted by [davidf](#) on Tue, 13 Jul 1999 07:00:00 GMT
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Liam Gumley (Liam.Gumley@ssec.wisc.edu) writes:

```
> Sorry to contradict, but my frame tools work perfectly well in 8-bit or
> 24-bit mode, and they do not rely on any kind of startup file. Please
> feel free to give them a try at
> http://cimss.ssec.wisc.edu/~gumley/frame.html
```

Whoops! Sorry, Liam. I know better than to post answers before I test them. I renew my test-before-posting pledge. :-)

> I believe that my original reply effectively gave the same advice, but
> apparently it did not work for Rose. Rose, could you elaborate a little
> on the 'crazy colors' behavior? And also, did you try the examples David
> and I posted *immediately* after starting a new IDL session, before
> opening any graphics windows?

Indeed. I think my advice was *identical* to yours, except that I wanted to be sure Rose was in a 24-bit TrueColor environment. There can only be three reasons for window colors to change when you load a color table:

1. You are in an 8-bit PseudoColor environment.
2. You are in a 24-bit DirectColor environment.
3. You didn't follow the directions Liam and I sent *exactly* as we gave them to you. :-) But it *can't* happen in a 24-bit TrueColor environment.

Cheers,

David

--

David Fanning, Ph.D.
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Subject: Re: Display Gifs, each w/diff color tables?
Posted by [rmlongfield](#) on Tue, 13 Jul 1999 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi All,

I'm beginning to hum Bruce Springsteen's song: "52 channels and nothing on". My 24 colors must be brain-dead. I follow exactly what David said in a previous post. The first line of my startup file I have written: `print!d.n_colors` and I get 256. However, once I input the lines that David said, I get the promised 16777216. Then I run: `@idlsave.sav`, which is the following lines:

```
read_gif,'./GIF_FILES/test1.gif',image,r,g,b
tv!ct,r,g,b
window,/free, retain=2
tv,bytsc! (image)
read_gif,'./GIF_FILES/test2.gif',image,r,g,b
tv!ct,r,g,b
window,/free, retain=2
tv,bytsc! (image)
read_gif,'./GIF_FILES/test3.gif',image,r,g,b
tv!ct,r,g,b
window,/free, retain=2
tv,bytsc! (image)
```

The "crazy colors" I referred to earlier looks to me like the color table is over-written and the new colors are being loaded into the previously plotted image (which should not happen, according to the rules). And that is why the colors change. They do not flash when I move the mouse. They change when I type the TVLCT command.

The color vectors are completely different for each image. I didn't make these images and they come from different people with different computers. I'm going to try to send these programs home where I have a PC and idl demo (which is only 5.0 but I hope will work.)

Until tomorrow,
Rose

Sent via Deja.com <http://www.deja.com/>
Share what you know. Learn what you don't.

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [Liam Gumley](#) on Tue, 13 Jul 1999 07:00:00 GMT
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David Fanning wrote:

```
> Rose (rmlongfield@my-deja.com) writes:
>> I forgot to mention that I do have 24-bit colors.
>
> Oh, well, then. In that case, I think you must
> have your 24-bit display in brain-dead mode.
> I'm going to guess you used Liam's setup file to
> run his FRAME tool. His setup file puts a 24-bit
> machine in an 8-bit PseudoColor mode, which sort of
> defeats the purpose of a 24-bit color display.
```

Sorry to contradict, but my frame tools work perfectly well in 8-bit or

24-bit mode, and they do not rely on any kind of startup file. Please feel free to give them a try at <http://cimss.ssec.wisc.edu/~gumley/frame.html>

- > Try this:
- >
- > 1. Before you open *any* graphics windows in IDL
- > (check your startup file to be sure it doesn't open
- > a pixmap graphics window), type this command:
- >
- > Device, True=24, Decomposed=0

I believe that my original reply effectively gave the same advice, but apparently it did not work for Rose. Rose, could you elaborate a little on the 'crazy colors' behavior? And also, did you try the examples David and I posted *immediately* after starting a new IDL session, before opening any graphics windows?

Cheers,
Liam.

--

Liam E. Gumley
Space Science and Engineering Center, UW-Madison
<http://cimss.ssec.wisc.edu/~gumley>

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Rose (rmlongfield@my-deja.com) writes:

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Oh, well, then. In that case, I think you must have your 24-bit display in brain-dead mode. I'm going to guess you used Liam's setup file to run his FRAME tool. His setup file puts a 24-bit machine in an 8-bit PseudoColor mode, which sort of defeats the purpose of a 24-bit color display.

Try this:

1. Before you open *any* graphics windows in IDL (check your startup file to be sure it doesn't open a pixmap graphics window), type this command:

Device, True=24, Decomposed=0

2. Now you will be using a 24-bit TrueColor visual.
Confirm it by typing this:

```
Device, Get_Visual_Name=thisVisual, Get_Visual_Depth=thisDepth  
Print, thisVisual, thisDepth
```

Or, if you have an older version of IDL:

```
Help, /Device
```

In this mode you can display as many images as you like with as many color tables as you can dream up. They will all exist simultaneously on your display. Simply load the color table associated with an image and display the image. (Be **sure** you set color decomposition OFF.) Loading the second (any any subsequent) color table will NOT affect any of the image colors that are previously on the display.

Cheers,

David

--

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Subject: Re: Display Gifs, each w/diff color tables?
Posted by [steinhh](#) on Tue, 13 Jul 1999 07:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <MPG.11f455e18517a391989820@news.frii.com>
davidf@dfanning.com (David Fanning) writes:

[...]

- > So, here is what I would do, assuming that the GIF files
- > really only do use a handful of colors each. I'd create
- > color separations of the GIF image, just as if you were
- > going to create 24-bit JPEG images, for example:
- >
- > <http://www.dfanning.com/tips/jpeg.html>
- >
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> through COLOR_QUAN, but I would use the COLORS keyword and
> restrict the number of output colors to something like 16 or
> so. Then, I would use the split color table method you
> tried previously, but now using the color table vectors
> you get back from COLOR_QUAN. If all goes well, that should
> work, although I have definitely NOT tried it just now.

Yes, David, I think this is the way to go. One possible improvement, however, would be to bundle all the 24-bit images together in (3) single array(s) before passing them to color_quan. Then, you'd get a ready-made color table for use with all the images at once. If some or all your images are using identical colors, this method will save you a lot of slots in the color table.

Regards,

Stein Vidar

Subject: Re: Display Gifs, each w/diff color tables?
Posted by [rmlongfield](#) on Tue, 13 Jul 1999 07:00:00 GMT
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In article <7mdadu\$ppb\$1@nnrp1.deja.com>,
rmlongfield@my-deja.com wrote: (see previous post)

I forgot to mention that I do have 24-bit colors. This doesn't show up in the !version structure.

Thanks Liam, for your suggestion. I was actually trying to display these GIF files with your FRAME tool and getting all sorts of crazy colors. Unfortunately, your suggestion produced the same problems.

Yes, DWF, I also thought that with 256*256*256 colors that I could also get as many different color tables displayed as I wish. Anyway, I tried what Liam suggested and it works for a few files (probably made on the same computer) but not all of them. Here is how I have been trying to track this problem:

```
> I use:  read_gif, './GIF_FILES/file.gif', image, r, g, b
> and get: IDL> help, r, g, b
R          BYTE      = Array[256]
G          BYTE      = Array[256]
B          BYTE      = Array[256]
```

```
> I look at the values with:
FOR i=0L,N_ELEMENTS(r) -1L DO BEGIN
```

```
print,i,r[i],g[i],b[i],FORMAT='(i6,i6,i6,i6)'  
ENDFOR
```

What I see is three columns of numbers filled. My first image has numbers in the first 13 rows. My second image has the first 9 rows and the last 10 filled. When I display this image, the colors in the first image change also. My next image has only an array size of 64 for the rgb vector. The next image has numbers in ALL of the 256 columns!. (This is bizaar because when I look at image info with XV, it gets only 3 colors) If I understand this correctly (and I suspect that I don't), especially with this last one, the new colors are affecting the colors defined in the other gif images.

I thought that with 24 bit colors that this would not be a problem. David, I was looking at the color_quan function with curiosity yesterday but wasn't sure how I could use it. Do I have to make a jpeg image from the gif file and then display it as a jpeg file? Perhaps this gives me more control of the colors.

Well, for the moment I am just going to use SPAWN,'xv file.gif' which is hardly a solution but will do for now.

Sigh. Lighting candles is likely to set off the fire alarm in the building and get me into trouble.

Rose

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