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Subject: Re: display many color images

Posted by [sterner](#) on Thu, 30 Jan 1997 08:00:00 GMT

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dwu@larry.cc.emory.edu (Ding Wu) writes:

> Anyone knows how to display many color images simultaneously.

> Splitting the color table will badly damage the color, and almost  
> impossible for many, say 20, images.

> I am thinking writing something using fixed the color table, using 256  
> colors to approximate all the colors, then images pixels looking for its  
> most close representations in the color table. It definitely changes the  
> colors of the image, just fools human's eyes.

> Better idea, or any written codes, please.

Split each image into its RGB components, concatenate them as desired into merged RGB components, and put them back together in 8 bits using `color_quan`.

For example, two images IMG1 and IMG2 with color tables R1,G1,B1 and R2, G2, B2 may be split into their RGB components:

`RR1=R1(IMG1) & GG1=G1(IMG1) & BB1=B1(IMG1)`

`RR2=R2(IMG2) & GG2=G2(IMG2) & BB2=B2(IMG2)`

(The color tables are obtained when you read the image or if it's on the screen use `tvlct,R1,G1,B1,/get`).

Put these components together somehow. If they are the same size one way is to put them side by side:

`RR=[RR1,RR2] & GG=[GG1,GG2] & BB=[BB1,BB2]`

Now convert back to 8 bits:

`C = color_quan(RR,GG,BB,R,G,B)`

To display:

`tv,C`

`tvlct,R,G,B`

`color_quan` does have it's limitations. You can play around with several keywords but sometimes it just doesn't give good results. Another trick is to save the new RGB components as the RGB parts of a JPEG image and then read it back. I have found this to work better in most cases. It would be nice to have a more direct access to the JPEG color algorithm, maybe as an option to `color_quan`.

You might not expect this to work too well but I have found that it

actually does a pretty good job, surprised me when I first tried it.

Ray Sterner                    sterner@tesla.jhuapl.edu  
The Johns Hopkins University   North latitude 39.16 degrees.  
Applied Physics Laboratory      West longitude 76.90 degrees.  
Laurel, MD 20723-6099  
WWW Home page: <http://fermi.jhuapl.edu/s1r/people/res/res.html>

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