
Subject: Re: Merging images? Roepcke asks
Posted by [hahn](#) on Wed, 10 Jul 1996 07:00:00 GMT
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panther@jungle.toppoint.de (Hendrik S. Roepcke) wrote:

> Hello,

> i have two images with 256 colors (in rgb-code eg).

> no I want wo merge this two images...

> a) $\text{pixel1} + \text{pixel2} / 2$ is working, but not fine...

This works basically. However, you didn't specify what is distracting. I can imagine that simply taking the average on the red, green and blue parts is not the best idea. Maybe you calculate brightness and the color by transforming your data from rgb to the hsi or hsv colour system. IDL has transformation procedures for that so you don't have to look up the formulas. Now you can average the intensity (brightness) and the contrast while averaging the hue doesn't make much sense to me: What is the average between green and blue?? Cyan, as the formula would give ???

> how about the brightness?

> In addition to that I want to fade both images in an
> interactive way with sliders and then finally choose
> an setting for saving.

Fading between both images is done easily. For a linear fade over 10 images need an array running from 0.0 to 1.0 in 10 steps and another array running from 1.0 to 0.0 accordingly. Thus:

```
factor1 = findgen(10)/9.0
```

With picture a stored in pic_a and picture b stored in pic_b you can calculate the intermediate frame pic_i by

```
color_convert, pic_a_r, pic_a_g, pic_a_b, pic_a_h, pic_a_s, pic_a_v, /rgb_hsv  
color_convert, pic_b_r, pic_b_g, pic_b_b, pic_b_h, pic_b_s, pic_b_v, /rgb_hsv
```

```
fi1 = factor1(i) & fi2 = 1.0 - fi1
```

```
pic_i_v = BYTE ( ( pic_a_v*fi1 + pic_b_v*fi2 ) /2.0 )  
pic_i_s = BYTE ( ( pic_a_s*fi1 + pic_b_s*fi2 ) /2.0 )
```

and maybe the same for hue...

> Are there any fast algorithms doing this?

Avoid any loops. IDL works on the whole matrix of intensities in one statement. Call `color_convert` before you enter the loop for the intermediate picture `i`.

> any hint needed!

Hope this helps...

> Hendrik

 $\succ$ $\geq -$

> Panther in the Jungle

> -BELIEVE AND DECEIVE-

> <http://www.ang-physik>

```
> .uni-kiel.de/~hendrik
```

Norbert Hahn

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