Subject: read_tiff - simple question
Posted by Harald von der Osten- on Sun, 28 Feb 1999 08:00:00 GMT
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Hi all,

I am trying to read an existing tiff image. Doing this exactly as proposed in the online help menue I only get error messages. For example:

device, true=24
image=read_tiff(ï¿½zeraqon.tifï¿½, r, g, b)
tvlct, r, g, b
tv, image

leads to the error message unknown variable r in tvlct. What is missing?

By the way: Does something exist like an archive including all the discussion in this newsgroup, so that beginners like me can first have a look on this before asking such simple questions in this newsgroup?

Thanks a lot,
Harald

--
Harald von der Osten-Woldenburg
Geophysical Prospection of Archaeological Sites
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http://delos.lf.net/~hvdosten/index.html: Geomagnetics and Geoelectrics
http://www.region-lb.de/HomeSites/HvdOsten: Ground Penetrating Radar and EMI

Subject: Re: read_tiff - simple question
Posted by davidf on Sun, 28 Feb 1999 08:00:00 GMT
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Harald von der Osten-Woldenburg (hvdosten@ludwigsburg.netsurf.de) writes:

> thank you very much for your answer. Your code did it and you were right, the
> TIFF-file was a 3 x m x n array.
>
> Just the last question: How can I split the image into three 2-dim arrays and

> after working with them to create again a 3 x m x n array (TIFF-file) with
> these three new files?

You can easily separate a 24-bit image into the three
"channels" or "color planes" that make up the 24-bit image.
For example:

```
image24 = Read_Tiff('zeragon.tif')
red = Reform(image24[0,*,*])
green = Reform(image24[1,*,*])
blue = Reform(image24[2,*,*])
```

Now, suppose you want to brighten the red values up a bit.
You could do something like this:

```
red_brightened = Byte(red * 1.2) < 255B
```

To put the brightened red plane back into the 24-bit image
all you do is this:

```
image24[0,*,*] = red_brightened
```

Of course, you can do the same thing "in situ" as it were.
For example, the same brightening with the green channel:

```
image24[1,*,*] = Byte( (image24[1,*,*] * 1.2) ) < 255B
```

If you want to put the planes back together again in a
new 24-bit image, you could do something like this:

```
dims = Size(image24, /Dimensions)
new_image24 = BytArr(3, dims[1], dims[2])
new_image24[0,*,*] = red_brightened
new_image24[1,*,*] = green
new_image24[2, *,*] = image24[2,*,*]
```

Image subscripting. Ain't it wonderful! :-)

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

[Note: This follow-up was e-mailed to the cited author.]

Subject: Re: read_tiff - simple question
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Dear David,

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Just the last question: How can I split the image into three 2-dim arrays and after working with them to create again a 3 x m x n array (TIFF-file) with these three new files?

Thanks again for your help!!!

Harald

David Fanning wrote:

> My guess is that this is a 24-bit image in this
> TIFF file, so there are no R, G, and B vectors that
> would create an associated color palette. The RGB
> information is included inside the image itself. You
> can easily test this by looking at image, r, g, and b
> with the HELP command:
>
> Help, image, r, g, b
>
> I think you will find that image is a 3-by-m-by-n array
> and that r, g, and b are undefined. Try this code:
>
> Device, True=24
> image = Read_Tiff('zeragon.tif')
> TV, image, True=1 ; if image is 3-by-whatever
>
>

--
Harald von der Osten-Woldenburg

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I think you will find that image is a 3-by-m-by-n array
and that r, g, and b are undefined. Try this code:

```
Device, True=24
image = Read_Tiff('zeragon.tif')
TV, image, True=1 ; if image is 3-by-whatever
```

You can find out exactly what is in the TIFF file before
you try to read it by using the new QUERY_TIFF function:

```
is_tiff = Query_TIFF('zeragon.tif', tiff_info)
IF is_tiff THEN Help, tiff_info, /Structure ELSE $
  Print, 'Not a TIFF file'
```

This will tell you whether the file contains a palette,
whether it is a 24-bit or 8-bit image, what its dimensions
are, etc. Very handy.

> By the way: Does something exist like an archive including all the
> discussion in this newsgroup, so that beginners like me can first have a
> look on this before asking such simple questions in this newsgroup?

You can always visit the IDL FAQ, maintained by Mike
Schienle at:

http://www.ivsoftware.com/pub/idl_faq.html

And I have plenty of IDL programming tips on my site as well:

http://www.dfanning.com/documents/tips.html

But I don't think anyone minds simple questions in the newsgroup
if the people seeking answers are sincere in their efforts to
learn IDL. :-)

Cheers,

David

P.S. I've just received the latest batch of IDL books from
the printer. This version has been updated rather extensively
for IDL 5.2. I have also increased the amount of discussion
on 8-bit verses 24-bit image display, as this continues to
be a source of confusion for many IDL users as we make the
transition from 8-bit to 24-bit computers.

I also have about 8 books from the previous Dec 98 version of the
book that I will sell to students cheaply, if anyone is interested.

--
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