
Subject: Re: Efficient Programing (reading multiband image)

Posted by [Liam Gumley](#) on Thu, 27 Jul 1995 07:00:00 GMT

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dean@phobos.cira.colostate.edu wrote:

> I use the following code to read in an interleave (by pixel) raster image.
(stuff deleted)
> IImage = BYTarr(nchan,nx,ny)

As long as you know the image interleave format, you can read the whole image in one hit. The interleave options available are

- (1) Band interleaved - image dimensioned as (pixels, lines, bands)
i.e. all pixels and lines for band 1; all pixels and lines for band 2;
- (2) Line interleaved - image dimensioned as (pixels, bands, lines)
i.e. all pixels for band 1, line 1; all pixels for band 2, line 1;
- (3) Pixel interleaved - image dimensioned as (bands, pixels, lines)
i.e. all bands for pixel 1, line 1; all bands for pixel 2, line 1;

(See IDL 4.0 Ref. Guide p. 1-927, paragraph 2)

You identified the image as pixel interleaved, so you can do the following:

```
openr, 1, 'image.dat'  
image = bytarr( nchan, nx, ny )  
readu, 1, image  
close, 1  
nchan = 0  
tvsc1, image( nchan, *, * )
```

If you are interested, I have a compound widget that lets you interactively pick a data file and specify the data type, size, and interleave. The data file is then read, and the contents returned in an array. BYTE, INTEGER, LONG, and FLOAT data types are supported, and an image header offset in bytes can be specified.

Cheers,
Liam.

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