Subject: Re: Reading 12-bit TIFF Images
Posted by Struan Gray on Thu, 20 Apr 2000 07:00:00 GMT
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David Fanning, davidf@dfanning.com writes:

> Does anyone have any advice/experience reading and working
> with 12-bit TIFF images in IDL?

Not in IDL, but I played with 12-bit TIFFs a long time ago.

> I poked around the web a bit, but I wasn't successful in
> learning whether 12-bit images are just stored as two
> 8-bit bytes, or whether the packing is true 12-bit.
> Anyway, any light you can shed will be welcome. Thanks.

The official word is here, including a PDF file with the spec for TIFF 6.0.:

http://www.adobe.com/support/salesdocs/2596.htm

As far as I know there is no standard for how 12-bit data should be stored, and in general you need to ask whoever wrote the file in order to decode it. The TIFF standard integer data types are 8, 16 and 32 bit unsigned integers, although there are tags that mark the data as being twos-complement signed integers.

All the examples I came across did the obvious thing and stored the samples as 16-bit values with four empty bits (but which ones?), relying on TIFF's compression of the whole array to get rid of redundancy if filespace was low. Adobe applications certainly store 12-bit data from scanners as 16-bit integers. It's possible that someone has packed the 12-bit values into an array of bytes and saved it as a pseudo 8-bit image, but unlikely.

Struan