
Subject: Re: JPEG2000 compression

Posted by [Roberto Monaco](#) on Wed, 13 Apr 2005 19:55:20 GMT

[View Forum Message](#) <> [Reply to Message](#)

>> I have a question regarding JPEG2000:

>>

>> How do you control compression ratio when you save an image as JPEG2000

>> using the IDL object?

>

> Looks like the N_LEVELS property.

Yes, from the documentation you would expect N_LEVELS to be responsible for compression.

This is the code I am using:

```
jp2 = obj_new('IDLffJPEG2000', jp2_file, /WRITE)
jp2->SetProperty, N_LEVELS=15
jp2->SetProperty, TILE_DIMENSIONS=[2048.,2048.]
jp2->SetData, image, /ORDER
obj_destroy, jp2
```

If I set N_LEVELS to 5 in the second line (the default) and run it again for the same image (same input file) I get both times jp2 files of the same dimension (31 MB) !?! I am obviously missing something here.

Perhaps one could define N levels and somehow store only some of these levels, discarding for example the 2 higher resolution levels? But I don't see a way of doing something like this, in SetData or elsewhere.

>> The following is curious: within a Photoshop plug-in I use to save JPEG2000

>> images, "they" define a compression factor. If I save the same image with

>> different compressions ratios (e.g. 1:1, 1:10, 1:40) I obviously get big

>> differences in the resulting file sizes. But if you read these files into

>> IDL objects, surprisingly all properties are exactly the same!! Same

>> dimensions for the data array, same bit_depth, same number of layers, etc.

>> ?? This does not make any sense to me ... I must be overlooking at something

>> stupid?

>

> Well, I know nothing about JPEG2000 but I would hope that all of the

> properties that you have specified *would* be identical. The only

> property that should change would be the compression factor. Don't know

> where that would be though. Maybe the N_LEVELS property again? Don't

> know if that would be set after reading a file or if it only applies to

> writing.

These images were created outside IDL, in Photoshop saving the same TIFF image as JP2 using different compression ratios each time. Afterwards when I read them within IDL I would expect to see differences in their properties, since one corresponds to 1:1 (~30 MB of data) and another to 1:40 (~3 MB of data). But N_LEVELS, as ALL the other properties, are exactly the same for all cases...

By the way there is no compression property in 'IDLffJPEG2000' object structure.

Roberto
