Subject: Re: Writing JPEG2000 file
Posted by David Alexander on Wed, 07 Sep 2005 21:17:44 GMT
View Forum Message <> Reply to Message

Chintan,

What are the dimensions of the image in your tiff file?

One thing you might try: write each tile individually. So, let's say you have a 2048x2048 tiff file, and you want to write a jpeg2000 file with tile dimensions of 1024x1024 (so there are four tiles), you could do something like this:

```
oJP2FILE->SetData, Data[*,0:1023,0:1023],TILE_INDEX=0
oJP2FILE->SetData, Data[*,1024:2047,0:1023],TILE_INDEX=1
oJP2FILE->SetData, Data[*,0:1023,1024:2047],TILE_INDEX=2
oJP2FILE->SetData, Data[*,1024:2047],TILE_INDEX=3
```

You probably have larger tiff files, but this is the idea.

David

Subject: Re: Writing JPEG2000 file
Posted by David Alexander on Wed, 07 Sep 2005 21:26:19 GMT
View Forum Message <> Reply to Message

Sorry, I didn't notice that you already specified the dimensions of your file. So, see if it helps when you call SetData many times for each tile rather than calling it once for all the data.

Subject: Re: Writing JPEG2000 file
Posted by Haje Korth on Thu, 08 Sep 2005 12:03:00 GMT
View Forum Message <> Reply to Message

Raval,
If displayed on a single monitor, the image will not reflect the resolution of the data set and thereofre you can safely used 'rebin' to turn the data into a 1000x1000 array, which inturn should work with your code. If this resolution is insuffient, try tiling the image.

Haje

<raval.chintan@gmail.com> wrote in message
news:1126087454.579398.30090@g44g2000cwa.googlegroups.com...

> Hello,
>
> I want to generate the JPEG2000 file from the tiff file which is
> containing 20000 samples and 20000 lines, I am writing the following
> code.
>
>
>
> jp2filename = 'abc'
> Data = read_tiff('c:\satellite.tif')
> imageDims = Size(data,/Dimension)
>
> ; Prepare JPEG2000 object property values.
> ncomponents = 3
> nLayers = 20
> nLevels = 6
> offset = [0,0]
> jp2TileDims = [1024, 1024]
> jp2TileOffset = [0,0]
> bitdepth = [8,8,8]
>
> ; Create the JPEG2000 image object.
> oJP2File = OBJ_NEW('IDLffJPEG2000',jp2filename , WRITE=1)
> oJP2File->SetProperty, N_COMPONENTS=nComponents, $
> N_LAYERS=nLayers, $
> N_LEVELS=nLevels, $
> OFFSET=offset, $
> TILE_DIMENSIONS=JP2TileDims, $
> TILE_OFFSET=JP2TileOffset, $
> BIT_DEPTH=bitDepth, $
> DIMENSIONS=[imageDims[1],ImageDims[2]]
>
>
> oJP2FILE->SetData, Data
> OBJ_DESTROY, oJP2FILE
>
>
>
> Now the problem is that IDL 6.2 is unable to allocate the memory for
> storing the data.
>
> Is there any other way to do this? If yes Then How one can do it?
>
> Thanks In Advance.
>
> Chintan Raval.
>

Subject: Re: Writing JPEG2000 file
Posted by Andrew Cool on Thu, 08 Sep 2005 23:26:51 GMT
View Forum Message <> Reply to Message

Haje Korth wrote:
> Raval,
> If displayed on a single monitor, the image will not reflect the resolution
> of the data set and thereofre you can safely used 'rebin' to turn the data
> into a 1000x1000 array, which inturn should work with your code. If this
> resolution is insuffient, try tiling the image.
>
> Haje
>
>
> <raval.chintan@gmail.com> wrote in message
> news:1126087454.579398.30090@g44g2000cwa.googlegroups.com...
>> Hello,
>>
>> I want to generate the JPEG2000 file from the tiff file which is
>> containing 20000 samples and 20000 lines, I am writing the following
>> code.
>>
>>
>> jp2filename = 'abc'
>> Data = read_tiff('c:\satellite.tif')
>> imageDims = Size(data,/Dimension)
>>
>> ; Prepare JPEG2000 object property values.
>> ncomponents = 3
>> nLayers = 20
>> nLevels = 6
>> offset = [0,0]
>> jp2TileDims = [1024, 1024]
>> jp2TileOffset = [0,0]
>> bitdepth = [8,8,8]
>>
>> ; Create the JPEG2000 image object.
>> oJP2File = OBJ_NEW('IDLffJPEG2000',jp2filename , WRITE=1)
>> oJP2File->SetProperty, N_COMPONENTS=nComponents, $
>> N_LAYERS=nLayers, $
>> N_LEVELS=nLevels, $
>> OFFSET=offset, $
>> TILE_DIMENSIONS=JP2TileDims, $
>> TILE_OFFSET=JP2TileOffset, $
>> BIT_DEPTH=bitDepth, $
>> DIMENSIONS=[imageDims[1],ImageDims[2]]
>>
>>
>> oJP2FILE->SetData, Data

>>   OBJ_DESTROY, oJP2FILE
>>
>>
>>
>> Now the problem is that IDL 6.2 is unable to allocate the memory for
>> storing the data.
>>
>> Is there any other way to do this? If yes Then How one can do it?
>>
>> Thanks In Advance.
>>
>> Chintan Raval.
>>

Haje,

Raval's code comes from RSI's example tilingjp2.pro, which demonstrates progressive zooming into more detailed image layers using the pyramid functionality of JPEG2000 files.

Hence rebinning the image down probably won't tie in with why Raval is using
that code.

I've tried using the same code for a *large* chunk of SRTM 3 arcsec data,
and have concluded that using a 32 bit OS (Windows) just ain't gonna do it for me.

I'll be switching to 64 bit IDL on Linux.

Andrew

Subject: Re: Writing JPEG2000 file
Posted by raval.chintan on Fri, 09 Sep 2005 13:07:31 GMT
View Forum Message <> Reply to Message

Haje Korth,

I do not have that much memory to store that large data while reading the tiff file which has 20000 samples and 20000 lines at a time. So that the suggesion provided by david is working fine in my system.

And thanks for a new Suggesion, As i m new to IDL, 'REBIN' function can be used in my other programms.

Chintan Raval.

Subject: Re: Writing JPEG2000 file
Posted by raval.chintan on Fri, 09 Sep 2005 13:26:01 GMT
View Forum Message <> Reply to Message

Hello,

One more thing i want to know is that When i m writing my file with above (In my previous Query) parameter, My original data is being lost , So what parameter i should pass to IDLffJPEG2000 so that i can generate a loss less JPEG2000 file.

Again Thanks In Advance.

Chintan Raval

Subject: Re: Writing JPEG2000 file
Posted by David Alexander on Mon, 12 Sep 2005 17:52:21 GMT
View Forum Message <> Reply to Message

Chintan,

The default when writing JPEG2000 is lossy compression. To get lossless compression, you need to set the REVERSIBLE property to true. The best way is probably to set it when you create your JPEG2000 object.
Something like this:

oJP2=OBJ_NEW('IDLffJPEG2000',filename,/WRITE,/REVERSIBLE)

adding, of course, any other properties you additionally want to set.

David
