Subject: Re: reading images with small # pixels but large # bands in ENVI
Posted by David Fanning on Mon, 06 Dec 2004 02:25:01 GMT
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Jeff writes:

> Has anyone ever tried to read an image that has a very few number of
> pixels but that has a very large number of bands? I created a
> 1x12x65536 image with BIP interleave and ENVI hangs every time i try
> to read it, even though the total file size is 1,536 kb. I know that
> reading BIP interleaved images is slow to begin with, but I let it run
> for several hours, so it really was hung - or taking far longer than
> i'm willing to give it. I'd like to hear if anyone else has tried
> something like this and whether or not it gave you any trouble either.

Wouldn't a BIP image have dimensions of 3x12x65536?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: reading images with small # pixels but large # bands in ENVI
Posted by jnettle1 on Mon, 06 Dec 2004 17:01:02 GMT
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David Fanning wrote:

>
> Wouldn't a BIP image have dimensions of 3x12x65536?
>

Not necessarily...are you asking this b/c of your tutorial on where
does the 3 go? Your tutorial was based on 3 band images, and as you
know BIP interleaves are not restricted to 3 bands. But you're right,
I should've been more clear about this: when I say 1x12x65536 I mean 1
column by 12 rows by 65536 bands, which is technically stored in the
image file as intarr(65536,1,12) since it's a BIP interleave. I am in
the perhaps misleading habit of referring to image cubes in general in
the column x row x band format regardless of the interleave :)

Jeff

> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.dfanning.com/

Subject: Re: reading images with small # pixels but large # bands in ENVI
Posted by David Fanning on Mon, 06 Dec 2004 17:46:53 GMT
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jnettle1@utk.edu writes:

> Not necessarily...are you asking this b/c of your tutorial on where
> does the 3 go?

No, I was just trying to understand what you were talking
about. :-)

> Your tutorial was based on 3 band images, and as you
> know BIP interleaves are not restricted to 3 bands. But you're right,
> I should've been more clear about this: when I say 1x12x65536 I mean 1
> column by 12 rows by 65536 bands, which is technically stored in the
> image file as intarr(65536,1,12) since it's a BIP interleave. I am in
> the perhaps misleading habit of referring to image cubes in general in
> the column x row x band format regardless of the interleave :)

No idea why it is hanging, but it wouldn't surprise me
if a dimension of 1 was somehow involved. ENVI (I think)
sometimes changes the interleaving of images for its own
purposes. I imagine it does this with the TRANSPOSE command.
I wouldn't be surprised to find this dimension dropped
accidentally and for that to be at the heart of the problem.

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.

Subject: Re: reading images with small # pixels but large # bands in ENVI
Posted by jnettle1 on Tue, 07 Dec 2004 16:13:00 GMT
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> No idea why it is hanging, but it wouldn't surprise me
> if a dimension of 1 was somehow involved. ENVI (I think)
> sometimes changes the interleaving of images for its own
> purposes. I imagine it does this with the TRANSPOSE command.
> I wouldn't be surprised to find this dimension dropped
> accidentally and for that to be at the heart of the problem.
>

I asked some colleagues that I thought had opened single column images before in ENVI, and sure enough, they have. They've even done 1x1 images....so i tried a few 1x12 images with smaller number of bands and they worked. 1x12x5000 worked but took a second, 1x12x10,000 took much longer. I have a feeling you're right about ENVI doing some transposing without telling me, but at this point I'm prepared to just call the whole thing a "memory problem" and just move on. I seem to recall a posting on your website about subscripting arrays taking tons of memory, I wonder if that has anything to do with it. Thanks for your help though.

Jeff