Subject: Re: Making a ginormous 54 panel plot...
Posted by Kenneth P. Bowman on Wed, 01 Dec 2010 20:49:55 GMT
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In article
<5d27124d-2a89-4667-b024-dd293bda55a1@f21g2000prn.googlegroups.com>,
 OUWxGuesser <aaron.kennedy@und.nodak.edu> wrote:

> Here's the deal. I have 54 .png plots I want to combine into a 9x6
> panel plot in IDL. Native resolution for each image is 1000x700
> pixels. This exceeds the maximum buffer size of 8192x8192.
>
> No problem... I use congrid and shrink everything to 90% of the
> original size which gives me a final image size of 8100x3780.
>
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> p=window(dimensions=[8100,3780])
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> I then loop through the files I need to panelize (or is it
> penalize? :)) and place them in the appropriate places. This
> works.
>
> The issue I have is IDL does not listen to my dimensions for the
> original window! Instead, it creates a window that is 8192x2632.
> This creates large whitespace between the columns and shrinks the
> individual panels beyond the original 90% of the original size I
> specified. This makes things tough to read which defeats the
> purpose... I want to place these plots on a poster for a conference.
> My alternative *cringe* is to use GIMP to cut and paste the 54 plots
> manually. Yikes!
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> I have tried messing with the buffer settings thinking this might be
> the source of the problem, but I just end up getting MESA frame
> buffer errors and in some cases, IDL crashes to the desktop with no
> warning. If anyone has any suggestions or assistance, I'd greatly
> appreciate it!

Why are you opening a window?

Can't you just read the PNG files, concatenate or copy them
into your big array, then write the array out as a new PNG.

Ken Bowman

Subject: Re: Making a ginormous 54 panel plot...
Posted by David Fanning on Wed, 01 Dec 2010 20:58:09 GMT

OUWxGuesser writes:

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> appreciate it!

Oh, my gosh. Have you tried TVImage? :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Making a ginormous 54 panel plot...

Sadly, the big array is too large for the memory. When I use the TV route and try to TVRD at the end, it spits out "TVRD: An error has occurred. Unable to complete command."

On Dec 1, 2:49 pm, "Kenneth P. Bowman" <k-bow...@null.edu> wrote:
> In article
> < 5d27124d-2a89-4667-b024-dd293bda5...@f21g2000prn.googlegroup s.com >,
>
>
>
> OUWxGuesser <aaron.kenn...@und.nodak.edu> wrote:
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> Ken Bowman

Subject: Re: Making a ginormous 54 panel plot...
Posted by David Fanning on Wed, 01 Dec 2010 22:05:59 GMT
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OUWxGuesser writes:

> Sadly, the big array is too large for the memory. When I use the TV
> route and try to TVRD at the end, it spits out "TVRD: An error has
> occurred. Unable to complete command."

Why don't you just output your images to a PostScript file?

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Making a ginormous 54 panel plot...
Posted by manodeep@gmail.com on Wed, 01 Dec 2010 22:10:47 GMT
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On Dec 1, 2:49 pm, "Kenneth P. Bowman" <k-bow...@null.edu> wrote:
> In article
> < 5d27124d-2a89-4667-b024-dd293bda5...@f21g2000prn.googlegroup s.com >,
>
>
>
> OUWxGuesser <aaron.kenn...@und.nodak.edu> wrote:
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> Why are you opening a window?
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> into your big array, then write the array out as a new PNG.
>
> Ken Bowman

If not using IDL for the final image is an option, then you should try montage (from Imagemagick) to tile the images. You have control over the layout, the individual image sizes and the spacing between the images.

Here is the man page for montage:
http://www.imagemagick.org/Usage/montage/

If all else fails, convert from the images from png to eps, include in a tex file in the layout you want and generate a ps or pdf file.

Cheers,
Manodeep

Subject: Re: Making a ginormous 54 panel plot...
Posted by OUWxGuesser on Wed, 01 Dec 2010 22:23:17 GMT

Darn. I was hoping to avoid crossing that bridge but that may be the
only solution!

On Dec 1, 4:05 pm, David Fanning <n...@dfanning.com> wrote:
> OUWxGuesser writes:
>> Sadly, the big array is too large for the memory. When I use the TV
>> route and try to TVRD at the end, it spits out "TVRD: An error has
>> occurred. Unable to complete command."
>
> Why don't you just output your images to a PostScript file?
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Making a ginormous 54 panel plot...
Posted by penteado on Thu, 02 Dec 2010 00:15:52 GMT

On Dec 1, 7:57 pm, OUWxGuesser <aaron.kenn...@und.nodak.edu> wrote:
> Sadly, the big array is too large for the memory. When I use the TV
> route and try to TVRD at the end, it spits out "TVRD: An error has
> occurred. Unable to complete command."

That is still the option with the potential to use the least memory.
If the array is too large and you would downsize it anyway to get to
less than 9000x4200, you can downsample the individual images before
putting them into the big array (which would not be so big).

Anyway, you probably do have enough memory to make the big array at
100%: 9000x4200 pixels at 24 bpp is only ~108MB. You were able to make
a buffer 81% of that size, which may (probably does?) use more memory
than the array would.

Subject: Re: Making a ginormous 54 panel plot...

Posted by greg.addr on Thu, 02 Dec 2010 11:33:20 GMT
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I use this to merge png files - might be helpful. If memory is the problem, at least you can combine as far as possible before resorting to GIMP.

Greg

```
pro gm_merge_png,filenames,outfile,frame,vertical=vertical
                ;filenames - png files to be merged
                ;outfile - output filename
                ;frame - white border between images, in pixels
                ;vertical - set to merge vertically instead of default
horizontal

  for i=0,n_elements(filenames)-1 do begin
    im0=read_png(filenames[i])
    if n_elements(frame) gt 0 then begin
      sz=size(im0,/dim)
       im1=make_array(3,sz[1]+frame*2,sz[2]+frame*2,/byte,value=255 b)
      im1[*,frame:sz[1]+frame-1,frame:sz[2]+frame-1]=im0
      im0=im1
    endif
    case i of
      0:im=im0
      else:im=keyword_set(vertical)?[[[im]],[[im0]]]:[[im],[im0]]
    endcase
  endfor
  write_png,outfile,im
end
```

Subject: Re: Making a ginormous 54 panel plot...
Posted by Kenneth P. Bowman on Thu, 02 Dec 2010 14:39:35 GMT
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In article
<6fc9ecfb-a3ea-4afa-a371-186420318ec2@y3g2000vbm.googlegroups.com>,
 OUWxGuesser <aaron.kennedy@und.nodak.edu> wrote:

> Sadly, the big array is too large for the memory. When I use the TV
> route and try to TVRD at the end, it spits out "TVRD: An error has
> occurred. Unable to complete command."

I still don't understand why are you using TV.

This code snippet reads a PNG file and creates a new PNG
file with the original image in a 2 x 2 tiling.

No TV or TVRD necessary.

Ken

```
IDL> img = READ_PNG('test.png')
% Loaded DLM: PNG.
IDL> help, img
IMG             BYTE      = Array[3, 1024, 612]
IDL> new_img = BYTARR(3, 2*1024, 2*612)
IDL> new_img[0,0,0] = img
IDL> new_img[0,1024,0] = img
IDL> new_img[0,1024,612] = img
IDL> new_img[0,0,612] = img
IDL> write_png, 'test1.png', new_img
```

Subject: Re: Making a ginormous 54 panel plot...
Posted by OUWxGuesser on Thu, 02 Dec 2010 15:39:03 GMT
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First of all, thanks for all of the suggestions! In the end, I
decided to do some experimentation with TVRD to see what it can
handle. While I don't have an exact size for all of you, I was able
to creatively edit my individual panels to decrease the resolution
slightly. I was successfully able to create an image using TVRD with
a resolution of 6930x3780. At this size, there is an audible increase
in fan-speed in my computer while IDL is humming away. Ah, the sound
of success!

Subject: Re: Making a ginormous 54 panel plot...
Posted by OUWxGuesser on Thu, 02 Dec 2010 15:40:46 GMT
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Oh and FYI, the memory issues were related to the patched IDL 8. The
non TV/TVRD method works fine in IDL 7.x
