Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 18:03:45 GMT

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Gray writes:

> Weird... I just used PS_START and PS_END to create .eps files... but
> ImageMagick can't find the .eps files to convert to PNGs when I have
> PS_END, /PNG set. Here's the output from PS_END:
>
> PostScript output will be created here: ~/Desktop/BrGamma_known.eps
> ImageMagick CONVRT command:
> convert -alpha off -density 300 "~/Desktop/BrGamma_known.eps" -resize
> 25% -flatten -rotate 90 "PNG24:~/Desktop/BrGamma_known.png"
> convert: unable to open image `~/Desktop/BrGamma_known.eps': No such
> file or directory @ error/blob.c/OpenBlob/2584
> convert: missing an image filename `PNG:~/Desktop/BrGamma_known.png' @
> error/convert.c/ConvertImageCommand/2949
>
> I get the .eps file on the desktop, and the image size is correct, but
> the plot isn't centered, it runs off the end, and the rotation is
> wrong.
>
> My last CG update is from a couple of days ago. Here's the routine
> that produces the plots:
>
> PRO knownplot, filt, nb, res, id, typ
>   ps_start, file='~/Desktop/'+filt+'_known.eps',$
>   /encapsulate,/inches,xsize=10,ysize=10
>   cgplot, nb, res-nb, psym=1, xtitle=filt+' NB mag',$
>   ytitle=filt+' Diff mag - NB mag',title+'Known WRs in '+$
>   filt, charsize=1.25
>   cgtext, nb, res-nb, typ, charsize=0.7, charthick=2, /data
>   ps_end, /png
> end

OK, let me try this again.

The purpose of PS_Start is to allow you to create PostScript
output that matches the output you see in a display window.
So, by default it looks at the current graphics window,
determines that window's aspect ratio (or uses the default
aspect ratio, if a graphics window isn't open), and then
creates a window with that aspect ratio, centered, on
a PostScript "page". If the graphics window is wider than
it is tall, the PostScript "page" is assumed to be in
landscape mode. Otherwise, it assumes the page is in
portrait mode.

Now, you don't *have* to use PS_Start in default mode.
You can choose to override this default behavior. If you
do, you MUST set the NOMATCH keyword, so it does not
match the aspect ratio of the current graphics window.
And, if you choose to override this default behavior, I
presume (maybe you are reading my new book!) you know
something about how the PostScript device works. In other
words, you know how to set sizes and offsets that get your
PostScript "window" somewhere where you will actually be
able to see it when you "print" the PostScript page.
(Presumably this is the point of making a PostScript file.)

If you don't know much about how the PostScript device works,
then I recommend you set the GUI keyword on PS_Start and
use PSConfig to set up your PostScript page. If you did that
in this case, you would see pretty clearly that a 10 inch
by 10 inch square does NOT fit on an 8.5 by 11 inch PostScript
page with the default offsets! In other words, you would
would have to select some other page size to fit the size
of the window you want to create.

So, if fooled around long enough with PSConfig to get what
you wanted, then PS_End would know *exactly* what it is you
are trying to do, know that what you chose was "legal" in the
sense that something sensible could result from it, and I have
great confidence that the PNG file made from such a sensible
PostScript file would also look pretty darn good. :-)

Something like this would work:

```
ps_start, file='~/Desktop/'+filt+'_known.eps', $
  /encapsulate,/inches,xsize=10,ysize=10, $
  pagetype='ledger', xoffset=0.5, yoffset=13.5, $
  /landscape, /gui
```

Well, actually, it appears ImageMagick is struggling a bit
with encapsulated PostScript files. I'll have to look into
this some more. I've never tried to turn encapsulated
PostScript files into raster files, so I don't know what
that problem might be.

While I am investigating, I think I'll add more error
handling to PSConfig to warn users that what they are
trying to do is not likely to work. :-)

I'll get back to you about ImageMagick and conversion
of encapsulated PostScript files.

Cheers,

David

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

Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 18:35:23 GMT
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David Fanning writes:

> Well, actually, it appears ImageMagick is struggling a bit
> with encapsulated PostScript files. I'll have to look into
> this some more. I've never tried to turn encapsulated
> PostScript files into raster files, so I don't know what
> that problem might be.

I am beginning to suspect that the encapsulated PostScript
files IDL produces might be the culprit here. Here is what
I have done.

I created a simple encapsulated PostScript file in IDL.
I tried to read this file in Adobe Illustrator. I couldn't
open it.

I opened another similar image file in Adobe Illustrator
and saved that as an encapsulated PostScript file.
ImageMagick had no difficulty creating a PNG file from
that encapsulated PostScript file.

I created an encapsulated PostScript file from an iPlot,
and tried to open this in Adobe Illustrator. It complained
about a missing font, but it opened the file just fine.
This file was also able to be converted to a PNG file
by ImageMagick just fine.

So, the culprit seems to be the traditional PostScript
device driver.

I seem to recall something about problems with IDL
encapsulated PostScript output, but I can't put my

finger on it. Does anyone remember? I am running
IDL 7.1.1 on Windows

Cheers,

David

--
David Fanning, Ph.D.
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 19:48:37 GMT
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David Fanning writes:

> I am beginning to suspect that the encapsulated PostScript
> files IDL produces might be the culprit here.

OK, here is another reason I love IDL. Even though
you have worked with it daily for 25 years, you can
still learn something new about it!

I am completely wrong about all of this. :-)

IDL's PostScript driver works correctly, as far
as I can tell.

The thing is, if you are going to create encapsulated
PostScript files, you want to turn LANDSCAPE off and
PORTRAIT on, and you want to set XOFFSET and YOFFSET
to zeros. Then, *everyone* is happy with the result,
including ImageMagick and Adobe Illustrator. I was not
aware of this until about 10 minutes ago, as hard as
that is for all of us to believe!

Anyway, I have made the require modifications to PS_Start,
but I want to also make the modifications to PSConfig,
as well as update some error handling.

With the modifications, then Gray's plot will work
perfectly, no matter how he chooses to create it. :-)

Cheers,

David

--
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by Gray on Sat, 19 Feb 2011 19:59:40 GMT

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On Feb 19, 1:35 pm, David Fanning <n...@idlcoyote.com> wrote:
> David Fanning writes:
>> Well, actually, it appears ImageMagick is struggling a bit
>> with encapsulated PostScript files. I'll have to look into
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> This file was also able to be converted to a PNG file
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> I seem to recall something about problems with IDL

> encapsulated PostScript output, but I can't put my
> finger on it. Does anyone remember? I am running
> IDL 7.1.1 on Windows
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.idlcoyote.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

OOOOh... /NOMATCH should definitely help. Oops. Thanks!

Subject: Re: More cgplot, ps_start, ps_end problems
Posted by Gray on Sat, 19 Feb 2011 20:10:00 GMT
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On Feb 19, 2:59 pm, Gray <grayliketheco...@gmail.com> wrote:
> On Feb 19, 1:35 pm, David Fanning <n...@idlcoyote.com> wrote:
>
>
>
>
>
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>
>
>> David Fanning writes:
>>> Well, actually, it appears ImageMagick is struggling a bit
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>>> PostScript files into raster files, so I don't know what
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>> and saved that as an encapsulated PostScript file.
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>
>> Cheers,
>
>> David
>
>> --
>> David Fanning, Ph.D.
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>
> OOOOh... /NOMATCH should definitely help. Oops. Thanks!

OK, so after /nomatch the .eps file looks fine, but ImageMagick still
can't find it to convert to a PNG... I'll update my CG and try
again! :)

Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 20:21:22 GMT

Gray writes:

> OK, so after /nomatch the .eps file looks fine, but ImageMagick still
> can't find it to convert to a PNG... I'll update my CG and try
> again! :)

Hang on, I haven't updated this yet! I'll let you know.

David

--
David Fanning, Ph.D.
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 20:43:05 GMT

David Fanning writes:

> Hang on, I haven't updated this yet! I'll let you know.

OK, now you can update. :-)

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by Gray on Sat, 19 Feb 2011 21:21:01 GMT

On Feb 19, 3:43 pm, David Fanning <n...@idlcoyote.com> wrote:
> David Fanning writes:
>> Hang on, I haven't updated this yet! I'll let you know.
>
> OK, now you can update. :-)
>
> Cheers,
>
> David
>
> --

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

OK, I've updated. The .EPS files look great. The PNG files, however,
still do not exist... :(

Subject: Re: More cgplot, ps_start, ps_end problems
Posted by Carsten Lechte on Sat, 19 Feb 2011 21:24:03 GMT

David Fanning wrote:
> I seem to recall something about problems with IDL
> encapsulated PostScript output, but I can't put my
> finger on it. Does anyone remember? I am running
> IDL 7.1.1 on Windows

I am using IDL 6.4 on Linux 64bit, and eps output works relatively painlessly.
I use something like

```
!P.FONT=0
SET_PLOT, 'PS'
DEVICE, FILENAME=fname
DEVICE, /ENCAPSULATED
DEVICE, /COLOR
DEVICE, BITS_PER_PIXEL=8
DEVICE, XSIZE=sizes[0], YSIZE=sizes[1]

plot stuff

DEVICE, /CLOSE_FILE
SPAWN, 'convert -transparent white -density 400 '+fname+' '+fname+'.png'
```

in my eps-output procedures and it has always worked. I have, however, given up on
landscape ps output.

I also get weird corrupted (as in "ghostscript cannot render it beyond the first page")
output when doing multipage, non-encapsulated ps. I will post about it if I can
reproduce the problem.

chl

Subject: Re: More cgplot, ps_start, ps_end problems

Posted by David Fanning on Sat, 19 Feb 2011 22:11:37 GMT

Carsten Lechte writes:

> in my eps-output procedures and it has always worked. I have, however, given up on
> landscape ps output.

FixPS from my web page has solved all my landscape
PostScript problems:

   http://www.idlcoyote.com/ps_tips/landscapeup.html

Cheers,

David

--
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by David Fanning on Sat, 19 Feb 2011 22:12:57 GMT

Gray writes:

> OK, I've updated. The .EPS files look great. The PNG files, however,
> still do not exist... :(

Do you think it is a problem expanding the "~" in the
file name? What happens when you give it an absolute
file name?

Cheers,

David

--
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Subject: Re: More cgplot, ps_start, ps_end problems
Posted by Gray on Sun, 20 Feb 2011 14:34:29 GMT

On Feb 19, 5:12 pm, David Fanning <n...@idlcoyote.com> wrote:
> Gray writes:
>> OK, I've updated. The .EPS files look great. The PNG files, however,
>> still do not exist... :(
>
> Do you think it is a problem expanding the "~" in the
> file name? What happens when you give it an absolute
> file name?
>
> Cheers,
>
> David
>
> --
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That was it. Easy fix! Thanks again! :)