Subject: Re: plots for printing
Posted by Alex Schuster on Thu, 26 Jul 2001 13:10:01 GMT
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Dominik Paul wrote:

> I need some plots for my report. And I made these plots with
> IDL (very good programm for visualisation). Than I take screen
> shots of the pictures and used it for printing.
>
> The result was a wuite bad quality. Does somebody know, how I
> could do this in a better way to get a good resolution for
> printing (maybe 300 dpi)?

Instead of
```
 PLOT, x, y
```
do:
```
 SET_PLOT 'PS'
 DEVICE, /encapsulated, filename='myplot.ps'
 PLOT, x, y
 DEVICE, /close
 SET_PLOT, 'X' ; or SET_PLOT, 'WIN' if using Windows
```

This puts the output not onto the screen, but into the postscript file myplot.ps. And have a look at www.dfanning.com if you want the correct colors, layout etc.

Instead of using the PS device, you can also use the PRINTER device to directly send the output to the printer.

Alex
--
Alex Schuster Wonko@planet-interkom.de
alex@pet.mpin-koeln.mpg.de

Subject: Re: plots for printing
Posted by Randall Skelton on Thu, 26 Jul 2001 13:36:14 GMT
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Screen-shots? Oh dear, this sounds bad.

Option 1, you can change the plotting device in IDL using the 'set_plot' command, i.e. (see the IDL Basics Manual p. 13)

```
IDL> ; save my device
IDL> MYDEVICE=!D.NAME
IDL> ; make some data
```

```
IDL> DATA = [1,2,3,4,5,6,7,8,9,10]
IDL> ; plot to the screen
IDL> PLOT, DATA
IDL> ; plot to a file
IDL> SET_PLOT, 'PS'
IDL> DEVICE, FILENAME='OUTPUT.PS'
IDL> PLOT, DATA
IDL> DEVICE, /CLOSE
IDL> ; reset the standard device
IDL> SET_PLOT, MYDEVICE
```

See the IDL help for the valid device types. If all you want to do is send the plot to your printer, substitute 'printer' for 'ps' in the above.

Option 2, If you want an *image* of the currently displayed IDL graphics window try something like:

```
IDL> ; make some data
IDL> DATA = [1,2,3,4,5,6,7,8,9,10]
IDL> ; plot to the screen
IDL> PLOT, DATA
IDL> ; write a jpeg file
IDL> WRITE_JPEG, 'test.jpeg', TVRD()
```

Note that you can replace 'write_jpeg' with almost any of the other 'write_' commands (see IDL help for the rest). You should look through the Using IDL manual (paying attention to 'Part III: Using Direct Graphics').

Alternatively, you may want to order yourself a copy of one of the numerous IDL programming books available these days. David Fanning's book 'IDL Programming Techniques, Second Edition' (www.dfanning.com) is an excellent book to work through and it describes plotting very well. You may be interested in downloading a Chapter 9 'Writing an IDL Graphics Display Program' which describes how create a device-independent, color-depth independent graphical display program.

Cheers,
Randall

On Thu, 26 Jul 2001, Dominik Paul wrote:

> Hello there,
>
> I need some plots for my report. And I made these plots with IDL (very good
> programm for visualisation). Than I take screen shots of the pictures and
> used it for printing.
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> The result was a wuite bad quality. Does somebody know, how I could do this

> in a better way to get a good resolution for printing (maybe 300 dpi)?
>
> Thanks for your help
>
> Dom
>
> --
> ==========
> Dominik Paul
> Uniklinik Freiburg
> Abt. Nuklearmedizin/PET
> ==========
>
>
>

Subject: Re: plots for printing
Posted by Martin Schultz on Thu, 26 Jul 2001 14:15:43 GMT
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"Dominik Paul" <dpaul@ukl.uni-freiburg.de> writes:

> Hello there,
>
> I need some plots for my report. And I made these plots with IDL (very good
> programm for visualisation). Than I take screen shots of the pictures and
> used it for printing.
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> Thanks for your help
>
> Dom
>
> --
> ==========
> Dominik Paul
> Uniklinik Freiburg
> Abt. Nuklearmedizin/PET
> ==========
>
>

For printing, I can only agree to what the others said: use the 'PS'
device for best results (often looks nicer to use PS or Truetype fonts,
too). However, if you want to be really en vogue and embed an IDL plot

in a Powerpoint or StarImpress (or ...) presentation, you have no way
but get a screen snapshot (e.g. with David's TVRD() program). This
gives horrible quality! The quality can be improved substantially,
however, if you produce the plot in a pixmap window that is at least
twice as large (along each side) as the desired final image size. Then
you read and save this screen, and afterwards you use some graphics
program (ImageMagick, Corel Photopaint, Photoshop, ...) to resize
the image. I tried this with Imagemagick and various graphics formats
and achieved good results only with jpg (downsizing produces anti-aliasing
-- with png it doesn't).

In principal, IDL should already have the tools built-in to do
the downsizing with anti-aliasing, but in the short time we tried this,
we couldn't get it to work. Maybe it's time for a feature request?

Best regards,

Martin

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