
Subject: Re: EPS fragment output for latex font interpretation?

Posted by [Paolo Grigis](#) on Wed, 25 Jul 2007 10:25:19 GMT

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Gernot Hassenpflug wrote:

> Hello all,
>
> I have used IDL to output EPS figures with whatever fonts IDL has
> built-in. Now I would like to use IDL to output EPS fragments (in
> vector format) with markers for the text information, and .tex files
> containing the text corresponding to the markers, with both files to
> be later interpreted by LaTeX with an \input statement. With matlab,
> which I do not currently have a licence to, this was possible using
> the user-contributed laprint program.
>
> With such a splitting of the tasks, it is easy to adjust text size and
> font to what is required in the LaTeX document.
>
> Is there any way to do such a task in IDL (I have 6.2 and 6.3 licences
> at my workplace).
>
> Alternatively, if there is a way to use Computer Modern fonts with
> IDL, I could try to use those in the EPS file directly (then output in
> binary format is fine too).
>
> Many thanks
> Gernot

I've done so in a few occasion, and it worked out fine.

Here's an example with IDL, LaTeX and unix commands, which
I put together with some help from this newsgroup a while ago:

IDL commands to generate a figure with b and t as text markers:

```
N=1000
```

```
x=findgen(N)/(N-1)*10-5
```

```
mu=0.
```

```
sigma=1.
```

```
y=total(exp(-(x-mu)^2/(2*sigma^2)),/cumulative)*(x[1]-x[0])
```

```
set_plot,'PS'
```

```
device,filename='fig1.eps',/encapsulated,xsize=12.,ysize=8.
```

```
!p.font=0
```

```
plot,x,y,yrange=[0.,3.],thick=4,/xstyle,xrange=[-5,5],xtitle='x',ytitle='y'  
oplot,!X.crangle,sqrt(2*!Pi)*sigma*[1,1],linestyle=2
```

```
xyouts,0.,1.,'t',/data  
xyouts,-3,2.65,'b'  
device,/close  
set_plot,'X'
```

;END IDL

LaTeX file:

```
\documentclass{article}  
\usepackage{geometry}  
\usepackage{graphicx}  
\usepackage{psfrag}  
\pagestyle{empty}  
\geometry{paperwidth=12.1cm,paperheight=8.1cm,margin=0pt}  
\begin{document}  
\psfrag{t}[l][1.35]{$\displaystyle y=\lim_{-\infty}^x  
e^{-\left(\frac{t-\mu}{\sqrt{2}\sigma}\right)^2}\,,\mathrm{d}t$}  
\psfrag{x}[c][1.75]{$x$}  
\psfrag{y}[c][1.75]{$y$}  
\psfrag{b}[c][1.35]{$\displaystyle y=\sqrt{2\pi}\sigma$}  
\includegraphics[width=11.9cm,height=7.9cm]{fig1.eps}  
\end{document}
```

%end latex

Linux command to TEX and transform into eps:

```
latex doc.tex  
dvips -o fignew.ps doc.dvi  
ps2epsi fignew.ps fignew.epsi  
perl -ne 'print unless /^%%BeginPreview/..^%%EndPreview/' < fignew.epsi > fignew.eps  
rm fignew.epsi
```

Now you should have an eps file with equations rather than "t" and "b" labels...

Hope this helps,
Paolo Grigis
