

Insert PSTricks Figures in the \TeX file

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Figures in \LaTeX

Insert PsTricks figure

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1. Figures in L^AT_EX

- How to insert a figure?
- How to draw figure?

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1.1. Better questions about figures:

- Which types of figures are supported by L^AT_EX?
- Which are T_EX friendly software that can produce such figures?

1.2. How to insert a figure?

- In preamble add these packages

```
\usepackage{graphics,graphicx}
```

- For **.ps** files, **.eps** file type is supported.

```
\includegraphics{figfilename.eps}
```

- For **.pdf** files **.jpg** file format is supported.

```
\includegraphics{figfilename.jpg}
```

Recommended file types are .eps to read on a paper (hard-copy) and .jpg to see on a display (softcopy).

2. Insert PsTricks figure

2.1. Insert code of the fig as it is

Insert the code in the main \TeX file at the appropriate places. Compile the main \TeX file. It will compile all pstricks fig code at a time.

Advantages: Compiler will generate .dvi, .ps, .aux, .log files only once for main.tex file. We need not worry about house keeping of the too many files generated.

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Disadvantages:

- Every time we compile the code i.e. main.tex file, all figure files will get compiled.
- If we have many ps figures and compilation time for it is more, then it sometimes may take longer time to generate output file.
- Length of code increases.
This can be overcome by using
`\include{figfile.tex}`
- Difficult to find the exact code to edit, if required.

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2.2. Using .eps file format

Convert each .ps fig file in the .eps file format.

```
\includegraphics{fig236c.eps}
```

Then directly use it in the main.tex file with

```
\includegraphics{fig.eps} command
```

Once figure is inserted in say main.tex file. Next requirement is:

How to place the figure correctly in the text?

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- Placing figure at correct place
- Placing figure of required size

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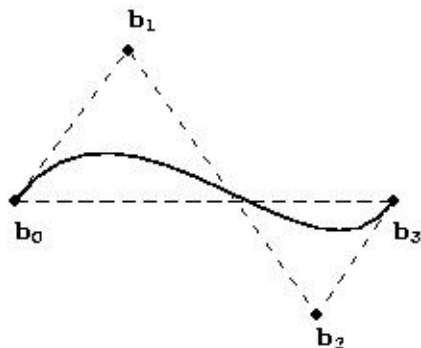
If the required size is already known, like in case of later-head, book cover etc. Then we can supply specific measurements for the figure.

Try:

```
\includegraphics*[width=1.5in,%  
height=1.5in]{figfile.eps}  
  
\resizebox{1in}{!}{%  
  \includegraphics{figfile.eps}}
```

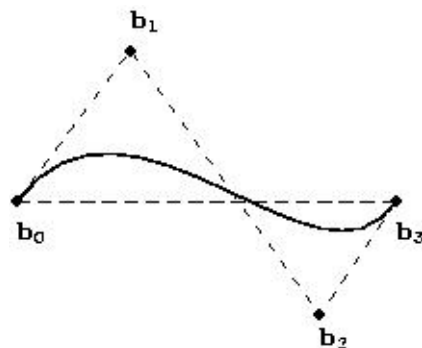
2.3. Example

```
\documentclass{article}  
\usepackage{graphics,graphicx}  
\begin{document}  
\includegraphics{chap1fig3c.jpg}  
\end{document}
```



3. Placing figures at the right place

3.1. Figure at center

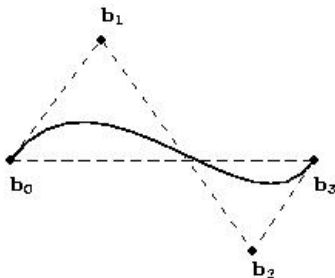


```
\centerline{  
\includegraphics{chap1fig3c.jpg}  
}
```

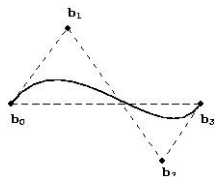
3.2. Adjust size of the figure

To reduce size of the figure you can use `\scalebox{.8}` to reduce the original figure 80%.

```
\scalebox{.8}{%  
\includegraphics{chap1fig3c.jpg}}
```



```
\scalebox{.5}{%  
  \includegraphics{chap1fig3c.jpg}}
```



3.3. Using figure environment

```
\begin{figure}  
  \includegraphics{chap1fig3c.jpg}  
\caption{This is a .jpg file}  
\end{figure}
```

Advantages: Caption automatic numbering and references are possible with figure environment.

Disadvantages: There is an upper bound for number of figures per page.

It can be relaxed. With some other command.

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4. Understanding the box around figure

4.1. Bounding Box

Tight fitting rectangular box around the figure.
It is invisible.
No text can be written inside the box.

If your psfig file has `\pagestyle{otherthanempty}` then page number will be occur on the fig page. Now converting thro' software. The software takes care that entire figure should get cover. so it puts bounding box accordingly. In case of page number on the fig file. The bounding box will be as much as a page. So after saving the file in .eps format. If we try to include it in the text file. It always shows the figure on a separate page.

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4.2. Conversions of file format

Store the file in the psfig1.tex file.

dvips to make it ps files.

Make it eps with ghostview

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4.3. Conversion tools/software

file type	software	O.S.	
psfile	ghostview	win	free
psfile	Coreldraw	win	commercial
psfile	gimp	Linux	free
psfile	pstoeps		free
bmp to jpg	paint brush		
bpm to jpg	gimp		
	Imagemagic		

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Thanks!

Questions?

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