

# LaTeX including graphics

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Outline

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## Including graphics and other flotsam



Figure : Tiger

You all know that a book with some illustrations at least looks a lot less boring. So you would like to add some pictures to your masterpiece.

You can do this

- ▶ Inline as if where part of the text 😊
- ▶ floating in the document
- ▶ Bound to a paragraph with text wrapped around it

You can also add things like captions and references.

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## How to include a graphical image

In all the text in these sheets we assume you compile with **pdflatex** from L<sup>A</sup>T<sub>E</sub>X source to **.pdf** output. You can include three types of images into L<sup>A</sup>T<sub>E</sub>X.

- ▶ single images in a **.pdf** file, preferably from a vector graphics source
- ▶ **.png** for pixel drawings with paint programs like The Gimp or paintshop pro.
- ▶ **.jpg** for photos you took with a camera.

See the L<sup>A</sup>T<sub>E</sub>X intro sheets for the difference. An syntax example is

```
\includegraphics [width=35mm]
{../../figures/Ghostscript_Tiger.pdf}
```

## How to use include graphics

- ▶ To be able to use the macro `\includegraphics` you need to add the package **graphicx** (note the **x** at the end) into your preamble or style file.
- ▶ The `\includegraphics` also has a set of options, such as forcing the picture to a specific **width** or **height** or even rotate it with an **angle** option.
- ▶ The path to the picture file to be include is specified between curly braces, the options between rectangular braces. See the example on the previous page.
- ▶ A picture included in this way tries to behave as a character and be include on the spot. In most cases this is not what you want.

## Including big pictures

More often,

- ▶ You want T<sub>E</sub>X to do the placement of the picture
- ▶ because your picture is big
- ▶ you do not want to keep shifting around with the picture, even if more text and or pictures are added.
- ▶ You want to add a caption to the picture
- ▶ You want to reference to the picture and its page in a symbolic way like: see the figure 2 on page 7

## Another Tiger



Figure : Tiger drawn in postscript (source: ghostscript example)

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## The tiger in L<sup>A</sup>T<sub>E</sub>X source code

Figure 2 on page 7 is produced with the code:

```
\begin{figure}[htpb]
  \includegraphics[width=55mm]
  {../../figures/Ghostscript_Tiger.↵
  pdf}
  \caption{Tiger drawn in postscript
  (source: ghostscript example)}
  \label{fig:tiger}
\end{figure}
```

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## More floating stuff

- ▶ You can also 'float' tables, with a similar table environment. In a similar fashion you can have pieces of code floating around or even have some side-text.
- ▶ You can add a list of figures, a list of tables to the front side of you pdf document, by placing the appropriate commands in the spot where you want them to appear. In these lists the figures and tables are referenced with their captions (or short captions if given). See the <http://latexbits.fontysvenlo.org> site for an example.

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## Smaller figures left or right adjusted

Sometimes your figures are a lot smaller than the text width or height. A figure mainly for illustrating the text (making it less boring).

You would like to attach it to a specific paragraph and have the text flow around it.

You can use the package `wrapfig` to enable this and then use it, for example like this:

```
\begin{wrapfigure}{1}{0.3\textwidth}
  \includegraphics[width=35mm]
  {../../figures/Ghostscript_Tiger.pdf}
  \caption{Tiger}
\end{wrapfigure}
```

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which is the start of this introduction file.

## Questions



Figure : Anyone?