A Sample Foils Document

Jim Hafner
IBM Research Division
Almaden Research Center
hafner@almaden.ibm.com

January 29, 1997

Abstract

This is where an abstract might go if you want one. There is usually not a lot of room for much here.

– Typeset by FoilTEX – Is this for a restricted audience?

Colors

FoilTEX (version 2) is fully integrated with LATEX 2ε so that the supported `color` package (part of the `graphics` package) is the preferred way to use colors.

For examples, see the `graphics` package documentation.

You can still use the old `colordvi` package that comes with Rokicki's `dvips`, but some things won't work exactly as expected (except in compatibility mode).

Itemize

- This is the first level of an itemize.
  - Here we jump to second level
    - Even third level (and there is a fourth level as well).
    - The second item at third level.
  - The second item at second level.
  - A third item at second level.
- The second item at first level.
- A third item at first level.

Note that we have turned off the logo on this page. It returns on the next page.

This should be a *new foil* with no header, followed by a quote:

> . . . it's a good idea to make your input file as easy to read as possible.

and some enumerating:

1. this is enumerated

2. this is also enumerated

> Above, we used `\emph{new foil}` instead of the old `{\em new foil\/}`!

On the following page we decided to stop the headers from appearing and move the date to the footline.

Fonts

- This shows *italics*, *slanted*, **boldface**, `typewriter`, roman, and SMALL CAPS.
- Unslanted *emphasize* and *slanted* emphasize.
- `\textrm` means roman and `\textsf` means sans serif.
- size changing from tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge, and Huge.
- 12pt is the smallest preloaded.
- 43pt is the largest preloaded in compatibility mode.
- 51pt is the largest preloaded in normal mode.

Special Characters and Accents

- Here is a list of accents:
  - ò, ó, ô, ö, õ, ō, ȯ, ǒ, ǒ, ő, o͡o, o̧, o̩, o̲.
- First in paragraph mode:
  - †, ‡, §, ¶, ©, £, 0123456789
- Then in math mode: (numerals are different!)
  - †, ‡, §, ¶, ©, £, 0123456789
- Here are more foreign language symbols:
  - œ, Œ, æ, Æ, å, Å, ø, Ø, ł, Ł, ß, ¿, ¡
- TEX's special symbols: #, $, %, &, _, {, }.

Some Mathematics

$$\mathcal{F} \cdots \frac{x+y}{1+\frac{y}{z+1}} = \sqrt{x+y} \times \sqrt[n]{2}$$

Here are some funny math symbols (we needed the `latexsym` package for a couple of these):

$$\forall \exists \flat \natural \sharp \partial \angle \Re \mho \jmath \aleph$$

$$\infty \diamond \clubsuit \diamondsuit \spadesuit \heartsuit \ell$$

$$\bigcap \bigcup \bigvee \bigwedge \bigodot \bigotimes \bigoplus \biguplus \sum \prod \coprod \int \oint$$

$$\sum_{i=1}^{n} x_i = \int_0^1 f[x] dx.$$

and $\gcd(m,n)$ and $x \equiv y \pmod{a+b}$.

More Math: arrays

$$\begin{array}{cccc} a+b+c & uv & x-y & 27 \\ a+b & u+v & z & 134 \\ a & 3u+vw & xyz & 2,978 \end{array}$$

$$\left(\begin{array}{|cc|} \hline x_{11} & x_{12} \\ x_{21} & x_{22} \\ \hline \end{array} \right) \begin{array}{c} \\ y \\ z \end{array}$$

$$x = \begin{cases} y & \text{if } y > 0 \\ z + y & \text{otherwise} \end{cases}$$

More Math: `equation` and `array` Numbering

Here is a numbered equation

$$E = mc^2 \tag{1}$$

and a numbered array

$$\begin{aligned} x &= 17y && (2)\\ y &> a+b+c+d+e+f+ \\ &\quad k+l+m+n+o+p && (3) \end{aligned}$$

More math accents: $\hat{a}$, $\check{a}$, $\breve{a}$, $\acute{a}$, $\grave{a}$, $\tilde{a}$, $\bar{a}$, $\vec{a}$, $\dot{a}$, $\ddot{a}$.

Over and underline:

$$\overline{\overline{x}^2 + 1} \qquad \overbrace{a + \underbrace{b+c}_{25} + d}^{16\alpha}$$

Bold Mathematics

The `boldequation` environment, with numbering yields

$$\boldsymbol{2\sqrt{x}\Pi^{y} \sim \pi \times x} \tag{4}$$

and without numbering yields

$$\boldsymbol{2\sqrt{x}\Pi^{y} \sim \pi \times x}$$

We can reference bold equations like (4).

There is also `\mathbf` and `\bm` in the middle of a formula, with
`\mathbf{a +} a + \bm{a+x\pi-\rho} -\rho`

$$\mathbf{a}+a + \boldsymbol{a + x\pi - \rho} - \rho$$

Note the difference between the two bold "a" in result.

Theorem and Proof Environments

Theorem 1. [TUG'92] *There are some TEX tools that are easier to use than others. This theorem is numbered and has an optional acknowledgement.*

Corollary. *This obvious corollary is not numbered because it uses the *-form.*

Proof. The details of the proof are left to the reader. Note that the environment names are case sensitive. □

We put a header back on the next foil to see that it is correctly rotated.

Rotated Foils

This entire page will (should?) be rotated if we declared the `\documentclass` option `dvips`. In the other cases, this is not supported and the user is warned.

The next foil will return to normal. Only foils that begin with `\rotatefoilhead` will be rotated. If LaTeX needs to split a rotated foil into two foils, *both* will be rotated.

Tables and Figures

Here is a short table:

First stuff	Second stuff	Third Stuff
foo	bar	bug
foofoo	barbar	bugbug

Table 1: This is the first table.

The above table is Table 1. It is a "nonfloat", since it doesn't float at all, but appears right where it was placed in the document.

`picture` Environments

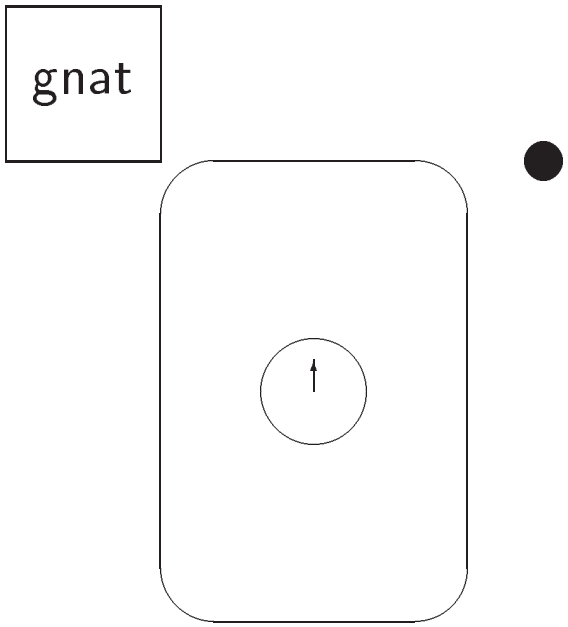

Figure 1: Isn't this a pretty picture?

`\thicklines` would be nice here but the picture doesn't look as good that way (why?). We should use the `graphics` package to load our graphics pictures here. Note that this Figure doesn't float!

Marginal Notes, Footnotes and Citations

A marginal note[1] is made with the `\marginpar` command, having the text as its argument. The note is placed in the margin, its first line even with the line of the text containing the command[2].

This is a marginal note

This is shows frameboxes at work. We can even cite references like [1] and [2].

References

[1] Rocky and Bullwinkle, Open problems, in *Mr. Know-it-all's Rock Encyclopedia*.

[2] Bullwinkle, Getting things out of hats, *Annals* **1** (1990BC), 1–2.

[1] This is a footnote.

[2] This is a second footnote.

Other Features

- `\raggedright` can be used in the preamble to get this effect throughout as we did on this page.

- Access to the AMS Fonts symbols and Euler fonts can easily be obtained with the `amslatex` (or is it `amsmath`) packages. You might not get fonts at the largest sizes however.

- PostScript fonts can used just by adding any of the package files from the PSNFSS package.