

The path package*

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Computer filenames, host names, and e-mail addresses tend to be long strings that cause line breaking problems for T_EX. Sometimes rather long strings are encountered, such as:

```
mighty-mouse-gw.src.symbolics.com
```

This file defines a macro, `\path|...|`, similar to L^AT_EX's `\verb|...|` macro, that sets the text in the typewriter font, allowing hyphen-less line breaks at punctuation characters. The macro `\pathafterhook` is expanded after the work of `\path|...|` is done.

The default set of punctuation characters is defined as

```
\discretionaries |~!@$%^&*()_+'-=#{"}[]:;,'<>,.?\/|
```

However, you can change it as needed, for example

```
\discretionaries +%!.+
```

would assign to it the set `@ % ! .` which commonly occur in electronic mail addresses.

The delimiter characters surrounding the arguments to `\discretionaries` and `\path` will normally be a punctuation character not found in the argument, and not otherwise significant to T_EX. In particular, backslash cannot be used as a delimiter. In the rare event that this is required, set

```
\specialpathdelimiterstrue
```

*This manual corresponds to `path.sty` v3.03b, dated 22 July 1997.

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This practice is not recommended, because $\text{T}_{\text{E}}\text{X}$ then runs about four times slower while it is typesetting $\backslash\text{path}\dots\backslash$ requests. $\backslash\text{specialpathdelimitersfalse}$ is the normal setting.

This file may be used in plain $\text{T}_{\text{E}}\text{X}$ or $\mathcal{A}\mathcal{M}\mathcal{S}\text{-T}_{\text{E}}\text{X}$ by

```
 $\backslash\text{input path.sty}$ 
```

and in $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ by

```
 $\backslash\text{usepackage}\{path\}$ 
```

The `checksum` field above, if present, contains a CRC-16 checksum as the first value, followed by the equivalent of the standard UNIX `wc` (word count) utility output of lines, words, and characters. This is produced by Robert Solovay's `checksum` utility.

The $\backslash\text{path}$ Macro

An early prototype of this code which was developed by Nelson H. F. Beebe <beebe@math.utah.edu> used a recursive macro to peel off one character at a time, then with a nest of $\backslash\text{ifx}$ statements, test for each punctuation character, and if one is found, insert discretionary linebreaks in the form of $\backslash-$ or $\backslash\text{penalty}0$. While this usually works, it is not entirely satisfactory, because the nested $\backslash\text{ifx}$ statements are ugly, and the recursion can exhaust $\text{T}_{\text{E}}\text{X}$'s macro stack for arguments longer than about 30 characters.

A second version by NHFB built upon the ideas used by the $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ $\backslash\text{verb}|\dots|$ macro; this was mostly successful, but was flawed by its inability to handle at least the three characters $\hat{[]}$, by loss of use of $\textcircled{\#}$ for naming internal private macros, and by its inability to allow the set of characters at which breaks are permissible.

The problem was then passed off to Philip Taylor, who wrote this third version which fully solves the problem. Phil therefore gets the author credit in the file header above. [Gee, thanks ! ** Phil]

Revision history (reverse time order):

3.03b [22-Jul-1997]

Summary: No code changes. An out-of-date example removed, the syntax for $\LaTeX 2_\epsilon$ changed to “`\usepackage {path}`”, and the “checksum” comments modified to indicate that the checksum is not necessarily present. The initial opening brace re-positioned to align with the matching closing brace, and the inner closing brace re-positioned to align with the inner opening brace. A check made to ensure that no `<tab>` characters are present.

3.03a [22-Jul-1997]

Summary: No code changes from V3.03; e-mail addresses, telephone numbers, etc. amended to reflect current situation. Checksum removed.

3.03 [03-Dec-1991]

Problem: A `\path|...|` entry in a \LaTeX index is set with an preceding blank line.

Solution: Add `\leavevmode` before `\hbox{}`; without it, an extra blank line gets typeset before every invocation of `\path` in a \LaTeX `theindex` environment.

Diagnosis: To avoid hyphenation, the expansion of `\path` starts with an `\hbox{}` (c. f. the \TeX book, p. 454); \LaTeX indices are basically set in vertical mode, with each index entry a paragraph in its own right; when an `\hbox {}` is encountered in vmode, it is typeset in vmode, and \TeX continues; the first real character is encountered, and \TeX enters unrestricted horizontal mode. The `\hbox {}` and the first character are therefore on separate lines, separated by `\baselineskip`.

3.02 [23-Oct-1991 13:45:12]

First released version.