Package ‘tth’

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Title TeX to HTML/MathML Translators tth/ttm
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Description C source code and R wrappers for the tth/ttm TeX to
HTML/MathML translators.
License GPL-2
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**R Interface to the tth/ttm TeX to HTML Converter**

**Description**

tth/ttm are command line utilities written by Hutchinson (2012) for converting (La)TeX to HTML or HTML+MathML, respectively.
Details
The R package **tth** ships the C sources for convenient compilation and installation on all platforms. It also provides wrappers in R to process R character vectors with the command line tools directly from the R prompt. A detailed manual for tth/ttm is available online at [http://hutchinson.belmont.ma.us/tth/manual.cgi](http://hutchinson.belmont.ma.us/tth/manual.cgi) (which actually produces an HTML version of the manual in real time using tth).

References

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**tth**

*R Interface to the tth/ttm TeX to HTML Converter*

Description
Convert TeX or LaTeX markup to HTML or HTML+MathML. Works for snippets as well as complete documents.

Usage
```
tth(x, ..., fixup = TRUE, Sweave = TRUE, mode = NULL)
ttm(x, ..., fixup = TRUE, Sweave = TRUE, mode = NULL)
```

```
tth.control(a = FALSE, c = FALSE, d = FALSE, e = 2, f = NULL, g = FALSE,
i = FALSE, j = NULL, L = TRUE, n = NULL, p = NULL, r = TRUE,
t = FALSE, u = FALSE, w = NULL, y = 2, xmakeindexcmd = NULL, v = FALSE)
```

Arguments
- **x**: character vector of (La)TeX code.
- **fixup**: logical. Should the resulting code be fixed up by deleting blank or empty lines and by replacing certain math symbols (such as not lower/greater etc.)?
- **Sweave**: logical. Should the Sweave code environments Sinput/Soutput be replaced by verbatim (and Schunk deleted) prior to conversion with tth/ttm?
- **mode**: character. If this is set to "hex", "dec", or "named", the corresponding mode is enforced for all character entity references. See also the details.
- **...**: arguments passed to tth.control.
- **c**: logical. Prefix header "Content-type: text/HTML" (for direct web serving)?
- **d**: logical. Disable definitions with delimited arguments? Default enable.
- **e**: numeric specifying epsfbox handling: 0 no conversion, just ref. 1 convert to png/gif using user-supplied ps2png/gif. 2 (default) convert and include inline.
numeric specifying limit for built-up fraction nesting in display equations to 0 to 9. Default is 5. For tth only.

logical. Remove (instead of guessing intent of) font commands. Default guess font/size.

logical. Use italic font for equations (like TeX)? Default roman. For tth only.

numeric specifying index page length. Default is 20 lines.

logical or character. If logical: Should LaTeX commands (e.g., frac) be enabled without a documentclass line? If character: The base file (no extension) for LaTeX auxiliary input.

numeric HTML title format control: 0 raw, 1 expand macros, 2 expand equations.

character specifying additional directories (paths) to search for input files.

logical. Raw HTML output (omit header and tail) for inclusion in other files?

logical. Display built-up items in textstyle equations? Default is inline. For tth only.

logical. Use unicode character encoding? Default is ISO-8859-1 (latin1).

numeric specifying HTML writing style. Default is no head/body tags, 0 no title, 1 single title only, head/body tags. 2 XHTML. For tth only.

numeric specifying equation style: 1 compress vertically, 2 inline overaccents.

character specifying command for making index. Default is makeindex.

logical or numeric. Give verbose commentary? Verbosity level can also be 0 (none, same as FALSE), 1 (same as TRUE), 2 (even higher verbosity for debugging).

Details

tth and ttm are simple R wrapper functions, calling command line tools of the same name which either need to be provided by the R package tth or be installed on the system (and available in the search path). The command line tools have been written by Hutchinson (2012) and a detailed manual is available online at http://hutchinson.belmont.ma.us/tth/manual.cgi (which actually produces an HTML version of the manual in real time using tth).

By default, the results of tth and ttm are processed further to accommodate the Sweave environments and fixup certain math symbols. Furthermore, optionally a particular mode for character entity references (mathematical symbols, greek letters, and other special characters) can be enforced. For example, the greek small letter mu can be represented in "named" mode (&mgr; or &mu;), in "hex" mode (&#x03BC;) or "dec" model (&#956;). Plain tth employs "dec" mode while plain ttm employs "named" mode. But setting mode = "hex" would convert all character entity references to hex mode etc. See http://www.w3.org/TR/xml-entity-names/bycodes.html for the list of character entity references employed and http://dev.w3.org/html5/html-author/charref for a somewhat nicer display.

Value

tth/ttm return a character vector with HTML code. tth.control returns a character vector with collapsed (non-default) control arguments.
References

Examples

tex <- c("This is \textbf{bold} and this \textit{italic}.",
"Points on the unit circle: $x^2 + y^2 = 1$.")
tth(tex)
ttm(tex)

h0 <- "$\theta: \mu_0 = 0$"
tth(h0)
tth(h0, mode = "hex")
tth(h0, mode = "named")
ttm(h0)
ttm(h0, mode = "hex")
ttm(h0, mode = "dec")
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