

L^AT_EX2RTF

A converter from L^AT_EX to RTF
Edition 0.4

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updated by Wilfried Hennings and Scott Prahl

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1 History & Copyright

In 1994 the first Version of $\text{\LaTeX}2\text{RTF}$ was written by Fernando Dorner and Andreas Granzer of the Viena University supervised by Ralf Schlatterbeck in a one-semester course. They created a simple \LaTeX parser and added most of the infrastructure for the program. This was version 1.0 of $\text{\LaTeX}2\text{RTF}$. In 1995, work on $\text{\LaTeX}2\text{RTF}$ was continued in another one-semester course by Friedrich Polzer and Gerhard Trisko. The result was $\text{\LaTeX}2\text{RTF}$ version 1.5. **Ralf Schlatterbeck** maintained and extended $\text{\LaTeX}2\text{RTF}$ until 1998.

In 1998 **Georg Lehner** found the reference to $\text{\LaTeX}2\text{RTF}$ on the **TeX Conversion Webpage** of **Wilfried Hennings** and added some functionality and took over the maintenance of the program. The last version release by Georg is 1.8aa. The bulk of development post 1.8aa was done by Scott Prahl. Wilfried Hennings now coordinates the development of the program and maintains the project on **SourceForge** where there are also (low volume) mailing lists for users **`latex2rtf-users@lists.sourceforge.net`** and developers **`latex2rtf-developers@lists.sourceforge.net`**. For subscription to these lists: **`latex2rtf-users-request@lists.sourceforge.net?subject=subscribe`** or **`latex2rtf-developers-request@lists.sourceforge.net?subject=subscribe`**

As of April 2002, version 1.9.13 of $\text{\LaTeX}2\text{RTF}$ is available. One day there shall be a jump to Version 2.0, but this is not history but future ...

The contents of this manual were composed by copying shamelessly what was available in the original sources and documentation.

2 Introduction

`LATEX2RTF` is a translator program from `LATEX` text into “rich text format” files. These files are commonly referred to as RTF files. RTF is a published standard format by Microsoft. This standard can be ambiguous in places and Microsoft ignores parts of the standard it finds inconvenient, but RTF is widely used by many WYSIWIG text editors and is supported by Microsoft Word and most text processors.

`LATEX2RTF` translates the text and as much of the formatting information from `LATEX` to RTF. Be forewarned that the typeset output is not nearly as good as what you would get from using `LATEX` directly. So, why bother translating? Consider,

1. You use `LATEX` and hate everything beginning with MS-... . Nevertheless, you have to share your documents with people who don't even now that there exist other things than MS-... .
2. You know somebody who frequently sends you very fine `LATEX` documents. Unfortunately, you are “on the other side” and need to import her files, steal some part, and then desktop publish it in your fine MS-... environment.

There are drawbacks to the conversion process. In fact, don't expect any `LATEX` file to be converted as you would like, don't expect it to be converted without errors or warnings, and don't be especially surprised when it doesn't convert at all. `LATEX2RTF` is known to have many bugs and many missing features. Paradoxically, this number seems to grow more and more with each day. However, we can categorically state that there are some special cases, in which a `LATEX` file will be translated to RTF satisfactorily by `LATEX2RTF` — This was sort of disclaimer, ok? OK!

`LATEX` is a system for typesetting text and therefore it focuses on the logical structure of a document, whilst RTF is meant to be a transport format for a family of Desktop Publishing Software, dealing mostly with the design of a text.

Although the possible different commands and styles in `LATEX` are much more flexible and standardized than in RTF, only a small subset of commands has been implemented to date. See [Section 9.1 \[Unimplemented Features\]](#), page 25.

Some of the capabilities of `LATEX2RTF` are restricted in scope or buggy. See [Section 9.3 \[Known Bugs\]](#), page 25.

RTF is a moving target, because Microsoft does not stop inventing new extensions and features for it. So you cannot view newer RTF files with older word processors. `LATEX2RTF` eventually will generate RTF output that is unreadable with your Program. The syntax and semantics of RTF are somewhat artistic, i.e., you can generate a syntactically correct RTF file that cannot be displayed by some/most word processors.

For more details on RTF look at the RTF-Tools by Paul DuBois, and the corresponding newsgroups, etc. <http://www.primate.wisc.edu/>

3 Availability

$\text{\LaTeX}2\text{RTF}$ is available for many Unix Platforms, for the Macintosh, and for MS-DOS, including all versions of MS Windows 95.

The MS-DOS version (1.8aa and up) will also run under all MS Windows versions. It requires an i386 processor or better. The Win32 Version requires [Cygnus-Cygwin32](#). As the MS-DOS version (1.8aa and up) will also run under all MS windows versions, the Win32 version has been discontinued.

Subsequent to 1.8aa, [Scott Prahl](#) has fixed many bugs, improved handling of tabular environments, significantly improved handling of equations, added macro expansion, improved handling of cross references, added bitmap rendering of equations, and added some support for `\includegraphics` files.

You find the latest version on [SourceForge](#) and – with some delay – on CTAN sites: e.g., <http://www.dante.de> or <http://www.ctan.org>.

There are a couple of people working on the $\text{\LaTeX}2\text{RTF}$, coordinated by [Wilfried Hennings](#). Contact the mailing_list for the latest news.

4 Installing LaTeX2RTF

4.1 General

The documentation of the program is found in the ‘doc/’ directory in the file ‘`latex2rtf.texi`’ in the GNU TeXInfo format. For your convenience, you can find HTML and PDF versions of the manual there as well.

4.2 UNIX

To install,

1. Edit ‘`Makefile`’ for your local configuration. In particular, pay attention to the `PREFIX` variable. If you do not have root access you might wish to set the makefile variable `PREFIX` to be your home directory.

On some machines the `cc` compiler will issue errors. In this case, better use the `gcc` compiler (from GNU). Edit ‘`Makefile`’ and change the line `CC=cc` into `CC=gcc`.

2. As of version 1.9.13, LaTeX2RTF supports conversion of LaTeX equations to bitmaps using the shell script ‘`latex2png`’, found in ‘`scripts/`’. ‘`latex2png`’ requires that both LaTeX and ‘`ImageMagick`’ are installed. LaTeX2RTF will translate documents without a working ‘`latex2png`’, but some features will be missing.

3. `make`

If this is not your first time installation, you may want to preserve your old configuration (‘`*.cfg`’) files. Copy them to a safe place before installing.

On IBM AIX, the IBM make utility does not support some of the commands used in Makefile. In this case use `gmake` (from GNU) instead.

4. `make check`

[OPTIONAL] This tests LaTeX2RTF on a variety of LaTeX files. Expect a whole lot of warnings, but no outright errors.

5. `make install`

If your `mkdir` doesn’t support the ‘`-p`’ option, then create the necessary directories by hand and remove the option from the `$MKDIR` variable. If you have other problems, just copy ‘`latex2rtf`’ and ‘`latex2png`’ to a binary directory, and move the contents of the ‘`cfg/`’ directory to the location specified by `$CFG_INSTALL`.

6. `make install-info`

[OPTIONAL] This installs ‘`.info`’ files for use with the `info` program.

You no longer need to define the environment variable `RTFPATH`. This is only necessary if you move the directory containing the ‘`.cfg`’ files. Just define `RTFPATH` to be the path to the new location.

4.3 DOS or Windows

The UNIX and Mac distributions do not contain an executable for DOS or Windows. Instead, get the DOS port as file ‘`latex2rtf-x.xx_dos.zip`’ (where x.xx is the version number) from [SourceForge](#)

The DOS distribution contains a precompiled executable which should run under plain DOS and also under any MS Windows system.

To install latex2rtf, extract all files from the zip archive to ‘`C:\l2r`’ or to another folder (i.e. directory) of your choice, preserving the folder structure (winzip: check "use folder names").

If you extracted them to another folder (e.g. ‘`C:\Program Files\l2r`’), edit the files ‘`L2R.BAT`’ and ‘`L2RSEM.BAT`’ and change the pathes to ‘`LATEX2RT.EXE`’ and to the `cfg` files so that they point to the folders where you put them. If there is a blank in any of the folder names (as in e.g. "Program Files"), then you need to enclose both the file-ID and the `cfg` path in double quotes, e.g.

```
"C:\Program Files\l2r\latex2rt" -P "C:\Program Files\l2r\cfg" %1 %2 ...'
```

If you install `LATEX2RTF` under WinNT, Win2000 or WinXP and you want other users to be able to use `LATEX2RTF`, you must assign the files and folders appropriate user permissions (at least read & execute). If you don't know about user permissions, put `LATEX2RTF` into ‘`C:\Program Files\l2r`’ or what else the standard folder for installing applications is named (e.g. in the German version it is ‘`C:\Programme\l2r`’).

Make sure that the folder containing the files ‘`L2R.BAT`’, ‘`L2RSEM.BAT`’ and ‘`LATEX2PNG.BAT`’ is in your search path, or put these files into a folder which is in your search path (e.g. ‘`C:\Windows`’).

To display the current search path, enter ‘`path`’ from the command prompt (with no arguments).

To add a folder – e.g. `C:\l2r` – to the search path:

DOS, Win3.1, Win95, Win98, WinME

Open the file ‘`C:\Autoexec.bat`’ either with Edit (DOS) or with Notepad (Windows).

At the end of that file, add the line

```
'PATH=%PATH%;C:\l2r'
```

Save the file to its original location.

WinNT, WinXP

Right-click "My Computer" (German: "Arbeitsplatz"), then select "Properties";

NT: Click the "Environment" tab;

XP: Click the "Extended" tab, then the "Environment variables" button;

Find the line beginning with ‘`PATH=`’ and append the string

```
‘;C:\l2r’
```

so that the complete line looks like

```
'PATH=C:\WINDOWS;...;...;C:\l2r'
```

Click "OK"

To start the program under Windows, open a command prompt (or console window) – under DOS you are already at the command prompt –, use ‘`cd <folder>`’ to make the

folder with your TeX files the current folder, then enter either ‘L2R <filename> <options>’ or ‘L2RSEM <filename> <options>’ where <filename> is the name of your TeX file without the .tex extension.

L2R.BAT and L2RSEM.BAT only differ in the character being used as parameter separator in the EQ fields, see chapter [Section 6.5 \[Equations\]](#), page 16.

If you want to use the option to convert equations to bitmaps (-M 12), you must have TeX, ImageMagick and Ghostscript installed. This works only on win32 systems (win95, win98, winNT4, win2000, winXP) because ImageMagick is available only for win32, not for pure DOS.

Of TeX, you need a complete installation.

Of ImageMagick, get the version for Win2000. It will also work under win95 and win98. You only need convert.exe.

Of Ghostscript, you only need gswin32c.exe and gsdll32.dll.

Either the folders where TeX, ImageMagick and Ghostscript are installed must be in your search path, or you must edit the file ‘LATEX2PNG.BAT’ and specify the folders where TeX, ImageMagick and Ghostscript are installed in the SET commands, e.g.

```
...
rem Set path to latex here (ending with \)
rem     if it isn't in your search path:
SET TEXDIR=C:\texmf\miktex\bin\

rem Set path to ImageMagick's convert here (ending with \)
rem     if it isn't in your search path:
SET MAGICKDIR=C:\ImageMagick\

rem Set path to Ghostscript's gswin32c.exe here (NOT ending with \)
rem     if it isn't in your search path:
SET GSDIR=C:\gs\gs7.04\bin
```

L^AT_EX2RTF first writes a temporary .tex file to disk which consists of only the equation to be converted. It then sends the call for latex2png.bat to the operating system. One user had problems that this didn't work although manually calling latex2png.bat from the command prompt worked.

I guess the problem was caused by using 4NT.exe as command processor instead of the (default) command.com, but he not (yet) confirmed this.

4.4 Macintosh

If you want a MacOS X version, make sure that you have installed the developer tools CD that is appropriate for your OS version, and then follow the directions above for UNIX installation.

There is a classic MacOS PPC port of the 1.9k of L^AT_EX2RTF and I have made a binary distribution of this application. Unfortunately, because I (Scott Prah) do all development under MacOS X, the binaries for the Classic version often lag (far) behind the current UNIX version.

To convert a `LaTeX` file, just drag the file onto the `LaTeX2RTF` application icon. The translation is best if there are `.aux` and `.bbl` files in the same folder as the `.tex` file to be converted. These should be generated using `LaTeX` and `bibtex`.

4.5 Problems Compiling

The code for `LaTeX2RTF` is standard ANSI C. Some possible pitfalls are

- Not correctly defining your compiler in the Makefile. The default is to use `gcc`.
- Encountering errors because the compiler options. During development all compiler warnings are turned on. However, different compilers have different interpretations of `-Wall` and `-pedantic` and so may generate errors that were not found in a different development system. Please report these, but a quick fix is to remove all compiler options.
- Not defining `RTFPATH` (either as environment variable or by the command line parameter `-P`).
- Not defining `HAS_NO_STRDUP` in the Makefile when your system lacks this facility.

4.6 Problems with make check

All the files in the `test` directory are converted (with more or less success) using `LaTeX2RTF` and are tested before each CVS check-in and with all released tarballs. If you have successfully compiled `LaTeX2RTF` then problems are probably caused by

- Not defining `RTFPATH`.
- Not defining `HAS_NO_STRDUP` in the Makefile when your system lacks this facility.

5 Using LaTeX2RTF

5.1 General Assumptions

LaTeX2RTF assumes that the `.tex` file you want to convert is a valid LaTeX document. The chances of a successful LaTeX2RTF conversion are slightly better than the proverbial snowball's if the `.tex` file doesn't `latex` properly. Use LaTeX to find and correct errors before using LaTeX2RTF.

To correctly convert font names you must edit the `fonts.cfg` configuration file. This file is used to specify the needed font names and how the LaTeX default font names should be converted to RTF. See [Section 7.5 \[Font Configuration\], page 20](#). LaTeX variables and user defined commands are not evaluated. They will be simply ignored. To let LaTeX2RTF know the names of variables you can add them in the `ignore.cfg` file. See [Section 7.4 \[Ignore Command\], page 20](#).

The environment variable `RTFPATH` may contain a search path for the support files (all files ending in `.cfg`). If no file is found during the search in the search-path or if the environment variable is not set, the compiled-in default for the configuration-file directory is used. If the files are not found at all the program aborts.

In the MS-DOS version the search path is separated by `;` in the Unix version by `:`. For the paths themselves apply `\` and `/`. A separator may appear at the beginning or ending of `RTFPATH`.

Make sure that the configuration files are in the correct directory. LaTeX2RTF will need at least `fonts.cfg`, `direct.cfg`, `ignore.cfg`, `english.cfg`. You may have to change one or more of them to suit your needs. See [Chapter 7 \[Configuring LaTeX2RTF\], page 19](#).

See [Section 9.2 \[Missing options\], page 25](#), for actual implementations irregularities.

See [Section 9.4 \[Reporting Bugs\], page 26](#), for information on how to reach the maintainer.

5.2 LaTeX2RTF Options

The LaTeX2RTF command converts a LaTeX file into RTF text format. The text and much of the formatting information is translated to RTF making the new file look similar to the original. The command line syntax is:

```
latex2rtf [-options] inputfile.[tex]
```

The `-options` may consist of one or more of the following

`-a auxfile`

specify an `.aux` file (for table and figure references) that differs from `inputfile.aux`. If this is omitted, the name of the inputfile with the suffix replaced `.aux` will be taken. You must provide both files (`.tex` and the `.aux`) to be able to convert cross-references in a LaTeX file. The `.aux` is created by running the `inputfile.tex` through `latex`.

-b bblfile

Unless an ‘bblfile’ is specified with the **-b** option, LaTeX2RTF uses a ‘inputfile.bbl’. The ‘bblfile’ file is used for citations and is typically created by running ‘inputfile.aux’ through ‘bibtex’.

-d

The ‘-d’ option determines the amount of debugging information to send to stderr while translating. ‘0’ means only Errors, ‘1’ Warning Messages (default) also. These numbers can go as high as ‘7’.

-i language

used to set the idiom or language used by the LaTeX document. Typically, this is specified in a LaTeX_{2_ε} document by including `\usepackage[language]{babel}` where **language** is one of the languages supported by the **babel** package. All languages listed in the babel system are supported so far as translations for “Chapter,” “References,” and the like. Specific support for specific options of the german style package are explicitly supported. The french translated names are found in the ‘french.cfg’ file in the ‘cfg/’ directory. See [Section 7.6 \[Language Configuration\]](#), page 21.

-l

same as ‘-i latin1’ (Note that the default behavior is to use ‘ansinew’ which is a superset of ‘latin1’). Included for backwards compatibility.

-o outputfile

Unless an ‘outputfile’ is specified with the **-o** option, the resulting RTF filename is formed by removing ‘.tex’ from the ‘inputfile’ and appending ‘.rtf’.

-C codepage

used to specify the character set (code page) used in the LaTeX document. This is only important when non-ansi characters are included in the LaTeX document. Typically this is done in a LaTeX_{2_ε} file by using `\usepackage[codepage]{inputenc}`. This command is not needed if the above command is already in the LaTeX_{2_ε} file. You may select any of the following code pages: ansinew, applemac, cp437, cp437de, cp850, cp852, cp865, decmulti, cp1250, cp1252, latin1, latin2, latin3, latin4, latin5, latin9, next. The default behavior is to use ansinew (code page 1252). Cyrillic support includes conversion of koi8-r, koi8-u, cp1251, cp855, cp866, maccyr, and macukr encodings.

-D dots_per_inch

used to specify the number of dots per inch for equations converted to bitmaps. This value is also used when picture environments are converted to bitmaps as well as when EPS graphics are converted to png files. The default value is 300 dots per inch.

-M#

where # selects the type of equation conversion. Use

- M1** convert displayed equations to RTF
- M2** convert inline equations to RTF
- M4** convert displayed equations to bitmap
- M8** convert inline equations to bitmap

-M16 insert Word comment field that the original equation text

These switches can be added together to get the desired conversion. Handy examples are

-M3 convert both inline and displayed equations to RTF (default)

-M6 convert inline equations to RTF and displayed equations to bitmaps

-M12 convert both inline and displayed equations to bitmaps

Bitmap conversion requires that you have installed a working latex2png script. Producing bitmaps is slow.

-P /path/to/cfg

used to specify the directory that contains the `.cfg` files

-S used to specify that semicolons should be used to separate arguments in RTF fields (instead of commas). Typically this is needed when the machine that opens the RTF file has a version of Windows that uses ‘,’ for decimal points.

-V prints version information on standard output and exits.

-W includes warnings directly in the RTF file

-Z# add the specified number of extra } to the end of the RTF file. This is useful for files that are not cleanly converted by LaTeX2RTF .

With no arguments other than switches starting with a “-”, LaTeX2RTF acts as a filter, i.e., it reads from `stdin` and writes to `stdout`. In addition, diagnostic messages are sent to `stderr`. If these standard channels are not redirected using `<` and `>`, then the input is read from the command line, and both output and error messages are printed on the screen.

If a non-switch argument is present, LaTeX2RTF assumes it is the name of the input file. The file must have extension “.tex” but the extension is optional. The output file is constructed from the input file name by removing the extension “.tex” and adding “.rtf”.

5.3 Debugging

With the ‘-d’ option you can specify how much processing information LaTeX2RTF reports. If there is a logfile specified the output goes to this file. Nonetheless Warnings and Errors are logged to `stderr` always.

Possible values of ‘-d’ are

0. only errors.
1. Translation Warnings (default).
2. shows preparsing of sections
3. Reasonably high level debugging messages
4. Show all function calls
5. Show all each character as it is processed
6. Show processing of characters as they are output as well

6 Features

In this chapter you find what styles is `LATEX2RTF` supposed to translate correctly to RTF.

6.1 L^AT_EX2e

`LATEX2RTF` understands most of the commands introduced with `LATEX2ε`. It supports both the old 2.09 version of `\documentstyle[options]{format#}` and the newer `\documentclass[options]{format}`.

6.2 Input Encoding

It is not necessary to specify the ‘-C’ option if you use `\usepackage{isolatin1}` or `\documentstyle[isolatin1]{...}`. `LATEX2RTF` automatically detects these packages/style options and switches to processing of ISO-Latin1 codes. The following encodings are supported: `ansinew`, `applemac`, `cp437`, `cp437de`, `cp850`, `cp852`, `cp865`, `decmulti`, `cp1250`, `cp1252`, `latin1`, `latin2`, `latin3`, `latin4`, `latin5`, `latin9`, `next`, `koi8-r`, `koi8-u`, `cp1251`, `cp855`, `cp866`, `maccyr`, and `macukr`. The encoding used in RTF files is `cp1252`. If cyrillic fonts are present, then these are represented in the RTF file using `cp1251` (Windows Cyrillic).

6.3 Language Support

The following languages from the Babel package are supported: `afrikaans`, `german`, `nynorsk`, `spanish`, `bahasa`, `dutch`, `icelandic`, `polish`, `swedish`, `basque`, `english`, `portuges`, `turkish`, `brazil`, `esperanto`, `irish`, `romanian`, `usorbian`, `breton`, `estonian`, `italian`, `samin`, `welsh`, `catalan`, `finnish`, `latin`, `scottish`, `croatian`, `lsorbian`, `serbian`, `czech`, `french`, `magyar`, `slovak`, `danish`, `galician`, `norsk`, `slovene`,

The only thing that these files do is to translate various words usually emitted by `LATEX` during processing. For example, this ensures that the `LATEX2RTF` will provide the correct translation of the word “Chapter” in the converted document.

You can select any of the above languages using the ‘-l’ option. This is not needed if your `LATEX` file contains `\usepackage[language]{babel}`.

Encountering the ‘`german`’ package or `documentstyle` option (by H. Partl of the Viena University) makes `LATEX2RTF` behave like that: German Quotes, German Umlauts by “a, etc. . . . This support is programmed directly into `LATEX2RTF` and supporting similar features for other languages will require patching the source code.

See [Section 7.6 \[Language Configuration\], page 21](#), for details on how to write a ‘`language.cfg`’ file for your language by yourself.

6.4 Cross References

Cross references include everything that you might expect and then some: bibliographic citations, equation references, table references, figure references, and section references. Section, equation, table and figure references are implemented by placing RTF bookmarks around the equation number (or table number or figure number).

Page references work but are implemented as “warm” cross-references. This means that Word does not automatically update the page references when the file is opened. To update the page references you must select the entire document (in Word) and press F9.

Bibliographic references currently require that a valid ‘.aux’ file be present. This is where LaTeX2RTF obtains the reference numbers. It would be nice if LaTeX2RTF just automatically numbered the references when there was no ‘.aux’ file, but LaTeX2RTF does not do this yet.

Footnotes are implemented and appear at the bottom of each page.

Indexing is reasonable well supported. The simple mark-up of `makeindex`

```
\index{topic!subtopic@\textit{subtopic}}
```

is supported. The rest of the fancy indexing stuff is not implemented. The index is created at the location of the `\printindex` command. When a file with an index is first opened in Word, you must select the entire file and update the page references and fields by pressing F9.

Currently, there is no support for `\labels` of `\items` in enumerate environments.

The conversion of cross-references is not perfect because of the different mechanisms in the LaTeX and Word worlds. In particular, if there are multiple `\label` in a figure, table, or section environment then only the first gets processed. It is also possible to confuse the LaTeX2RTF in `eqnarray` environments.

6.5 Equations

There are four separate levels of equation translation based on the -M switch, See [Section 5.2 \[LaTeX2RTF Options\]](#), page 11. Each equation is now converted either to an EQ field or to a bitmap.

This is an interim solution (for some definition of “interim”). Ideally the equations would become OLE equation objects in the RTF file, but this needs to be implemented.

Some functions in the EQ fields have two or more parameters with a separator between each two. Unfortunately, the interpretation of these separators depends on the country specific settings in the MS Windows system in which the rtf file is opened. E.g. in English versions of MS Windows, the default parameter separator is the comma, in German versions the default is the semicolon. If the parameter in the RTF file does not match the Windows setting, some EQ fields are not interpreted correctly. You can check and set the separator in [Windows control panel - country settings - numbers - list separator]. By default, latex2rtf uses the comma as separator. If latex2rtf is called with the command line parameter -S , the semicolon is inserted as parameter delimiter.

6.6 Tables

The table code is currently barely working. It needs to be rewritten.

6.7 Graphics

There is now rudimentary support for `\includegraphics`. Three file types will be inserted into the RTF file without needing conversion: `.pict`, `.jpeg`, and `.png` files. EPS files are converted to PNG using `convert` from the ImageMagick package.

6.8 Pagestyles

If there is no `\pagestyle` command, the RTF output is generated as with plain pagestyle, i.e. each page gets its page number centered at the bottom.

You must turn this off with the `\pagestyle{empty}` command in the \LaTeX file if you don't want pagenumbers. The `headings` and `myheadings` styles are silently ignored by now. The `twosided` option to the `\documentstyle` or `\documentclass` produces the corresponding RTF tokens. Note that these features require RTF Version 1.4.

6.9 Hyperlatex

Hyperlatex support is largely broken at the moment, but continues to improve.

Otfried Schwarzkopf has created the “Hyperlatex Markup Language” which is a “little package that allows you to use \LaTeX to prepare documents in HTML.” It brings an Emacs lisp program with it to convert the Hyperlatex file to HTML. Hyperlatex can be obtained from the CTAN-sites, See [Chapter 3 \[Availability\]](#), page 5. There are two convenient commands that avoid typing: `\link` and `\xlink` that generate an “internal” label which then is used in the following `\Ref` and `\Pageref` commands.

\LaTeX makes it possible to write `'\link{anchor}[ltx]{label}'`, which typesets: `'anchor ltx'`. \LaTeX2RTF does NOT support this approach since the optional parameter is thrown away right now, See [Chapter 9 \[LaTeX2RTF under Development\]](#), page 25.

Note that you have to update your `'.cfg'` files if you are upgrading, since there are a lot of HTML oriented commands in Hyperlatex that we simply can ‘ignore’.

7 Configuring LaTeX2RTF

7.1 Input processing

On processing input LaTeX2RTF first converts the LaTeX special characters. If it encounters one of the standard commands it is converted internally. If a command is not known to LaTeX2RTF it is first looked up in ‘direct.cfg’ and the RTF code specified there is output. If not found there it is looked up in the section ‘ignore.cfg’. This file includes a lot of LaTeX commands that do not affect the output (cross reference information and the like), or that we are not able or willing to convert to RTF.

You can use ‘ignore.cfg’ if you get tired of seeing

```
WARNING: command: ‘foo’ not found - ignored
```

and you don’t need ‘foo’ in your RTF document. It would be nice to send your additions to the LaTeX2RTF mailing list for inclusion in later distributions.

LaTeX2RTF accepts Unix, MS-DOS, and Macintosh line ending codes (\n, \r\n and \r). The files it creates are the line ending for the platform on which LaTeX2RTF was compiled.

The LaTeX file may have been created with a wide variety of character sets. If the LaTeX lacks the `\package{codepage}{inputenc}` definition, then you may need to use the command line switch to manually select the proper code page. See [Section 6.2 \[Input Encoding\]](#), page 15.

7.2 Output formatting

On writing output, LaTeX2RTF generates \n as line ending code. Your RTF Reader should accept this on any platform. If you ftp your RTF file from or to MS-DOS platforms the line ending code can be converted to \r\n. As this should also be legal to any RTF Reader the resulting RTF rendering should not be affected.

LaTeX2RTF does not offer a whole lot of flexibility in how files are translated, but it does offer some. This flexibility resides in four files ‘direct.cfg’, ‘ignore.cfg’, ‘fonts.cfg’, and ‘language.cfg’. These files are documented in the next four sections.

7.3 Direct Conversion

The file ‘direct.cfg’ is used for converting LaTeX commands by simple text replacement. The format consists of lines with a LaTeX command with backslash followed by comma. The rest of the line until a ‘.’ character will be written to the RTF file when the command is found in the LaTeX file. Lines starting with a ‘#’ character are ignored. After the ‘.’ everything is ignored to end of line. To select a specific font use `*fontname*`, where `fontname` be defined in ‘fonts.cfg’. To write the ‘*’ character use ‘**’.

```
\alpha,{\f*Symbol* a}. #alpha in the Symbol Font
\copyright,\’a9.
```

7.4 Ignore Command

The file ‘`ignore.cfg`’ is used for defining how to ignore specific commands. This file is used for recognition of \LaTeX variables, user defined variables, and some simple commands. All variables are ignored but the converter must know the names to correctly ignore assignments to variables. Lines in this file consist of a variable name with backslash, followed by comma and the type of the variable followed by ‘.’. Possible types are

‘NUMBER’	simple numeric value
‘MEASURE’	numeric value with following unit of measure
‘OTHER’	ignores anything to the first character after ‘=’ and from there to next space. e.g., <code>\setbox\bak=\hbox</code>
‘COMMAND’	ignores anything to next ‘\’ and from there to the occurrence of anything but a letter e.g., <code>\newbox\bak</code>
‘SINGLE’	ignore single command e.g., <code>\noindent</code>
‘PARAMETER’	ignores a command with one parameter e.g., <code>\foo{bar}</code>
‘PACKAGE’	does not produce a Warning message if PACKAGE is encountered, e.g., ‘PACKAGE,kleenex.’
‘ENVCMD’	processes contents of unknown environment as if it were plain \LaTeX eg. ‘ENV-CMD,envron.’ Therefore <code>\begin{envron} text \end{envron}</code> as ‘text’.
‘ENVIRONMENT’	ignores contents of that environment, e.g., with ‘ENVIRONMENT,ifhtml.’ <code>\begin{ifhtml} text \end{ifhtml}</code> ignores ‘text’.

The types are in upper case exactly as above. Do not use spaces. Lines starting with a ‘#’ character are ignored. After the ‘.’ everything is ignored to end of line. Example:

```
\pagelength,MEASURE.
```

7.5 Font Configuration

The file ‘`fonts.cfg`’ contains the font name mapping. For example, this file determines what font is used to represent \rm characters in the RTF file.

A line consists of a font name in \LaTeX followed by comma and a font name in RTF. The end is marked by a ‘.’. No spaces are allowed. The \LaTeX font will be converted to the RTF font when it is found in the \LaTeX file. If multiple translations for the same \LaTeX font are specified, only the first is used. All fonts in a \LaTeX file that are not in this file will be mapped to the default font. All RTF fonts listed in this file will be in every RTF file header whether used or not. Lines starting with a ‘#’ character are ignored. After the ‘.’ everything is ignored to end of line.

To add a RTF font not used as substitute for a \LaTeX font — for example a Symbol font used in ‘`direct.cfg`’ — use a dummy \LaTeX name like in the following

`Dummy3,MathematicalSymbols.`

Make sure you use the correct font name. Take care of spaces in font names. The default fonts are named Roman `\rm`, Slanted `\sl`, Sans Serif `\sf`, Typewriter `\tt`, or Calligraphic `\cal`.

7.6 Language Configuration

The file(s) `'language.cfg'` control the translation of \LaTeX 's "hardcoded" sectioning names. The standard \LaTeX styles have some fixed Title names like 'Part', 'Reference' or 'Bibliography' that appeared in English or German in the output with the original versions of \LaTeX2RTF .

It is unlikely that you will need to create a new `'language.cfg'` file. However, just look at one of the existing files and follow the pattern. The format is really simple.

8 Error Messages and Logging

As stated in the Debugging section, `LATEX2RTF` provides a means to control the amount of debugging information through the ‘`-d#`’ switch. By using a debugging level of 4, you can get a pretty good idea of what `LATEX` command caused the problem and what line that command might be found on.

‘Fatal error messages’

indicate a bug in the source code. PLEASE report them, if they do not appear in the documentation. See [Section 9.4 \[Reporting Bugs\]](#), page 26.

‘Error messages’

always abort the program and are caused by conditions that prevent further conversion of the input file. Typically this is caused by `LATEX2RTF` getting hopelessly confused by the number of braces in the `LATEX` file.

‘Warning messages’

inform you, that there is some conversion loss from `LATEX` to RTF, or that the output file has some restrictions on some RTF Readers. Most of these warnings can be suppressed by adding the offending command to the ‘`ignore.cfg`’ file.

Error and Warning messages should follow the GNU Coding standards, i.e. they have the format

```
inputfile':line: Error|Warning: message
```

You can also control the level of debugging output by inserting `\verbositylevel{#}` in the `LATEX` file. This is very handy if you have a large `LATEX` file that is failing in only a small section. For example,

```
problem free latex file ....
\verbositylevel{5}
problematic code
\verbositylevel{0}
```

will cause a huge amount of debugging information to be emitted for the problematic code.

Error reporting and logging still has many inconsistencies, but it gets better with each release. Don't try to make any sense in debugging levels above 4, these are for my own delight only and can change significantly between versions.

The ‘`inputfile`’ may be incorrectly identified if it is incorporated through `\input` or `\include`. The line may be also be wrong at times. See [Section 9.3 \[Known Bugs\]](#), page 25.

9 LaTeX2RTF under Development

9.1 Unimplemented Features

- `LaTeX2RTF` ignores some of the optional parameters of `\documentstyle`
- Need to finish code page support. Some characters that need to be constructed using RTF `\field` commands are not implemented.
- Add the code to produce the corresponding chapter, section, and page numbering with headings and myheadings pagestyles. Implement `\markboth` and `\markright`.
- To support `\tableofcontents` there would be two approaches: Transfer sectioning information, title text and then produce page numbers by the rtf- reader. Scan and label all of the sectioning commands while reading and then construct the sectioning information using these labels. Needs two passes on `LaTeX` input.
- Include the GNU gettext package to internationalize `LaTeX2RTF` 's Messages.

9.2 Missing options

Missing or buggy command line options.

- | | |
|-----------------|---|
| ‘-v’ | The version information output is not compatible with the GNU Coding Standards. |
| ‘-d’ | Information logging and Error reporting is not implemented consistently. Need to test and track problems with the lineNumber and with the file name. |
| ‘-?’ | There should be an option to intersperse RTF-Output with the <code>LaTeX</code> input that produced it to aid debugging. |
| ‘-q’ | There should be a ‘-q’ (quiet) option, to suppress Warning Messages. By now this can be achieved by the ‘-d0’ option. |
| ‘-rmajor.minor’ | There should be an option that restrict the generation of RTF code with version greater than major,minor. Actually this is done at compile time. There are some Warning messages if “newer” RTF Code is generated, but it is not consistent at all. |
| ‘--long_names’ | It would be useful to implement the GNU long option names, e.g.: ‘-debug’, ‘-output_file’, ‘-quiet’, etc. This could be done by switching to the GNU getopt package. |

9.3 Known Bugs

1. The first parameter of a `\link{anchor}[ltx]{label}` is converted to the rtf-output. Label is stored to hyperref for later use, the optional parameter is ignored. [ltx] should be processed as Otfried recommends it, to use for exclusive `LaTeX` output.e.g: `\link{readhere}[~\Ref]{explaining: chapter}`. Since {explaining:chapter} is yet read by `LaTeX` and hyperlatex when [...] is evaluated it produces the correct reference.

`LaTeX2RTF` is only strolling from left to right through the text and can't remember what she will see in the future.

2. The diagnostics routine does not output the correct (actual) inputfilename. (`'aux'`, `'bbl'`, `\input`).

9.4 Reporting Bugs

Report bugs to the bug tracking system at [SourceForge](https://sourceforge.net). Only report bugs for the latest version of `LaTeX2RTF` that is available. Please provide the following information and observe the following guidelines when reporting a bug in the program:

1. State the version of `LaTeX2RTF` that you are using. You can get the version by specifying the `-V` option to `LaTeX2RTF`.
2. Specify the your operating system and version. Be sure to check the file `'Makefile'` for settings that may be specific to your machine, especially for some versions of SunOS there may be settings which are needed to compile successfully. Do this before submitting a bug report.
3. If the program produces wrong output or does not work for you, include a short `LaTeX` file along with a description of the problem. Isolating the bug into a small `LaTeX` file does two things. First, it provides a file that can be used to test future versions of `LaTeX2RTF` and second, it certainly improves the chances that the bug will get some attention. Do not send me large `LaTeX` or RTF files, I simply do not have the time to wade through large files to search for a bug!
4. Be patient. I am maintaining the program in my free time. I did not write most of the code. Often I do not have the time to answer to your question. I will, however, try to fix reported bugs in upcoming releases.

9.5 Todo List

Scott's ToDo list

- Use `lex/yacc` to implement `getSection`
- Rewrite table code
- Add support for `pagestyle`
- Improve `graphic/graphicx` support
- Better support for ignoring commands

Georg's todo list

- Make this Manual more consistent, the `ToDo` and `Known Bug List` shorter and the `Features List` longer.
- Harmonize all of the error and warning messages.
- Put warnings everywhere applicable about producing RTF 1.4 tokens.
- Provide an Error and Warning recovery guide to the user.
- Add a chapter with lists of all `LaTeX` commands that convert, and that do not convert to RTF, including their status (for future releases, never, partially functional, ...).

10 Index for LaTeX2RTF

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