

Installation of Latex2html

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Contents

This whole page can be also found in this PDF file. A plain text version is also available of this page which was generated using the following catdvi command¹

```
catdvi -e 1 -U index.dvi | sed -re "s/[U\+2022\]*/g" | sed -re "s/([^\[:space:]])\s+/\1 /g" > index.txt
```

1 Installation on Linux

Installation of Latex2html is very easy on Linux. Used package manager (GUI interface) and select latex2html package. It will install everything needed.

Once latex2html is installed, I then created a file called \$HOME/.latex2html-init

This is my copy of my .latex2html-init which fixes some issues mentioned below.

In addition to the above, I had to edit the file /usr/share/latex2html/styles/more_amsmath.perl for the rendering bug described below.

That is all! now latex2html is ready to be used on linux.

2 Installation on windows with MikTeX 2.8

After struggling with installation of Latex2html (l2h) on windows for many days, I have decided to write down the final layout showing graphically what the tree looks like. I think a graphical illustration to describe the installation is easier for me, and I suspect for many others, to see where things are.

The diagram below shows the final installed tree. This tree layout can be used as a guide for anyone who wants to install l2h on their windows system.

[click to enlarge](#)

2.1 Installation steps

The following are the main points to watch out for in order to minimize installation problems

1. Install the software components needed on the same drive, where your data is and where you will be working, because if you install the software on the C: drive, and your data is on another driver, then you will find that things might not work (this was in my case).
2. Start by downloading all the software components and install them one after the other. These are the components needed and where I downloaded them from
 - MikTeX: Version 2.8 <http://miktex.org/>
 - Perl: Active Perl 5.1 build 1006. <http://www.activestate.com/activeperl/>
 - netpbm for windows: Version 10.27. <http://gnuwin32.sourceforge.net/packages/netpbm.htm>
 - gsview: version 4.9. <http://pages.cs.wisc.edu/~ghost/gsview/get49.htm>

¹Thanks to <http://zanedp.livejournal.com/201222.html> for the full catdvi command used to convert this page to plain text

- ghostscript. I used AFLP ghostscript. I had problems with other versions for some reasons. May be there was something else going on, but this version works for me, so I am not going to change anything now. <http://pages.cs.wisc.edu/ghost/doc/AFPL/index.htm>
- latex2html version 2008 <http://www.ctan.org/tex-archive/support/latex2html/>

3. Now install MikTeX, perl, netpbm, ghostscript, gsvie into the directories as shown in the tree.
4. untar latex2html into folder latex2html-initial/
5. Edit latex2html-initial/prefs.m and add/change the corresponding lines as the following

```
$prefs{'EXTRAPATH'} = 'C:\\texmf\\gsAFLP\\gs8.54\\bin;C:\\texmf\\GnuWin32\\bin';
$prefs{'PREFIX'} = 'C:\\texmf\\latex2html';
$prefs{'TEXPATH'} = 'C:\\texmf\\MiKTeX2.8\\tex';
$prefs{'TMPSPACE'} = 'C:\\texmf\\tmp';
```

6. Edit latex2html-initial/config.bat and add/change the corresponding lines as the following

```
set PERL=c:\texmf\perl\bin\perl.exe
```

7. Add the following to the PATH environment variable on windows (Using Computer->Properties->Advanced)

```
C:\texmf\latex2html\bin;
c:\texmf\perl\bin;
C:\texmf\GnuWin32\bin;
C:\texmf\MiKTeX2.8\miktex\bin
```

8. Add a new environment variable GS_LIB and give it the following value

```
.;C:\texmf\gsAFLP\gs8.54\lib;C:\texmf\gsAFLP\fonts
```

Notice that the above is sufficient to make latex2html happy as far as GS_LIB is concerned, and hence there is no need to edit the file cfcache.pm and set this value there as well, which if you check the file now, most likely this variable will be empty

```
$cfg{'GS_LIB'} = q'';
```

but this was OK on my system, since it is now defined in an environment variable. But it should do no harm to also replace the above with

```
$cfg{'GS_LIB'} = q'.;C:\\texmf\\gsAFLP\\gs8.54\\lib;C:\\texmf\\gsAFLP\\fonts';
```

Even though I did not have to do it on my system as I mentioned above.

9. Add a new environment variable RGBDEF and give it the following value

```
C:\texmf\latex2html\styles\rgb.txt
```

10. There is no need to define an environment variable TEXINPUTS since install.bat when run will copy the latex2html style files and put them in location within MikTeX folder where they can be located by MikTeX latex.exe without the need to define such an environment variable.
11. Start a new DOS terminal to make sure the effect of setting the above environment variable is now in effect.
12. There is one bug that shows up if you are using the package amsmath which causes the generated HTML to contain extra text showing up inside the images. To fix this ², cd to the folder

```
G:\texmf\latex2html-initial\styles
```

²Thanks to Shigeharu TAKENO for finding the solution to this bug and posting it to the latex2html mailing list on 11/3/2009

and edit the file called more_amsmath.perl as follows

```
----- From here -----
*** styles/more_amsmath.perl.ORG          Sat Dec  2 15:15:01 2000
--- styles/more_amsmath.perl      Fri Oct  1 08:42:49 2004
*****
*** 95,100 ****
--- 95,101 ----
    }
    } else { $tag = ';SPMnbsp;;SPMnbsp;;SPMnbsp;'; }
    $*=0;
+   $scan =~ s/($comment_mark\d+) /$1\n/g;
    if ($labels) {
        $labels =~ s/$anchor_mark/$tag/o;
        ($labels , $scan);
----- To here -----
```

13. cd back to latex2html-initial/, run config.bat. If no errors then go to the next step.

14. run install.bat. Now latex2html will be installed to

```
C:\texmf\latex2html
```

15. run latex2html-initial/test.bat and look for any errors.

16. If all is well, that is all. Now you are ready to use latex2html. Go to next step

17. Perform post installation configuration. Edit the file

```
c:\texmf\latex2html\l2hconf.pm
```

```
$FONT_SIZE = "12pt";
$WHITE_BACKGROUND = 1;
$LOCAL_ICONS = 1;
$MAX_SPLIT_DEPTH = 4;
$SHORTEXTN = 1;
$ANTI_ALIAS = 1;
$ANTI_ALIAS_TEXT = 1;
$HTML_VERSION = '4.0';
$MATH_SCALE_FACTOR = 1.8;
$DISP_SCALE_FACTOR = 1.0;
$FIGURE_SCALE_FACTOR = 1.0;
$TRANSPARENT_FIGURES = 1;
$NO_SUBDIR = 1;
$DISCARD_PS = 0;
```

18. On Linux/Unix system, the above commands can be put in

```
~/latex2html-init file.
```

If you do that, make sure to end the file with "1;" This is my file as an example

```
cat .latex2html-init
```

```
$FONT_SIZE = "12pt";
$WHITE_BACKGROUND = 1;
$LOCAL_ICONS = 1;
$MAX_SPLIT_DEPTH = 4;
$SHORTEXTN = 1;
```

```

$ANTI_ALIAS = 1;
$ANTI_ALIAS_TEXT = 1;
$HTML_VERSION = '4.0';
$MATH_SCALE_FACTOR = 1.8;
$DISP_SCALE_FACTOR = 1.0;
$FIGURE_SCALE_FACTOR = 1.0;
$TRANSPARENT_FIGURES = 1;
$NO_SUBDIR = 1;
$DISCARD_PS = 0;
$DVIPSOPT = '-E';
$LATEX_COLOR = "";

1;

```

2.2 Some errors and possible solution

1. If you get this error when running test.bat that looks like something as the following

```

pstoimg.bat: Error: Ghostscript returned error status 1
pstoimg.bat: Error: Couldn't find pnm output of G:\texmf\tmp\l2h1716\image002.ps

```

Then check that you have defined GS_LIB environment variable correctly to point to the ghostscript lib/ and font/ directly as shown above.

2. if you get an error from test.bat that looks like something as the following

```

pstoimg.bat: Error: pnmtopng.exe -interlace -trans gray85 < p3704.pnm > img1.png" failed: No such file

```

Then make sure that you have defined the env. variable RGBDEF as described above.

3. some of the bitmap images produced for the mathematics in the document have a solid dark bar, usually at the bottom or the side of the bitmap image. The reason for this is unknown. But I found by trial and error that setting the following values in my l2hconf.pm eliminated most if not all of these

```

$MATH_SCALE_FACTOR = 1.8;
$DISP_SCALE_FACTOR = 1.0;

```

On my system, any value less than 1.8 for the above, with everything else is fixed, produced the side solid edges again. This problem needs to be fixed.

See also this page https://ccrma.stanford.edu/jos/webpub/Eliminating_Black_Rules_Equation.html which mentions a solution to removing black bars from under equations.

4. Some mathematics equations are still underlined, even after doing the above. I found this was the case when I was using linux. If you still see the underlines, then try the following: edit l2hconf.pm and set the value of DVIPSOPT as follows

```

$DVIPSOPT = '-E' ;

```

5. Some mathematics formula have gray color in background. I noticed this on some equations having gray background. In this case, edit l2hconf.pm and set the following:

```

$LATEX_COLOR = "";

```

The above should remove the gray background. If the above does not remove the gray background then try the following: In your latex document itself, add the following 2 lines³ in the document preamble

³Thanks to post by Ross Moore <http://www.tug.org/pipermail/latex2html/2000-October/000805.html>

```
\usepackage{color}
\pagecolor{white}
```

Then try again. This should, hopefully, remove the gray background. The above trick did it for me when I moved to new Linux OS and found the gray background came back, even though I was using the same .latex2html-init file as before.

6. Watch out for the `-no_reuse` option to `latex2html`. If one is also using `-no_subdir`, then `Latex2html` will ask the user if they want the images in the current folder deleted:

```
latex2html -no_reuse -no_subdir foo.tex
```

```
This is LaTeX2HTML Version 2008 (1.71)
....
Cannot create directory .\ : File exists
(r) Reuse the images in the old directory OR
(d) *** DELETE *** the images in .\ OR
(q) Quit ?
```

And if you select option (d) then it will delete all the images in the current folder. This can include any images that were not related to `latex2html` earlier runs at all, and it could be your own images that you did not want deleted. This happened to me, but I had a backup copy. So, if you intend on using `-no_subdir` then it is safer to not use `-no_reuse`.

7. `l2h` does not support the package `ragged2e`. I use HTML CSS style to change the alignment of the table cells. The following code will not work as expected in `l2h`

```
\documentclass{article}
\usepackage{html}
\usepackage{array}
\usepackage{ragged2e}
\newcolumntype{P}[1]{>{\RaggedRight\hspace{0pt}}p{#1}}

\begin{document}
\begin{tabular}{|P{2in}|P{2in}|} %notice UPPER case P here
\hline
jfadlkfj lkfjdsf fdasfad fkjdsklfja&
djflkjads;flkajds;flk dsafjdads\tabularnewline\hline

jfadlkfj lkfjdsf fdasfad&
djflkjads;flkajds;flk dsafjdad\tabularnewline\hline

\end{tabular}
\end{document}
```

2.3 Making your latex code latex2html friendly

These are few things that I found that helped in using `latex2html`

1. Always include `html` package

```
\usepackage{html}
```

2. `l2h` does not support `tabularx` package. As a work around add the following to the preamble

```
%\begin{htmlonly}
%\newenvironment{tabularx}[2]{\begin{tabular}{#2}}{\end{tabular}}
%\end{htmlonly}
```

In addition, l2h will not recognize

```
%\raggedright
```

so it has to be removed.

3. l2h does not support listings.sty, therefore if the latex code already does something as

```
\lstinputlisting{file.txt}
```

then it will not work with l2h. The solution is to add the following⁴

```
%...
%\begin{htmlonly}
%  \usepackage{verbatim}
%  \providecommand{\lstinputlisting}[2] []{\verbatiminput{#2}}
%\end{htmlonly}
%.....
%\begin{document}
%...
%\lstinputlisting{file.txt}
%...
%\end{document}
```

I found one problem in the above. If the file has an absolute path on it, then it will not be included. But if the file is in the same folder as the latex file, then it will be included. So, the following will not work

```
%...
%\begin{htmlonly}
%  \usepackage{verbatim}
%  \providecommand{\lstinputlisting}[2] []{\verbatiminput{#2}}
%\end{htmlonly}
%.....
%\begin{document}
%...
%\lstinputlisting{/home/my_files/file.txt}
%...
%\end{document}
```

4. Some images that I use were too large for inclusion in PDF without being scaled, even though the size looked OK for html.

So I wanted a way to use conditional logic so that when the latex file is run by pdflatex, it will scale the image, but when it is run by latex2html, the image is not scaled. I settled at this solution.

```
% \documentclass[]{article}%
% \usepackage{html}
%
% \begin{document}
%
% \begin{htmlonly}
% \includegraphics[]{image.png}
% \end{htmlonly}
%
% \begin{latexonly}
% \includegraphics[scale=0.75]{image.png}
% \end{latexonly}
%
% \end{document}
```

⁴Thanks to post by Ross Moore for this solution

5. Wanted a way to modify the <HEAD> META tags in the HTML file generated by latex2html. I settled on this method for now. May be there is a better way? Thanks for old posts I found on the net by Thomas Anders and Ross Moore which helped in finding this solution.

(a) created a file called l2h_init.pl in the same folder where my latex file is. This file looks like this

```
$MY_KEYWORDS = "Latex2html, HTML, MikTeX";
$MY_DESCRIPTION = "This describes Latex2html";
sub meta_information {
    local($_) = @_;
    if (not defined $MY_KEYWORDS) { $MY_KEYWORDS = "$FILE"; }
    if (not defined $MY_DESCRIPTION) { $MY_DESCRIPTION = "$_"; }
    do { s/<[^>]*>//g;
        "<!-- Do not edit here - edit TeX file $FILE.tex instead -->\n" .
        "<META NAME=\"description\" CONTENT=\"$MY_DESCRIPTION\">\n" .
        "<META NAME=\"keywords\" CONTENT=\"$MY_KEYWORDS\">\n" .
        "<META NAME=\"resource-type\" CONTENT=\"document\">\n" .
        "<META NAME=\"distribution\" CONTENT=\"global\">\n" .
        "$MY_META" } if $_;
    }
}; # This must be the last line
```

(b) Now run latex2html to convert my latex file to html. Supposed my latex file is called foo.tex, then the command I used is

```
latex2html -init_file l2h_init.pl foo.tex
```

(c) now I looked at the generated HTML file foo.htm, and I see the header as follows

```
<HEAD>
<TITLE>index</TITLE>
<!-- Do not edit here - edit TeX file index.tex instead -->
<META NAME="description" CONTENT="This describes Latex2html">
<META NAME="keywords" CONTENT="Latex2html, HTML, MikTeX">
<META NAME="resource-type" CONTENT="document">
<META NAME="distribution" CONTENT="global">

<META NAME="Generator" CONTENT="LaTeX2HTML v2008">
<META HTTP-EQUIV="Content-Style-Type" CONTENT="text/css">

</HEAD>
```

6. do not use the following

```
\href{}{}
```

Instead, use the following

```
\htmladdnormallink{name}{URL}
```

And remember to always include the html package using

```
\usepackage{html}
```

7. do not enclose the image in a frame using \fbox. This will cause the image not to show up correctly. i.e. do not do something as the following

```
\fbox{\includegraphics[] {image}}
```

But instead just write

```
\includegraphics[] {image}
```

8. I had the following problem when using l2h when it creates a subdirectory to put all the resulting HTML and image into. This is because the hyperlinks inside the HTML would now all be off by one level.

Assuming you are at folder called A/ and you run l2h on a latex file called B.tex which contains hyperlinks to other places in your site, and these links are added so that they are relative hyperlinks. i.e. the hyperlinks are relative the folder A. When l2h process the file B.tex, it would by default create a sub folder and put the result into it. This folder is called A/B/.

However, from B/ the hyperlinks are now not correct as the case would be if the file was still in A/. Therefore, I now add the following option to my l2h command `-no_subdir`. This means the current folder A/ will contain all the output from the l2h run, which can make the folder too messy. However, this for me was a better solution than having to change all the hyperlinks in the latex file or to make them all absolute links (which I do not think is a good idea).

I think the correct solution is to make l2h behave the same way as when Microsoft WORD saves a document as a web page, where it would leave the html file at the same level as the word document, but would then create a special folder called `document_files` which contains all the images and other html files generated.

9. Use a css file to customize the look of the resulting HTML instead of adding HTML code in the latex file using l2h special latex commands. Once you create a css file, you can tell l2h to use it with the option

```
latex2html -style="myfile.css" myfile.tex
```

10. When running latex2html on a file called say `foo.tex`, it will create also a file `index.htm` in addition to `foo.htm` and link to `foo.htm` from `index.htm`. This can cause a problem if one already has an `index.htm` in the same folder and hence it will be overwritten. To make latex2html create only `foo.htm` the option `-no_auto_link` can be used which is what I currently do.
11. Including animated GIF files. To include an animated gif file, one can not include a gif file in latex, i.e. one can not just type

```
\includegraphics[] {file.gif}
```

But I need to include an animated gif file, and I could not convert the gif file to say `.png` or `.ps`, so what to do? I have a file called `foo.gif`, an animated file, which I want to have as a thumbnail, and run as animated, and wanted to also click on it if I wanted to see the animation in actual size. By trial and error, I found the following solution which worked for me

```
%\documentclass[] {article}%  
\usepackage{html}  
\usepackage{graphicx}  
\begin{document}  
%  
\begin{htmlonly}  
\htmladdnormallink{\includegraphics[scale=0.3]{foo}}{foo.gif}  
\end{htmlonly}
```

When running the above through latex2html, I would get a warning about a "bad file descriptor" and "could not copy foo.gif to tree" type messages, but the latex2html did complete, and I ignored these. The generated HTML did work, and that is what important.

2.4 log files

In here I have links to the output generated from running config.bat, install.bat and test.bat. I also have link to my l2hconf.pm. Notice that on my PC, I have installed everything on the G:\ drive under a folder I called LATEX and not under C:\texmf as I showed in the diagram, but as long as you have installed everything on the same drive, it does not have to be the C: drive and can be anything else.

1. output_from_config.txt
2. output_from_install.txt
3. output_from_test.txt
4. l2hconf.pm

3 installation on cygwin

These are the steps I did to install latex2html under cygwin.

1. I downloaded cygwin from <http://www.cygwin.com/> and installed it on windows. I installed EVERYTHING. Used Unix mode. (not DOS mode).
2. made sure the following is installed after the above is completed

```
> which latex
/usr/bin/latex

> latex -v
pdfTeX 3.141592-1.21a-2.2 (Web2C 7.5.4)
kpathsea version 3.5.4

> which pdflatex
/usr/bin/pdflatex

> pdflatex -v
pdfTeX 3.141592-1.21a-2.2 (Web2C 7.5.4)
kpathsea version 3.5.4

> cygcheck -c | grep -i tex
tetex-base                3.0.0-3                OK

> which perl
/usr/bin/perl

> perl -v
This is perl, v5.10.1 (*) built for i686-cygwin-thread-multi-64int
(with 12 registered patches, see perl -V for more detail)

> cygcheck -c | grep -i perl
perl                       5.10.1-3                OK

> which gs
/usr/bin/gs

> gs -v
GPL Ghostscript 8.63 (2008-08-01)
Copyright (C) 2008 Artifex Software, Inc. All rights reserved.
```

3. Looked to make sure netpbm package already installed from above installation of cygwin, to check, I looked for one of its programs

```
> which pngtopnm
/usr/bin/pngtopnm

> cygcheck -c | grep -i netpbm
libnetpbm-devel          10.49.2-1          OK
libnetpbm10             10.49.2-1          OK
netpbm                  10.49.2-1          OK
```

4. downloaded latex2html version 2008 from <http://www.ctan.org/tex-archive/support/latex2html/> and untar it in some directory.
5. cd to latexhtml and edit the file L2hos.pm, replace the line (near the end)

```
@ISA = load('L2hos', $^O);
```

with

```
@ISA = load('L2hos', 'unix');
```

6. edited prefs.pm and set location of temporary disk space. This step is not needed, but I like to be more sure where temporary disk space for latex2html is.

```
$prefs{'TMPSPACE'} = '/cygdrive/G/LATEX/TMP';
```

7. run configure

```
./configure
```

Noticed that it did not use TMP defined above in prefs.pm, which is not I want TMP to point to. So I edited the file generated by running configure above, which is called cfgcache.pm located in the same folder, and forced it to use my TMPSPACE by changing the line as follows:

```
$cfg{'TMPSPACE'} = q'/cygdrive/G/LATEX/TMP';
```

8. run the command make
9. run the command

```
make install
```

10. run the command

```
make test
```

cd to the test directory and check the output to make sure it is OK.

As of today (June 6, 2010), there is a problem with cygwin installation which is not yet resolved. Cygwin generates an error coming from one of the perl file (L2h/Unix.pm). I send a bug report to cygwin on this. Until this is fixed, I am not able to run Latex2html under cygwin

I installed cygwin 1.7.5 on windows 7 (64 bit OS), and when I run some command which uses perl, I get the following error:

```
0 [main] perl 2528 C:\cygwin\bin\perl.exe: *** fatal error - Internal
error: TP_NUM_W_BUFS too small.
```

DETAILS:

I installed cygwin, all of it on windows 7, 64 bit os.
All went ok.

Then I installed latex2html, and I am trying to use latex2html under cygwin, which uses perl. (latex2html is a PERL script)

When I run latex2html command on some latex file, I get many of the above errors each time perl is called:

```
$ uname -a
CYGWIN_NT-6.1-WOW64 me-PC 1.7.5(0.225/5/3) 2010-04-12 19:07 i686 Cygwin
```

```
$ cygcheck -c | grep perl
perl                    5.10.1-3                OK
perl-Error              0.17016-1              OK
perl-ExtUtils-Depends  0.302-1                OK
perl-ExtUtils-PkgConfig 1.12-1                 OK
perl-Graphics-Magick   1.3.7-2                OK
perl-Image-Magick      6.4.0.6-2             OK
perl-libwin32          0.28-3                 OK
perl-Locale-gettext    1.05-11                OK
perl-ming              0.4.3-1                Incomplete
perl-SGMLSpM           1.03ii-2               OK
perl-Tk                804.028-3              OK
perl-Win32-GUI         1.06-3                 OK
perl-XML-Simple        2.18-10                OK
perl_manpages          5.10.1-3                OK
postgresql-plperl     8.2.11-1               OK
subversion-perl        1.6.11-1               OK
$
```

```
$make test
.....
Converting image #2
1 [main] perl 3104 C:\cygwin\bin\perl.exe: *** fatal error -
Internal error: TP_NUM_W_BUFS too small.
```

Error while converting image

This is the file where this error comes from Unix.pm This is a more detailed error message:

```
> 262: my ($self,$cmd,$in,$out,$err) = @_;  
> 263: carp qq{Debug (syswait): Running "$cmd"\n} if($Verbose);  
> 265: my $status;  
> 266: my $child_pid;  
> 267: if ($child_pid = fork) {  
> 268: $status = waitpid($child_pid, 0);  
> 274: unless(exec($cmd)) {  
> 0 [main] perl 4524 C:\cygwin\bin\perl.exe: *** fatal error - Internal error: TP_NUM_W_BUFS too small  
> 269: carp "Debug (syswait): Finished child process: # $child_pid\n"  
> 270: if($Verbose);  
> 271: $child_pid = 0;  
> 272: return($?);  
> exited L2hos::Unix::syswait
```

3.1 log files

In here I have links to the output generated from running above commands:

1. This is output from cygwin configure
2. This is output from make install

4 References

- http://www.math.vt.edu/people/linnell/l2h_man.pdf
- <http://intranet.cs.man.ac.uk/software/latex2html/manual/manual.html>
- <http://www.mayer.dial.pipex.com/l2h.htm>
- <http://www.usenix.org/events/samples/conversion.html>
- Latex2html man page <http://linux.die.net/man/1/latex2html>