

L^AT_EX and L^yX Tips

Administrative

texhash update L^AT_EX database

L^yX Shortcuts

[alt-C][space]	default character
[alt-P]*2	unnumbered section
[alt-P]2	numbered section
[alt-P]i	item
[alt-P]l	list
[alt-P]e	enumerate
[alt-C][right]	Capitalize
[alt-C][down]	capitalize
[alt-C][up]	CAPITALIZE
[alt-C]p	typewriter font
[alt-S]5	font-size normal, increase numbers for larger font
[alt-S]n	font-size normal
[F7]	spellchecker

L^AT_EX Commands

<code>\discretionary{%1}{%2}{%3}</code>	“Hyphenation” at line breaks, before%3after, before%1%2after
<code>\slash{}</code>	Breakable slash, short cut for <code>\discretionary{/}{/}{/}</code>
<code>\filbreak</code>	prevent an item in a (for eg.) bibliography list breaking across page breaks
<code>\jobname</code>	the current filename
<code>\filename@ext</code>	the current filename
<code>\ldots</code>	ellipsis ...
--	en-dash –
---	em-dash —

In Math Mode (in `$math equation$`):

<code>\;</code>	a thick space
<code>\:</code>	a medium space
<code>\,</code>	a thin space
<code>\!</code>	a negative thin space
<code>\times</code>	×

BIB_TE_X

<code>\usepackage[square,sort]{natbib}</code>	in preamble
<code>\renewcommand\refname{References}</code>	in preamble to change heading
<code>\bibliographystyle{ametsoc.bst}</code>	declare the BIB _T E _X style file to use
<code>\bibliography{abs,references}{}</code>	in document where the bibliography is to appear

xdvi Commands

R refresh
ns scale
g, ng end, move to page **n**
n, nn next page, **nth** next page
p, np previous page, **nth** prev. page
k toggle keep position
D toggle grid

ssh Commands

~? help
~# display
ssh -X force X connection

vi Commands

:com <name> [-range] [-nargs] create macro command
| separates vim commands on same line
:sp split window
[^w][down], [^w][up], [^w]w move around windows
: " comment
[^f], [^b] forward, back screen
:g/^/norm J join every second line

vim split windows commands

^w^w	change to next
^w^n	new empty window
^wq	quit window
^wc	close window
^wx	exchange windows
^w=	equalize
^w+	increase
^w-	decrease
^w_	maximise
^wo	make only window

bash Scripting and UNIX Commands

<code>man command col -b</code>	Print plain ASCII man page (col filters ANSI escapes)
<code>grep -B3 -C3</code>	Find with context before and after
<code>mktemp</code>	Create unique temporary file

Customize Keyboard

<code>dumpkeys > newkeyfile</code>	Dump current keymap to a file
<code>loadkeys newkeyfile</code>	Load new keymap from a file
<code>keycode 29 = Caps_Lock</code>	Swap capslock and control
<code>keycode 58 = Control</code>	

To allow <ctrl-alt-end> to shutdown

```
control alt keycode 79 = KeyboardSignal
control alt keycode 107 = KeyboardSignal
and add kb::kbrequest:/sbin/shutdown -h now to inittab
```

<code>showkey</code>	to display the codes of the key pressed
<code>xkeycap</code>	to set up modmap graphically
NB Read the keyboard and console howto!	

Command-Line Keystrokes

<code>^u</code>	delete line
<code>^c</code>	cancel command
<code>^d, <esc>-d</code>	delete character, word
<code>^w</code>	delete word backwards
<code>^v</code>	quote character
<code>^t, alt-t</code>	transpose chars, words
<code>^f, alt-f</code>	forward
<code>^a</code>	start of line
<code>^e</code>	end of line

History Substitution

<code>!!</code>	repeat previous command
<code>!n:k</code>	insert the k-th word of command n
<code>!-n:k</code>	insert the k-th word of n-th previous command
<code>!-n:*</code>	insert all the words but the 0-th of n-th previous command

System Administration

<code>service, /etc/init.d/*d</code>	start, stop and status of daemons
<code>chkconfig</code>	manipulate run levels
<code>hwclock -r, -a, -w, -s</code>	read, adjust, write to, set from the hardware clock

procmail, fetchmail, sendmail	mail processing
procinfo, top, uptime, w, who, whoami	information about the system
lsof, fuser	information about open processes
dmidecode	hardware information
sig	System Information Gatherer — SuSE system info tool
See http://www.cpqlinux.com/hostname.html about fixing the hostname	

Monitoring

netwatch, iptraf, iftop
mii-tool interface information
ntop:3000

Turning off the annoying beep

set bell-style none in ~/.inputrc, ~/.profile, or ~/.bash-profile.
 Does not work in .bashrc
set nobeep=1 in csh
xset b off in X-window
"Settings→Bell→None" in konsole

Other useful stuff

x-friend, google-desktop desktop search

Some thoughts to add: to render a man page to plain ascii use `man man | col -b`

GMT Hints

pstext input: (*x, y, size, angle, fontno, justify, text*)

convert -density 150 -page A4 filename.ps filename.png

gmtset WANT_EURO_FONT true to get european character sets

Character Table

°	\217
σ	\163
Θ	\161
ü	\370
Δ	\104

@~ to toggle symbol font

wget Options

-p	everything needed
-nH	not under host directory
--cut-dirs=n	ignore leading directory tree
-r	recursive
-N	timestamping
-np	no parent
-nv	nonverbose
-Q	quota

rsync Options

rsync [options] fromdir host:destdir

-r	recursive
-t	copy timestamps too
-u	update newer only
-n	test, don't do it
-v	verbose

Manipulating PostScript Documents

1. StarOffice and OpenOffice

(a) Creating a presentation from StarOffice

- i. print as a .ps, using the trim option
- ii. Rotate using

```
pstops -w0 -h0 1:0R\ (0in,8.27in\ ) psfile > rotfile
```
- iii. `pstopdf -g7930x5950 rotfile pdfffile`

Now it's in a script `rotate.zsh`

(b) Preparing figures for OpenOffice

OpenOffice is very bad at eps figures. Turn them into JPEGs. Matlab JPEGs are very bad, print them as EPS and turn them into JPEGs with gimp. gmt does not make JPEGs, make eps figures and use gimp.

2. Changing from EPS to PS

Use `epsffit`

A4 595x842

A5 421x595

A6 297x421

A7 210x297

Using `pstops`

```
pstops '2:0L@.65(21cm,0)+1L@.65(21cm,14.85)' filename
```

3. Converting to Postscript

```
convert -density [density] fromfile.jpg tofile.ps
```

density here refers to number of pixels across? (see ImageMagick help pages)

```
convert -density 150 -units pixelsperinch seems to work.
```

4. Concatenating Postscript documents and creating a pdf

```
gs -q -dNOPAUSE -dBATCH -sDEVICE=pdfwrite -sOutputFile=output-file-name
input-file1 [ input-file2 ... ]
```

Note that the *input-file** can also be pdf files, and ps and pdf documents can be mixed in the arguments.

5. Converting pdf documents to postscript: try using gs with -sDEVICE=pswrite.

6. Reluctant documents

(a) You might be able to print reluctant postscript files by converting them using

```
ps2ps [-dLanguageLevel=1] fromfile tofile
```

(b) Postscript files that are very large can turn into fairly small pdfs if you use `ps2pdf`.

- (c) Huge files that are slow to display (render) might be able to be flattened with `gimp`. For existing PDF documents that might be very slow to render some pages (possibly with a huge unflattened figure on them):

split up the document with `gs -dFirstPage=n -dLastPage=m`

`gimp` the offending pages, saving as postscript

join the document back together with `gs` (see concatenating above)

7. Badly adjusted page offsets

- (a) For source from a \LaTeX document: try `dvips -t letter -f <dvifile>`

- (b) Look for the `align.ps` file in the ghostscript package; there are instructions in there for adjusting the margins using `gs`. Create a `margin.ps` file containing

```
%% << /.HWMargins [ml mb mr mt] /Margins [x y] >> setpagedevice
```

```
%% ml = L * 72, mb = B * 72, mr = R * 72, mt = T * 72,
```

```
%% x = (1 - H) * 720.0, y = (V - 1) * 720.0
```

```
<< /.HWMargins [0 0 0 0] /Margins [-180 -360] >> setpagedevice
```

with the appropriate margins then add the `margin.ps` file to the list of input files.

- (c) Consult some of these for the problems of A4 versus Letter size:

- <http://amath.colorado.edu/documentation/LaTeX/reference/faq/a4.html>
- http://dam.mellis.org/2003/12/a4_vs_letter/
- <http://mintaka.sdsu.edu/GF/bibliog/latex/LaTeXtoPDF.html>

StarOffice Options

<code>-minimized</code>	keep startup bitmap minimized
<code>-help/-h/-?</code>	show the help message and exit
<code>-writer</code>	create new text document
<code>-calc</code>	create new spreadsheet document
<code>-draw</code>	create new drawing
<code>-impress</code>	create new presentation
<code>-math</code>	create new formula
<code>-global</code>	create new global document
<code>-web</code>	create new HTML document

X-server Workarounds

(Cures for some of the insanity in KDE, gnome, StarOffice and friends)

```
ssh -X
```

```
konsolekalendar --help
```

```
soffice -help/-h/-?      don't try --[option] !
```

```
soffice -minimized       no splash screen
```

Recording a CD

[Obsolete Comment: Star has a Creative CDRW. Speeds are 4,2,24 (writable, rewritable, read).
NOTE: Drive does not like fixating in dummy mode. The SCSI emulator driver is susceptible to locking up the CD on this configuration, requiring a power cycle reboot from time to time.]

Modules required

sg, sr_mod, loop

Blank a rewritable cd

- `cdrecord -v blank=fast dev=0,0`

Can blank and burn in the same command.

Make a filesystem

- # For an ext2 filesystem
- `dd if=/dev/zero of=cddimage; mke2fs cddimage; mount -o loop cddimage /mnt; \cp -a dir /mnt`
- # For an iso9660 filesystem
- `mkisofs -v -R -o cddimage dir`
- # Burn it
- `cdrecord -v speed=2 dev=0,0 cddimage`

Use mkhybrid for a filesystem which can be read by a Mac.

In one go

To burn the contents of the directory dir. Note the double - for the nice and the final - for the cdrecord.

- `nice --18 mkisofs -J -R -r dir | cdrecord -v speed=2 dev=0,0 -`
 - R Rock Ridge extensions
 - r global read permissions and root ownership
 - J Joliet extensions

Setting defaults

The default device and speed can be specified in the file `/etc/default/cdrecord`, to shorten the above commands, e.g.

- `nice --18 mkisofs -J -R -r dir | cdrecord -v -`
- `cat /etc/default/cdrecord`
`CDR_DEVICE=0,0,0`
`CDR_SPEED=2`