

# T<sub>E</sub>X Live 2009 round-table

Karl Berry

July 28, 2009

# Outline

0. T<sub>E</sub>X Live 2009
1. `epstopdf` & `\write18`
2. Omega → Aleph
3. LuaT<sub>E</sub>X output formats
4. `amsfonts`: CM, Euler, ...
5. T<sub>E</sub>Xworks: GUI front end
6. Asymptote: Graphics
7. `dvipdfm` → `dvipdfmx`
8. Potpourri
9. Acknowledgements

## 0. T<sub>E</sub>X Live

- ▶ Cross-platform: Windows, MacOSX (MacT<sub>E</sub>X), GNU/Linux, BSD, Solaris, ...
- ▶ Native installer, or
- ▶ basis for T<sub>E</sub>X in distributions (\*BSD, Fedora, Debian, ...)
- ▶ First released in 1996 by Sebastian Rahtz, based on teT<sub>E</sub>X.
- ▶ <http://tug.org/texlive/pretest.html>

# 1. epstopdf

- ▶ Problem: EPS cannot be read by pdf $\LaTeX$ , but
- ▶ all other programs can import EPS fine.
- ▶ Heiko Oberdiek's epstopdf package has been around for ages, but
- ▶ few people read documentation or search through packages.
- ▶ Semi-solution: autoconvert at runtime.

## 1a. `\write18`

- ▶ `\write18` allows execution of external commands.
- ▶ Too dangerous!
- ▶ In 2009, have “restricted” mode: only certain commands (in `texmf.cnf` configuration file) can be run.
- ▶ Besides `epstopdf`, can also run `bibtex`, `makeindex`, etc.
- ▶ Still easy to abuse, but life is a tradeoff.

## 2. Omega $\rightarrow$ Aleph

- ▶ Approved by Yannis H.
- ▶ Omega & Lambda are gone; Aleph & Lamed remain.
- ▶ Omega utilities still included.
- ▶ No symlink left behind since not compatible

### 3. LuaT<sub>E</sub>X output formats

- ▶ lua(la)tex outputs PDF by default now, for sake of OpenType support, etc.
- ▶ new executables dvlua(la)tex output DVI.
- ▶ LuaT<sub>E</sub>X is not frozen :).

## 4. amsfonts: CM, Euler, ...

- ▶ Computer Modern (AMS): Knuth shape changes over the years, Y&Y hinting.
- ▶ Euler (Hagen, Hoekwater, Schaa): shape changes from Zapf, rehintered.
- ▶ Metrics unchanged.



## 5. T<sub>E</sub>Xworks: GUI front end

- ▶ Jonathan Kew
- ▶ Cross-platform front end inspired by T<sub>E</sub>Xshop (Dick Koch)
- ▶ Windows binary in T<sub>E</sub>X Live, MacT<sub>E</sub>X;  
shared library woes → download other platforms

## 6. Asymptote: Graphics

- ▶ John Bowman and colleagues
- ▶ Text-based MetaPost(ish) language
- ▶ 3D support
- ▶ Some binaries in T<sub>E</sub>X Live, but shared libraries woes again
- ▶ TUGboat articles

## 7. dvipdfm → dvipdfmx

- ▶ ChoF and colleagues
- ▶ CJK support, ongoing fixes
- ▶ compatibility mode for dvipdfm

## 8. Potpourri

- ▶ xz compression
- ▶ \$ in filenames
- ▶ multi-threaded kpathsea (Taco)
- ▶ automake-based build (Peter B.)

# Acknowledgements

- ▶ The whole T<sub>E</sub>X world
- ▶ CTAN: Jim Hefferon, Robin Fairbairns, Rainer Schöpf
- ▶ Manuel Pégourié-Gonnard
- ▶ Norbert Preining — installer, tlmgr
- ▶ Peter Breitenlohner — autotools, build infrastructure
- ▶ Staszek Wawrykiewicz — testing
- ▶ Tomasz Trzeciak — Windows support