LaTeX and Mac OS X

Kevin O’Malley
http://ai.eecs.umich.edu/people/omalley
omalley@umich.edu

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Overview

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- Mac OS X \LaTeX\ Implementations/Front Ends
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What is Mac OS X

- Apple’s latest operating system that combines the Macintosh user experience and the power and stability of Unix (Mach/BSD)
- Mac OS X was released in March 2001
- Supports various execution environments for running user programs
  - Carbon, Cocoa, Classic, Java, and BSD
- Aqua, the Mac OS X user interface, gives Mac OS X programs their look and feel
Things You Can Do Under Mac OS X

- Use pre-Mac OS X (MacOS) programs in Classic mode
- Use Unix commands and programs (ls, ps, top, vi, emacs) from a shell
- Add more Unix programs using DarwinPorts and Fink - freely available
- Use X11 programs under Apple’s X Window implementation (X11) or XDarwin - freely available
- Use \LaTeX{} of course!
Mac OS X running UNIX (text and X11), Mac OS X, and Mac Classic (MacOS) software
LaTeX Implementations

- Fink - The Fink project wants to bring the full world of Unix Open Source software to Darwin and Mac OS X - Supports binary and source installations - Currently has 3819 packages available (free)
- TeX Live and teTeX - You use i-Installer, a network-aware application for installing/configuring \LaTeX\ packages (free)
- OzTeX - A Mac implementation of Donald Knuth’s \LaTeX\ typesetting system (shareware)
- CMacTeX - An integrated suite of programs for implementing \LaTeX\ on the Macintosh (shareware)
- ScientificAssistant - A Document Management and Scientific Wordprocessing System for the Macintosh (commercial)
Front Ends
TeXShop

- Integrated writing environment for composing \LaTeX
- Includes editor, previewer, and many other features to support composing \LaTeX
- Available in a compiled version (dmg file) or as source code
- Uses the gwTeX distribution, but can be configured to use others such as the Fink \LaTeX package
- Has menus for inserting \LaTeX macros into documents as well as navigation features
- Excellent PDF document previewer
- On-line help
- Can be configured to support external editors
TeXShop displaying presentation slide
Front Ends

iTeXMac

- \LaTeX\ writing environment and previewer in the same spirit as\TeX\Shop, but with more features
- Includes an editor, previewer, and many other features to support composing \LaTeX\ documents
- It uses the gw\TeX\ distribution, but can be configured to use others such as the Fink \LaTeX\ package
- Has assistant-SDK you can download for writing iTeXMac extensions
- Excellent online Apple Help Books for \LaTeX
- Can be configured to support external editors
- Has AppleScript support
iTeXMac displaying presentation slide
Front Ends
LyX

- An open source document processor
- Comes in two flavors; a Mac OS X program and a version that runs under X11
- Interface written using the Qt GUI toolkit - feels different than native Mac OS X applications
- The writing environment is different than the other tools or even word processors - “Think of LyX as the first WYSIWYM word processor: What You See Is What You Mean.”
LyX displaying presentation slide
LATEX Implementations/Front Ends

OzTeX

- Popular implementation of \LaTeX for the Macintosh - has been around since the MacOS days
- Comes with \LaTeX
- Does not have an integrated editor
- Distribution includes the OzTeX program, which includes \LaTeX, a DVI previewer, a DVI-to-PostScript translator, dvidvi, dvicopy, and PostScript utilities psbook, psnup, and psselect, to name a few
- Is not an integrated environment like TeXShop or iTexMac, but rather knits together several tools
- Distributed as shareware
OzTeX displaying an example file
\textbf{\LaTeX{} Implementations/Front Ends}

\textbf{C\textsc{Mac}\TeX{}}

- An integrated suite of programs for implementing $\LaTeX{}$ on the Macintosh
- Includes TEX, e-TEX, pdfTEX, a DVI and Postscript previewer, and a Postscript converter, to name a few
- Compatible with Unix $\LaTeX{}$ versions and understands UNIX directory paths embedded in $\LaTeX{}$ document
- Similar in spirit to Oz\TeX{} - enables you to conveniently access $\LaTeX{}$ tools
- Has AppleScript support
- Distributed as shareware
CMacTeX displaying an example file
Unix-based Programs

- You can use \texttt{\LaTeX} from the command line
Command-line environment displaying an example file
GUlIs

- LyX - An open source document processor that runs under X11
- GNU TeXmacs
  - \LaTeX\-based WYSIWYG environment
  - The goal of the project is to produce a complete scientific office suite, including a spreadsheet, a technical drawing editor, and a presentation program
  - Supports the Guile/Scheme extension language
Add-on Tools

- **AUCTeX**
  - A GNU Emacs-based package that provides a customizable integrated environment for composing \LaTeX\ files using Emacs
  - Supports menus for Preview, \LaTeX, Commands, Math, and Ref
- **TeX Mode**
  - An Emacs mode that supports editing \LaTeX\ files
  - Usually comes installed with Emacs
  - Provides support for editing and composing \LaTeX\ files within Emacs
Support Tools

- BibDesk
  - A Mac OS X BibTeX bibliography manager
  - Provides a GUI for managing BibTeX files

- TeX Tools
  - A collection of tools for \LaTeX
  - Includes MacGhostView, MacDviX, TeXShell, BBEdit extensions for TeX, BBEdit extensions for iTeXMac
Support Tools

- **iStorm**
  - Collaboration tool that enables users work, talk, and think together
  - Supports inline \LaTeX{} and calculator
- **tkbibtex**
  - A portable editor and browser for BibTeX files
- **Easy N-up**
  - Makes creating N-up PDF files simple and easy
Summery

- Mac OS X is a very good platform for composing LaTeX-based documents
- Supports lots of high-quality \LaTeX\ implementations, front ends, and tools
- Supports all your favorite Unix tools and commands, including X11
- Lots of Unix programs have been ported to Mac OS X and are available from the DarwinPorts and Fink projects
Resources

• Implementation/Front-ends/Tools for Mac OS X
  - TeXShop - http://www.uoregon.edu/ koch/texshop/texshop.html
  - iTeXMac - http://itexmac.sourceforge.net
  - OzTeX - http://www.trevorrow.com/oztexit
  - ScientificAssistant - http://www.advanced-science.com
  - LyX - http://www.lyx.org
  - GNU TeXmacs - http://www.texmacs.org

• Support Tools
  - iStorm - http://www.mathgamehouse.com/istorm
  - Easy N-up - http://evolve.lse.ac.uk/software/PDFNupMaker/
• Unix Tools for Mac OS X
  – XDarwin - http://www.xdarwin.org

• Online Resources for Mac OS X
  – TeX on Mac OS X - http://www.rna.nl/tex.html
  – MacOS X TeX/LaTeX Web Site - http://www.esm.psu.edu/mac-tex
About

- Slides were created using FoilTeX, a collection of \LaTeX\ files for making foils
- Screen shots were created using Snapz Pro X (http://www.ambrosiasw.com/utilities/snapzprox)
- N-up PDF was created using Easy N-up