

LaTeX and Mac OS X

Kevin O'Malley

`http://ai.eecs.umich.edu/people/omalley
omalley@umich.edu`

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Overview

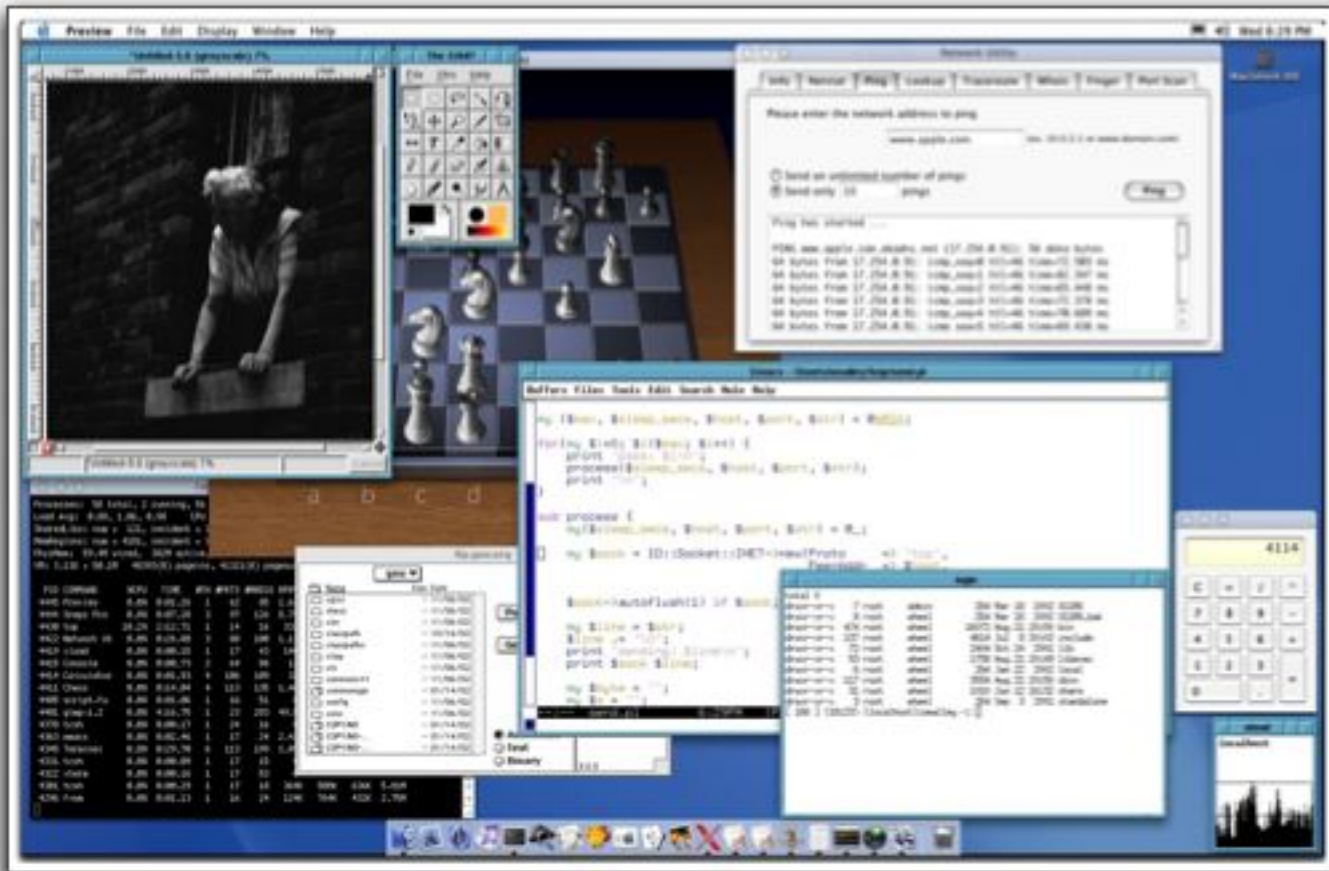
- What is Mac OS X
- Things You Can Do Under Mac OS X
- Mac OS X L^AT_EX Implementations
- Mac OS X Front Ends
- Mac OS X L^AT_EX Implementations/Front Ends
- Unix-based Programs
 - GUIs
 - Add-on Tools
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- About

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

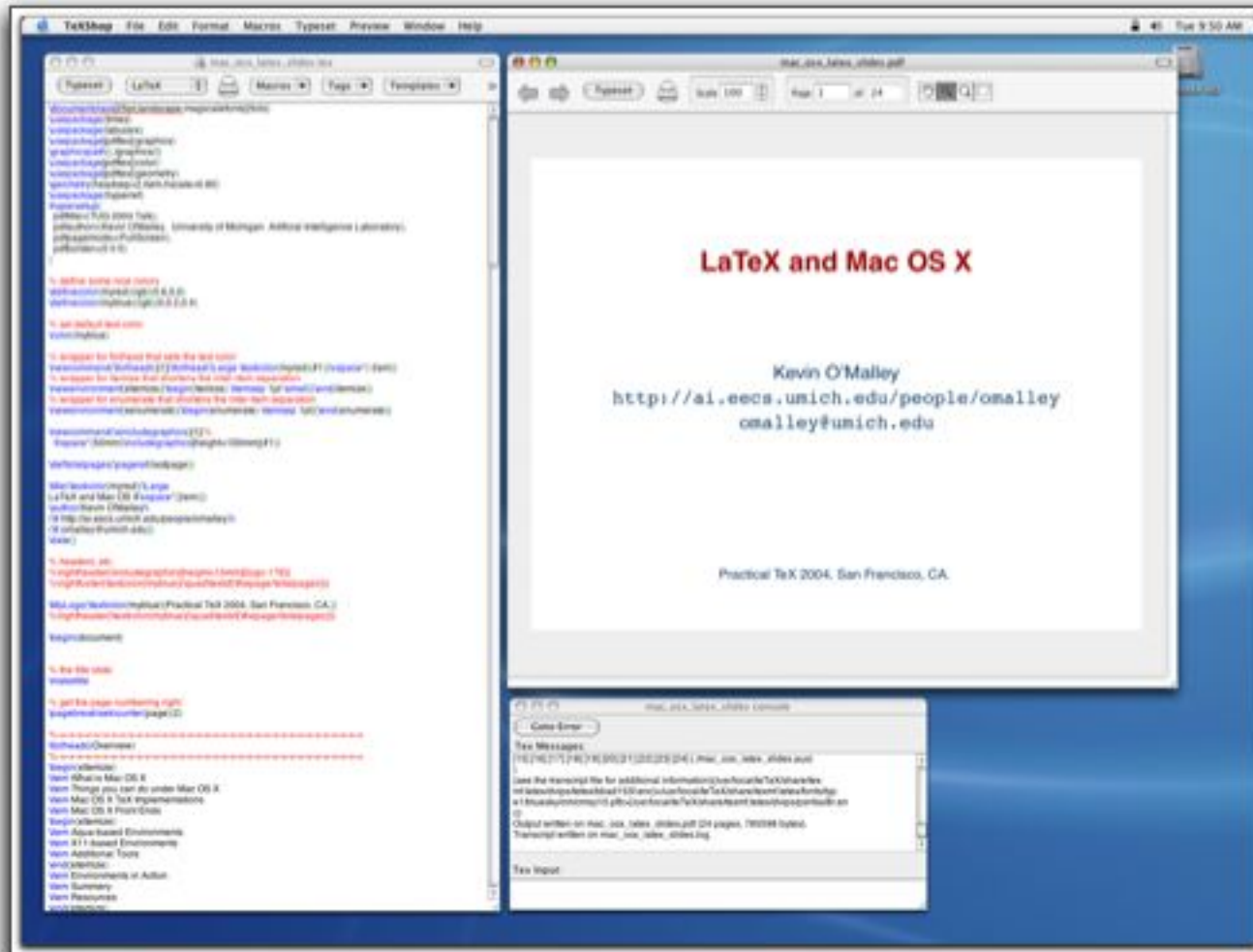
L^AT_EX Implementations

- 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 L^AT_EX packages (free)
- OzTeX - A Mac implementation of Donald Knuth's L^AT_EX typesetting system (shareware)
- CMacTeX - An integrated suite of programs for implementing L^AT_EX 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

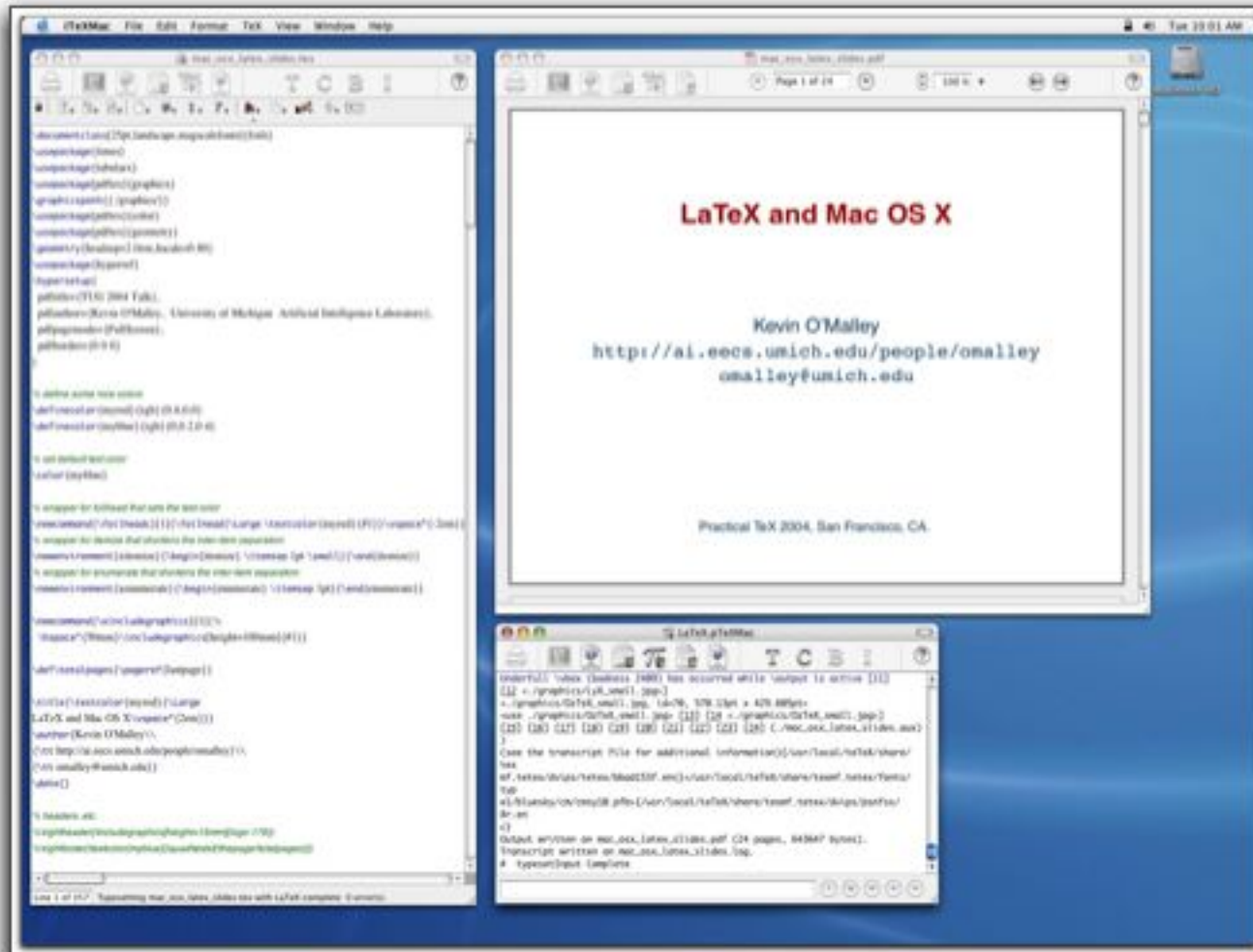


TeXShop displaying presentation slide

Front Ends

iTeXMac

- \LaTeX writing environment and previewer in the same spirit as TeXShop, but with more features
- Includes an editor, previewer, and many other features to support composing \LaTeX documents
- It uses the gwTeX 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

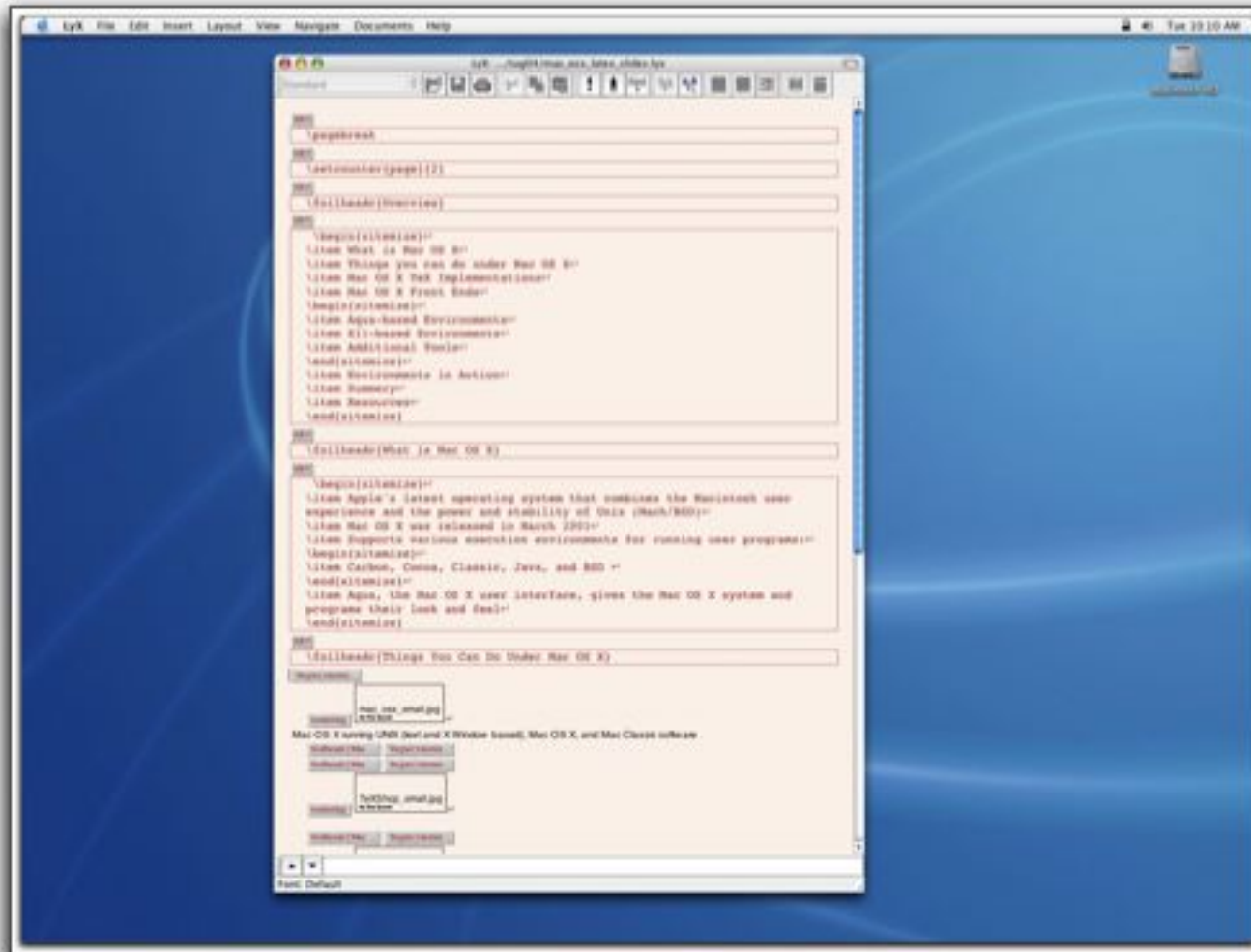


iTeXMac displaying presentation slide

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.”

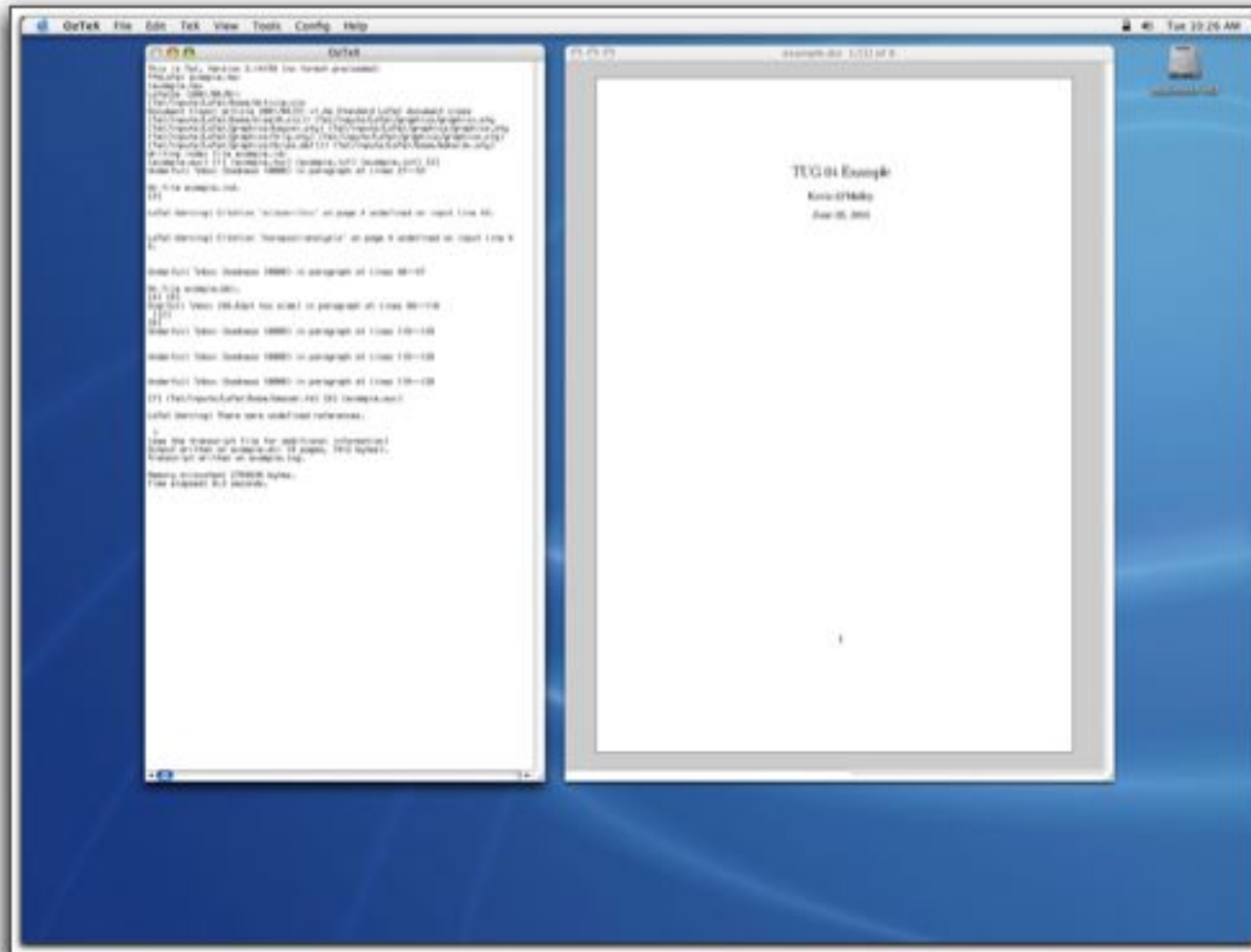


LyX displaying presentation slide

L^AT_EX Implementations/Front Ends

OzTeX

- Popular implementation of L^AT_EX for the Macintosh - has been around since the MacOS days
- Comes with L^AT_EX
- Does not have an integrated editor
- Distribution includes the OzTeX program, which includes L^AT_EX , 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

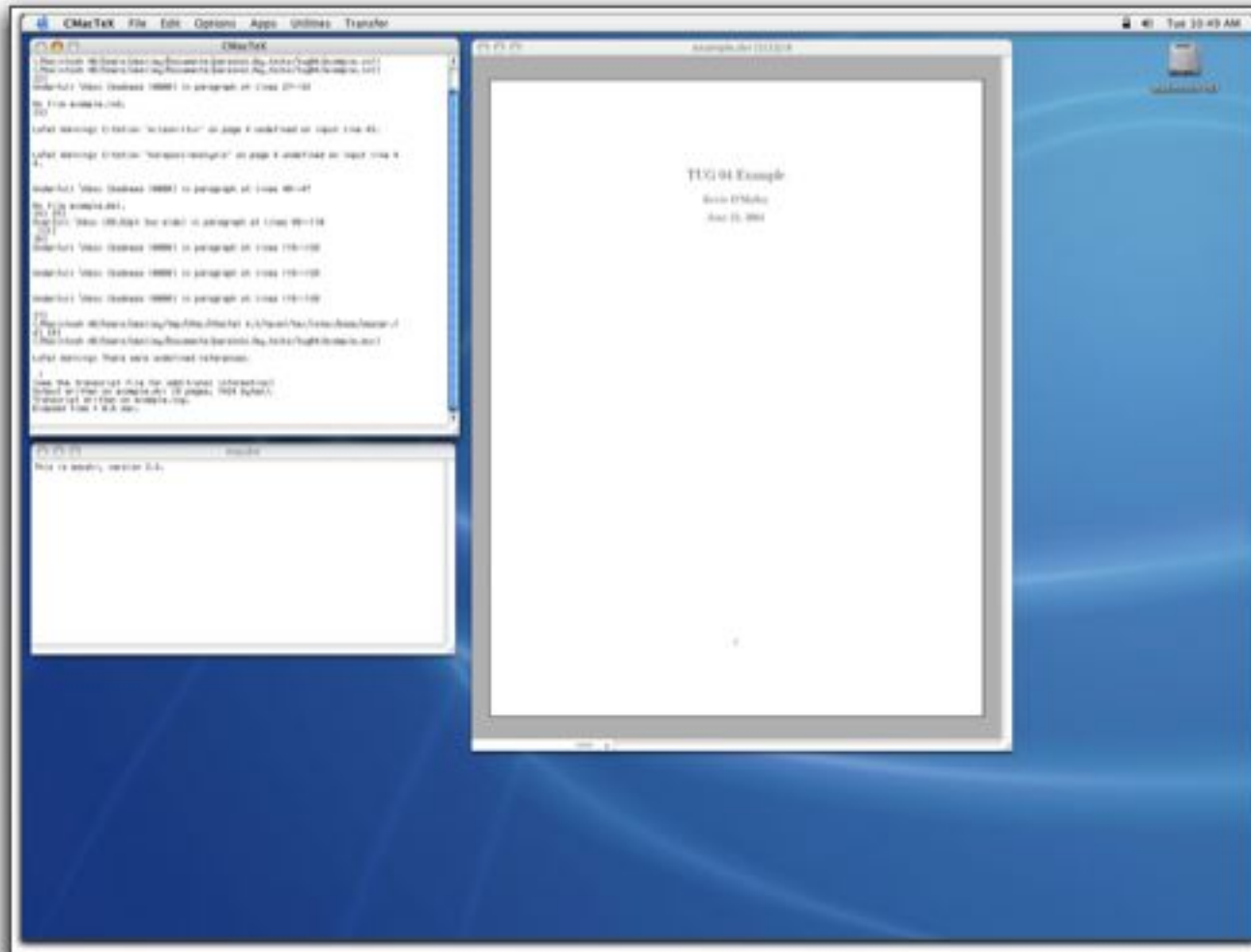


OzTeX displaying an example file

L^AT_EX Implementations/Front Ends

C_MacTeX

- An integrated suite of programs for implementing L^AT_EX on the Macintosh
- Includes TEX, e-TEX, pdfTEX, a DVI and Postscript previewer, and a Postscript converter, to name a few
- Compatible with Unix L^AT_EX versions and understands UNIX directory paths embedded in L^AT_EX document
- Similar in spirit to OzTeX - enables you to conveniently access L^AT_EX tools
- Has AppleScript support
- Distributed as shareware



CMacTeX displaying an example file

Unix-based Programs

- You can use \LaTeX from the command line

GUIs

- 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, BBEdition extensions for teTeX, BBEdition 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/oztex/>
- CMacTeX - <http://www.kiffe.com/cmactex.html>
- ScientificAssistant - <http://www.advanced-science.com>
- LyX - <http://www.lyx.org>
- GNU TeXmacs - <http://www.texmacs.org>
- AUCTeX - <http://www.gnu.org/software/auctex>
- TeX Mode - http://www.delorie.com/gnu/docs/emacs/emacs_252.html

- Support Tools

- BibDesk - <http://bibdesk.sourceforge.net>
- TeX Tools for OS X - <http://www.kiffe.com/texttools.html>
- iStorm - <http://www.mathgamehouse.com/istorm>
- tkbibtex - <http://www.cat.csiro.au/cmst/staff/pic/tkbibtex.html>
- Easy N-up - <http://evolve.lse.ac.uk/software/PDFNupMaker/>

● Unix Tools for Mac OS X

- Apple's X11 - <http://www.apple.com/macosx/features/x11>
- XDarwin - <http://www.xdarwin.org>
- Fink - <http://fink.sourceforge.net>
- FinkCommander A GUI for Fink - <http://finkcommander.sourceforge.net>
- DarwinPorts - <http://darwinports.opendarwin.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>
- MacTeX Technical Working Group Homepage - <http://www.tug.org/twg/mactex/>
- LaTeX: It's Not Just for Academia Part 1, Kevin O'Malley, O'Reilly MacDevCenter, Feb 2004.
<http://www.macdevcenter.com/pub/a/mac/2004/02/03/latex.html>
- LaTeX: It's Not Just for Academia Part 2, Kevin O'Malley, O'Reilly MacDevCenter, Feb 2004.
<http://www.macdevcenter.com/pub/a/mac/2004/03/05/latex.html>

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