LaTeXWorkshop Graduate School of Governance Maastricht

Jaap Bos (Utrecht *University* School of Economics)

This version is dated November 14, 2009

November 18, 2009

Outline

1. LaTeXPrimer
   - What is LaTeX?
2. Software requirements
   - Interfaces for a Windows PC
   - Interfaces for a Mac
3. Installation
4. Further info
   - Add-ons (from winedt.org)
   - Add-ons (for Mac)
5. An example

What is LaTeX?

- LaTeXis a document preparation system for high-quality typesetting. It is based on Donald E. Knuth's TeX typesetting language. LaTeX was first developed in 1985 by Leslie Lamport, and is now being maintained and developed by the LaTeX3 Project.
- LaTeXis a markup language (like HTML, but much smarter).
- LaTeXis most often used for medium-to-large technical or scientific documents, but it can be used for almost any form of publishing.
- LaTeXis not a word processor! Instead, LaTeXencourages authors not to worry too much about the appearance of their documents, but to concentrate on getting the right content.
- More info here: ▸ Jump to the end

What is a markup language?

- Well, for starters, consider the LaTeXcode for the beginning of this presentation:

```
\title[research skills]{\large \\ \LaTeX Workshop Graduate School of Governance
Maastricht}
\author{\normalsize Jaap Bos (Utrecht \emph{University} School of Economics)}
\institute[USE]{\emph{This version is dated June 18, 2009}}
\date{\small June 18, 2009}

\begin{document}

\begin{frame}
\titlepage
\end{frame}

\begin{frame}
 \frametitle{Outline}
 \tableofcontents
\end{frame}

\section{\LaTeX Primer}
```

A bit more about markup languages

- So somewhere you or someone else has defined what e.g. title should look like....
- A collection of those features is called a **shell**.
- Once you've chosen your shell, you no longer worry about layout....
- In the end, you *compile* the document, and a software package turns it into readible and printable output.

Who uses LaTeX?

- Scientists (physics, etc.), and other geeks, nerds (www.tug.org, or www.dante.org)
- Increasingly many people working in economics and finance.
- The publishers of the journals that you read and submit to...
- Many people in your science.
- Yours truly.

What kind of a LaTeXuser am I?

- For 99% of my work I use the same shell (which I dowloaded from Elsevier (it's what they use for their journals as well)).
- It makes me much more productive and helps me avoid some of the wordprocessing problems I hate the most.
- I've occasionally used it to do math as well (more later, or ask me!).
- It helps now that I'll be writing a book and integrating some papers in that book.
- I really like the combination with Stata.
- I sometimes use SWP like old-school Wordperfect (with the underwater screen).
- Every now and then I like to do some of my own programming...

How does Scientific Workplace relate to LaTeX?

- Scientific Workplace (SWP) is one of those programs used for programming in LaTeX. The key difference with most of the other programs: it is (almost) completely windows based. So you don't have to worry about all that code.
- LaTeXsnobs will tell you SWP is for dummies, but the truth is, it can almost completely be integrated with LaTeX.
- So in principle you don't have to choose: you can start with SWP and later switch to LaTeX.
- SWP is a commercial package, so you (or USE) will have to pay....
- SWP has MUPAD (remember the math I talked about?)

How does Word relate to SWP and LaTeX?

- Word is not a markup language (yet!)...
- ...but HTML is.
- Word becomes more and more like HTML (try opening a website in Word, and you'll see what I mean).
- Word2TeXis relatively simple.
- TeX2Word is more troublesome.
- A bit about writing papers with Word users...

Pros of Scientific Workplace

1. It is very stable.
2. It is easy to use (easier than LaTeX)
3. It is somewhat (!) more compatible to Word than LaTeX.
4. Your documents will look great.
5. Almost all types, shapes and looks of documents are available.
6. SWP5 now has pdftex....
7. You can use a lot of LaTeXprogramming, should you choose to do so.

Cons of SWP

1. It is definitely not as flexible as Word.
2. To get more flexibility you'll still have to learn how to program (big minus, unless you know and like html).
3. It comes at a price (albeit a reasonable price).
4. You'll have to learn a new program.

Pros of LaTeX

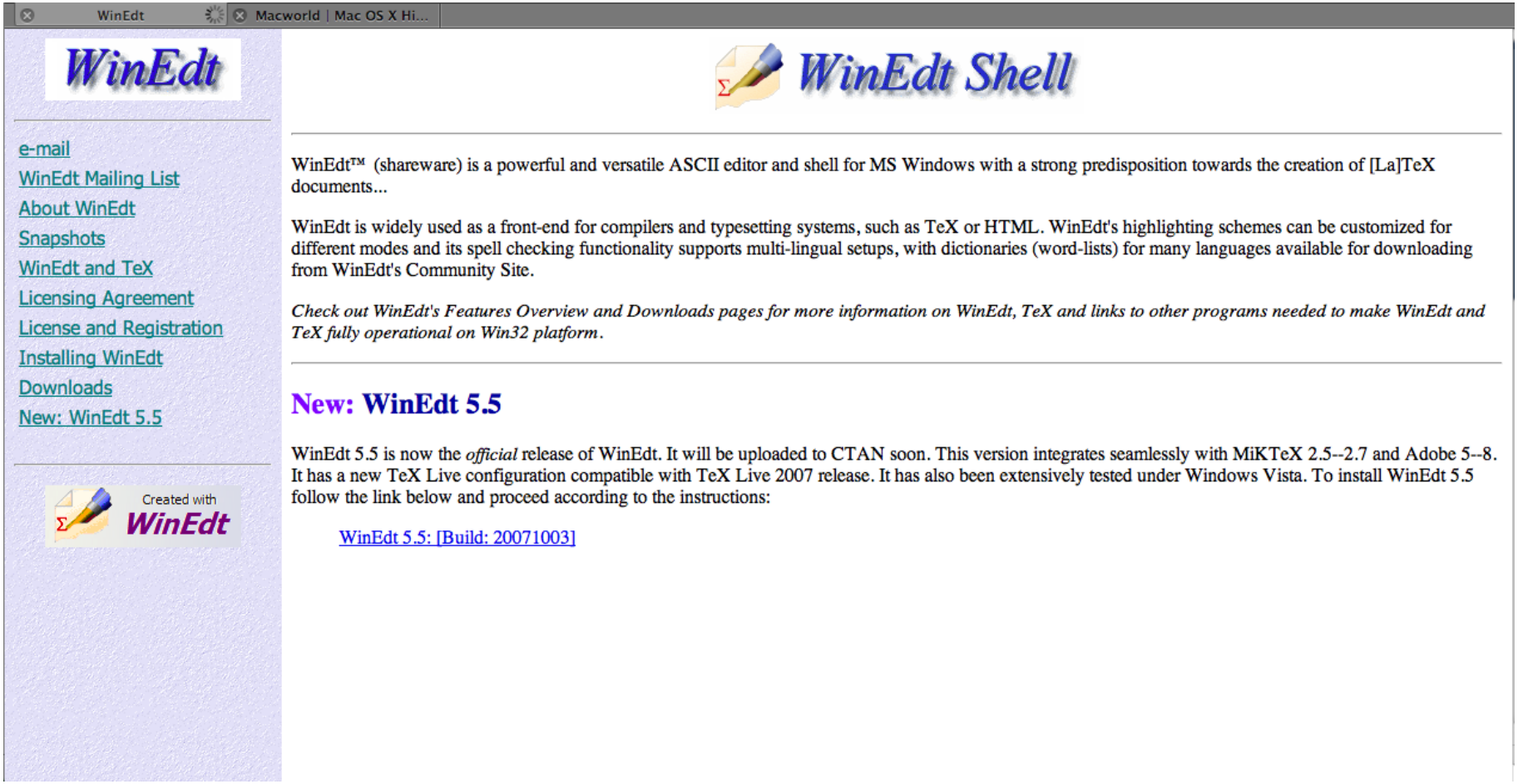
1. It is the best package for documents containing mathematics.
2. It is free on virtually every computer in the world.
3. It is portable: stick to the standard commands and everyone can read and exchange documents.
4. The source file is purely alphanumeric so it can be read by eye or posted by e-mail with no problems associated with different versions or binary files.
5. LaTeXhas the reputation of being hard, but in fact it is effectively the same as HTML!
6. It is very stable (graphs, tables, citations, reference lists, table of contents, etc.).
7. It can be integrated with Stata.

Cons of LaTeX

1. It is perhaps not as flexible as Word.
2. To get more flexibility you have to learn how to program (big minus, unless you know and like html).
3. It is very difficult to write with non-LaTeXusers.
4. In a way, you're still more lay out focussed, just like a Word-user.

Winedt.com

http://www.winedt.com



Winedt.com - other programs to install

http://www.winedt.com

WinEdt

e-mail
WinEdt Mailing List
About WinEdt
Snapshots
WinEdt and TeX
Licensing Agreement
License and Registration
Installing WinEdt
Downloads
New: WinEdt 5.5

Created with WinEdt

WinEdt 5.5: [Build: 20071003]

CTAN (Comprehensive TeX Archive Network) Servers:

WinEdt can be downloaded from "/tex-archive/systems/win32/winedt/" directory on CTAN:

WinEdt Version and Build	Size	England	Germany	USA
WinEdt 5.4 [Build: 20050701] (old)	6.07MB	WinEdt 5.4	WinEdt 5.4	WinEdt 5.4
WinEdt 5.3 [Build: 20020323] (obsolete)	4.0MB	WinEdt 5.3	WinEdt 5.3	WinEdt 5.3
WinEdt32 [Build: 19981003 (v 1.414)] (obsolete)	2.1MB	WinEdt32	WinEdt32	WinEdt32
WinEdt16 [Build: 19980623 (v 1.41-e)] (obsolete)	1.3MB	WinEdt16	WinEdt16	WinEdt16

On CTAN you'll also find other TeX related packages and accessories!

WinEdt dictionaries for many languages are also available on CTAN, via:

- Dictionaries (word lists) for WinEdt

WinEdt: Additional Macros and Packages

- www.winedt.org (WinEdt Macro Library and Configurations)

Links to other Home Pages containing WinEdt or TeX related material:

- TUG: TeX Users Group
- MiKTeX's Home Page
- TeX Live Home Page (TUG)
- Ghostscript's Home Page (GS and GSView)

MikTeX

http://www.miktex.org/

Web miktex.org
Google Search

Home

About
- MiKTeX
- MiKTeX Tools

Download
- MiKTeX 2.7

DVD/CD
- MiKTeX on DVD-R
- MiKTeX on CD-R

Help & Support
- Documentation
- Support
- Feature Requests
- Troubleshooting

Welcome to the MiKTeX project page!

MiKTeX is an up-to-date TeX implementation for the Windows operating system.

TeX is a typesetting system written by Donald E. Knuth, who says that it is "*intended f*
and especially for books that contain a lot of mathematics".

Learn more...

MiKTeX Releases [compare]

2.8 [status]
xetex 0.997, pdftex 1.40.4, LuaTeX, mpost 1.001

2.7 [status] [download] [issues]
xetex 0.997, pdftex 1.40.4, mpost 1.001

2.6 [status] [download] [issues]
pdftex 1.40.4, mpost 1.000

2.5 [status] [~~download~~] [issues]
pdftex 1.30.6, mpost 0.901

MiKTeX Package Repository [status]

Version: 2948
Date: 1/27/2008
Packages: 1542

Ghostscript and Ghostview

http://www.ghostscript.com/awki

Ghostscript Website

Welcome to Ghostscript, an interpreter for the PostScript language and for PDF.

Releases and News

The leading edge of Ghostscript development is now under GPL license, as is the latest release, Ghostscript 8.60.

Ghostscript can be downloaded from cs.wisc.edu and sourceforge.net.

Documention

We keep online documentation for the development tree and many previous releases in the documentation archive.

Developers

- Mailing lists
- Bugzilla
- Source repository
- Bug bounty program

Related projects

Other page description languages:

- Ghostpcl
- Ghostpdf
- Ghostxps
- MuPDF

A user-friendly viewer:

- GSview

Contents Index Changes History

Search:

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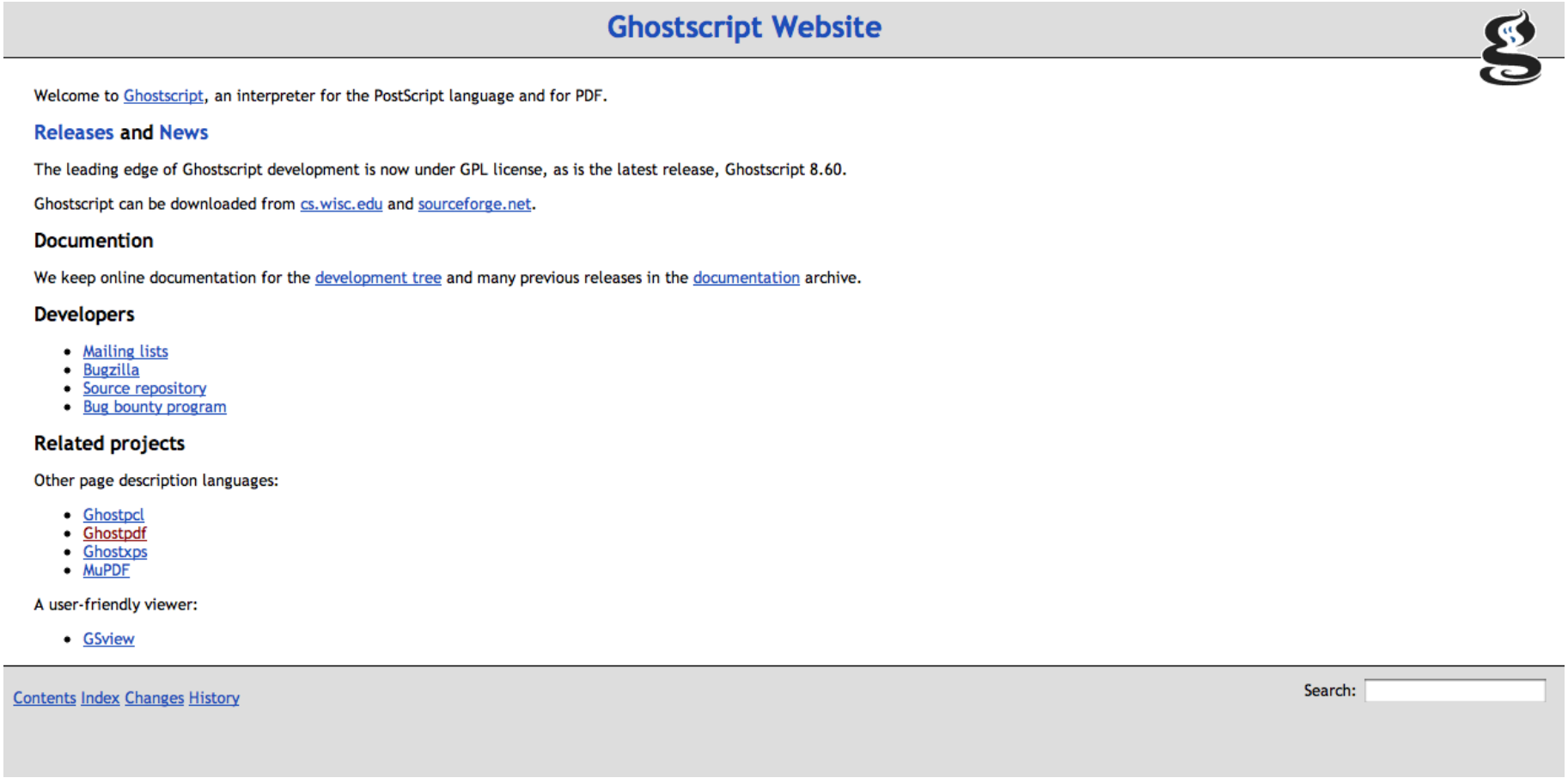

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4. You're set to go!

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5. Check out http://guides.macrumors.com/Installing_LaTeX_on_a_Mac

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   - But things go much smoother after a short while (my co-authors wrote their first draft of our joint paper in a week after they first used LaTeX).

Most common mistakes

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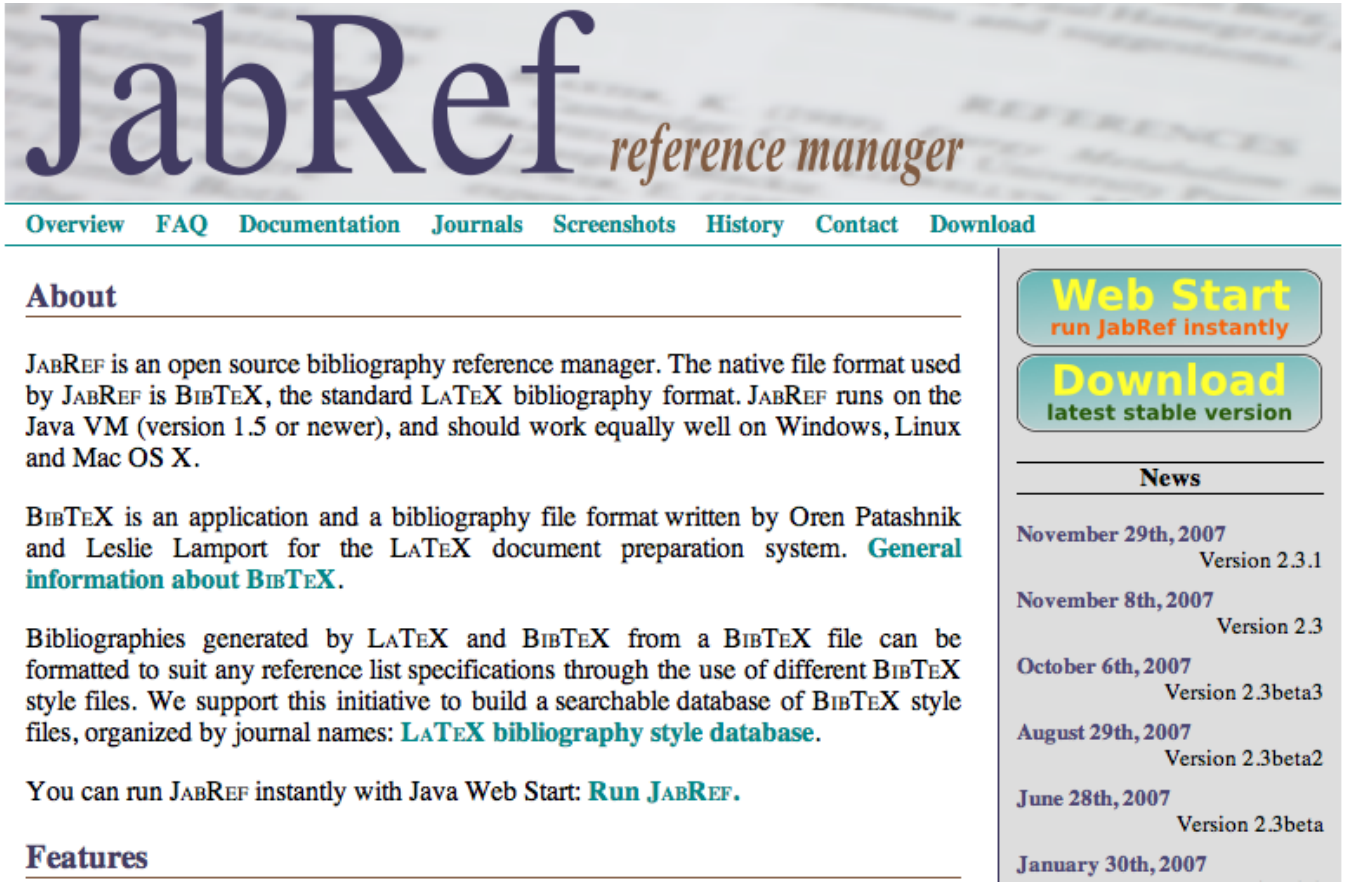
JabRef

http://jabref.sourceforge.net/



JabRef reference manager

Overview FAQ Documentation Journals Screenshots History Contact Download

About

JabRef is an open source bibliography reference manager. The native file format used by JabRef is BibTeX, the standard LaTeX bibliography format. JabRef runs on the Java VM (version 1.5 or newer), and should work equally well on Windows, Linux and Mac OS X.

BibTeX is an application and a bibliography file format written by Oren Patashnik and Leslie Lamport for the LaTeX document preparation system. General information about BibTeX.

Bibliographies generated by LaTeX and BibTeX from a BibTeX file can be formatted to suit any reference list specifications through the use of different BibTeX style files. We support this initiative to build a searchable database of BibTeX style files, organized by journal names: LaTeX bibliography style database.

You can run JabRef instantly with Java Web Start: Run JabRef.

Features

Web Start
run JabRef instantly

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latest stable version

News

November 29th, 2007
Version 2.3.1

November 8th, 2007
Version 2.3

October 6th, 2007
Version 2.3beta3

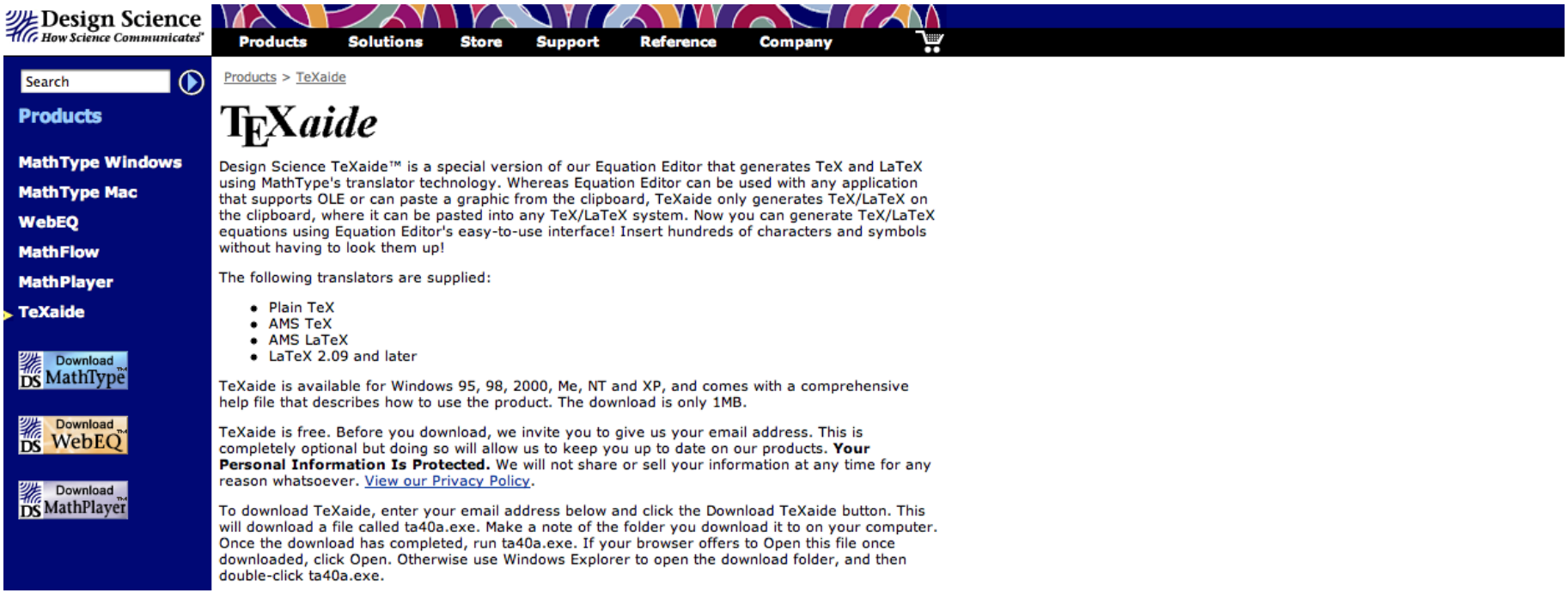
August 29th, 2007
Version 2.3beta2

June 28th, 2007
Version 2.3beta

January 30th, 2007

TexAide

http://www.dessci.com/en/products/texaide/



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WebEQ
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MathPlayer
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TEXaide

Design Science TeXaide™ is a special version of our Equation Editor that generates TeX and LaTeX using MathType's translator technology. Whereas Equation Editor can be used with any application that supports OLE or can paste a graphic from the clipboard, TeXaide only generates TeX/LaTeX on the clipboard, where it can be pasted into any TeX/LaTeX system. Now you can generate TeX/LaTeX equations using Equation Editor's easy-to-use interface! Insert hundreds of characters and symbols without having to look them up!

The following translators are supplied:

- Plain TeX
- AMS TeX
- AMS LaTeX
- LaTeX 2.09 and later

TeXaide is available for Windows 95, 98, 2000, Me, NT and XP, and comes with a comprehensive help file that describes how to use the product. The download is only 1MB.

TeXaide is free. Before you download, we invite you to give us your email address. This is completely optional but doing so will allow us to keep you up to date on our products. **Your Personal Information Is Protected.** We will not share or sell your information at any time for any reason whatsoever. View our Privacy Policy.

To download TeXaide, enter your email address below and click the Download TeXaide button. This will download a file called ta40a.exe. Make a note of the folder you download it to on your computer. Once the download has completed, run ta40a.exe. If your browser offers to Open this file once downloaded, click Open. Otherwise use Windows Explorer to open the download folder, and then double-click ta40a.exe.

Excel2Latex

http://www.ctan.org/tex-archive/support/excel2latex/

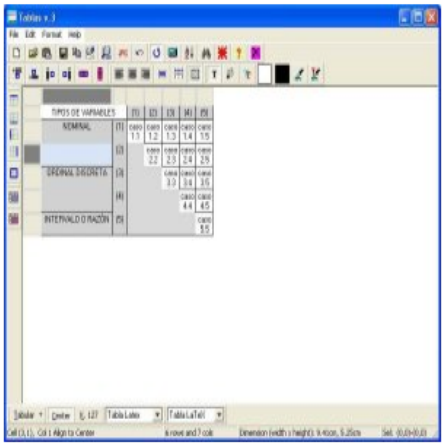
Tablas (also in English)

http://www.informatica.us.es/ calvo/latex.html

Tablas **versión 3.0.0.4 (2-6-2004)**

Programa que permite exportar e importar tablas LaTeX de forma visual.
Algunas características de este programa son:

- Admite distintos idiomas (por ahora, español, inglés).
- Tiene fichero de ayuda para windows en español o inglés.
- Permite exportar a formato JPEG.
- Se pueden utilizar bordes, colores de fondo, colores de letra, columnas de ancho automático o fijo, justificar el texto en las celdas, crear multicolumn, etc.
- Permite el intercambio de información en los dos sentidos con Winedt.
- Permite ver el aspecto de la tabla si tenemos instalado LaTeX (por ejemplo: MikTeX con Yap).
- También puede crear código Pstricks para representar Redes y Árboles.
- Etc.



Download:

- tablas3sp.zip (con ayuda en español).
- tablas3.zip (con ayuda en inglés).
- **Versiones anteriores de tablas:**

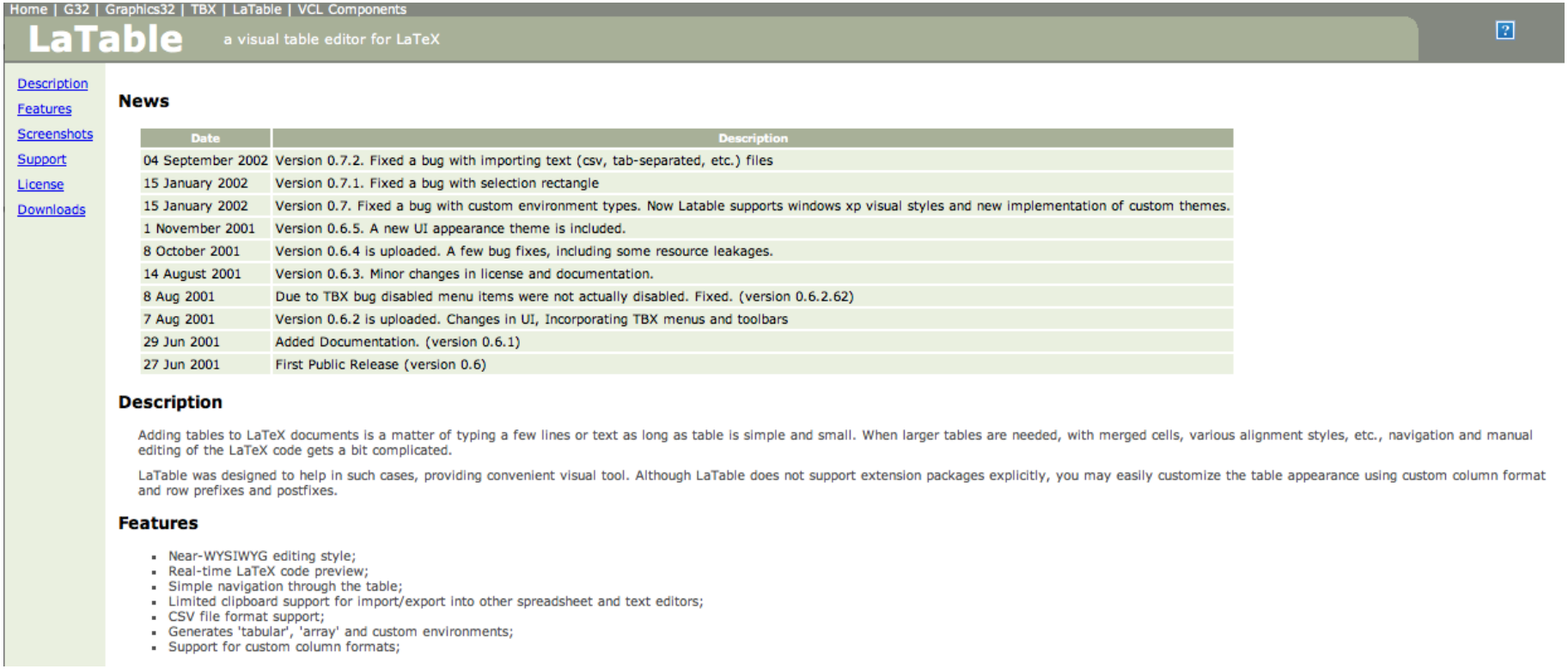
Nota:

Ayuda en línea de Tablas en su versión actual en español o inglés.

Versiones anteriores de Tablas.

Latable

http://www.g32.org/latable/



Home | G32 | Graphics32 | TBX | LaTable | VCL Components

LaTable a visual table editor for LaTeX

Description
Features
Screenshots
Support
License
Downloads

News

Date	Description
04 September 2002	Version 0.7.2. Fixed a bug with importing text (csv, tab-separated, etc.) files
15 January 2002	Version 0.7.1. Fixed a bug with selection rectangle
15 January 2002	Version 0.7. Fixed a bug with custom environment types. Now Latable supports windows xp visual styles and new implementation of custom themes.
1 November 2001	Version 0.6.5. A new UI appearance theme is included.
8 October 2001	Version 0.6.4 is uploaded. A few bug fixes, including some resource leakages.
14 August 2001	Version 0.6.3. Minor changes in license and documentation.
8 Aug 2001	Due to TBX bug disabled menu items were not actually disabled. Fixed. (version 0.6.2.62)
7 Aug 2001	Version 0.6.2 is uploaded. Changes in UI, Incorporating TBX menus and toolbars
29 Jun 2001	Added Documentation. (version 0.6.1)
27 Jun 2001	First Public Release (version 0.6)

Description

Adding tables to LaTeX documents is a matter of typing a few lines or text as long as table is simple and small. When larger tables are needed, with merged cells, various alignment styles, etc., navigation and manual editing of the LaTeX code gets a bit complicated.

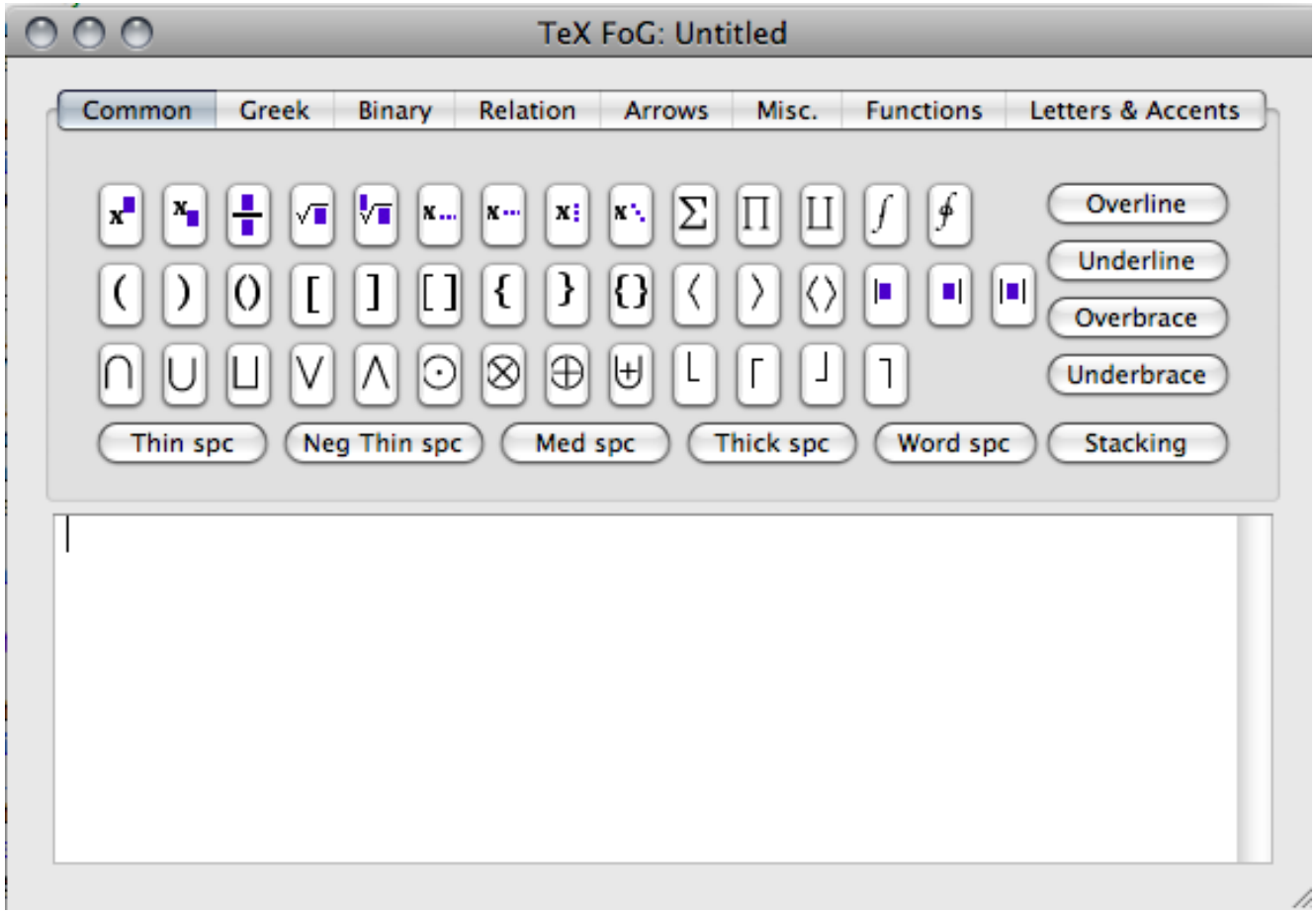
LaTable was designed to help in such cases, providing convenient visual tool. Although LaTable does not support extension packages explicitly, you may easily customize the table appearance using custom column format and row prefixes and postfixes.

Features

- Near-WYSIWYG editing style;
- Real-time LaTeX code preview;
- Simple navigation through the table;
- Limited clipboard support for import/export into other spreadsheet and text editors;
- CSV file format support;
- Generates 'tabular', 'array' and custom environments;
- Support for custom column formats;

TeX FoG (for Mac)

http://homepage.mac.com/marco_coisson/TeXFoG/



An example

- Now we'll go through a simple paper, with:
  - A graph
  - A table
  - A reference list, and two types of references

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- The paper will be available at the same place where all other material for this seminar is available.

Where to find this information

- Until the end of October, you can visit http://www.jwbbos.com/SoG. Use the username and password that were supplied to you.
- Otherwise, visit my website at http://www.jwbbos.com. Go to "**Code**", and find the post that is entitled "**LaTeX Primer**."