Easy-to-use Chinese $\LaTeX$ Suite

Hongbin Ma

mathmhb@bit.edu.cn

School of Automation

Beijing Institute of Technology

March 14, 2012 Beijing, China

This is a demo of mslide package in $\LaTeX$. 
OUTLINE

1 Introduction  3
2 Motivations of \texttt{MTEX}  7
3 Features of \texttt{MTEX}  9
4 Installation and Configuration  10
5 Teaching \TeX\ing with \texttt{MTEX}  13
6 Useful \texttt{MTEX} Tools  15
7 Sc1IDE: All-In-One IDE  18
8 Contact Us ...  25
1 Introduction

What is \TeX? Who use \TeX?

\TeX is

- an excellent computer typesetting system;
- invented by great computer scientist D.E. Knuth;
1 Introduction

What is \TeX? Who use \TeX?

\TeX is

- an excellent computer typesetting system;
- invented by great computer scientist D.E. Knuth;

\TeX is widely used by

- mathematicians, engineers, and scientists;
- most prominent publishers, such as Springer, Elsevier, etc.;
- students, teachers, and fans in many technical areas;
- and most conferences/journals require submissions based on \TeX.
D.E. Knuth (Jan 10, 1938—)

The Art of Computer Programming (TAOCP)

First ACM Grace Murray Hopper Award, 1971

Turing Award, 1974 (36 years old!)

National Medal of Science, 1979

More awards ... Many interesting stories ...
TEX/LaTEX vs. Microsoft Word

<table>
<thead>
<tr>
<th>Item</th>
<th>TEX</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1977</td>
<td>1989</td>
</tr>
<tr>
<td>Platform</td>
<td>almost all OS’</td>
<td>only Windows</td>
</tr>
<tr>
<td>License</td>
<td>free and open-source</td>
<td>commercial with high price</td>
</tr>
<tr>
<td>Compatibility</td>
<td>excellent</td>
<td>very poor</td>
</tr>
<tr>
<td>Quality</td>
<td>professional</td>
<td>non-professional</td>
</tr>
<tr>
<td>Editing</td>
<td>simple, text mode</td>
<td>GUI mode (WYSIWYG)</td>
</tr>
<tr>
<td>Philosophy</td>
<td>focusing on structure</td>
<td>focusing on details</td>
</tr>
<tr>
<td>Formulae</td>
<td>very suitable</td>
<td>not suitable</td>
</tr>
<tr>
<td>Tables/graphics</td>
<td>not difficult</td>
<td>relatively easy</td>
</tr>
<tr>
<td>Macros</td>
<td>very powerful</td>
<td>weak, limited by VBA</td>
</tr>
</tbody>
</table>

OUTLINE
1. Introduction
2. Motivations of LaTeX
3. Features of LaTeX
4. Installation and Configuration
5. Teaching LaTeX with LaTeX
6. Useful LaTeX Tools
7. SciIDE: All-In-One IDE
8. Contact Us...
1. Introduction

TEXing with \texttt{MTeX}

Chinese \texttt{MTeX} Suite is

- developed and maintained by myself;
- a stand-alone self-contained \TeX\ distribution;
- much smaller than other \TeX\ systems;
- freely downloadable from \url{http://mteX.sf.net}
- configured well to auto support Chinese typesetting and other jobs;
- easy-to-use and powerful, esp. for \TeX/\LaTeX\ beginners;
- able to incorporate any useful utilities in the same manner.
2 Motivations of \textsc{MTeX}

- A huge software? No! Less space please ...
- Waiting for installation? No, please make it as fast as possible ...
- Installed everywhere? Portable and green \textsc{TeX} suite is desired!
- Chinese typesetting support? \textsc{CCT}, \textsc{TY}, \text{ctex}, \text{gbk2uni}, \text{fixbbl}, ...
- Graphics inclusion support? .gif, .tif, .bmp, .png, png, .eps, .pdf, ...
- Multi-engine smart compilation? \textsc{TeX}, \text{e\TeX}, \text{\LaTeX}, \text{\LaTeX209}, \text{pdf\LaTeX}, \text{Xe\TeX}, \text{Xel\LaTeX}, \text{Lua\TeX}, ...
- Mutli-purpose smart compilation? \text{bibtex8}, \text{makeindex}, \text{patchdvi}, \text{metapost}, \text{ppower}, ...
- Easy insertion of symbols and code snippets?
2. Motivations of M\TeX

- Use \LaTeX in PowerPoint, Excel, ...
- Forward and reverse search in DVI/PDF view?
- Support to most DVI/PS/PDF viewers? Support to most spelling checkers?
- Integrated development environment for \TeXers, programmers, researchers?
- Complicated TDS tree and thousands of sleepy files?
- ......
3 Features of $\mathcal{M}$\TeX

$\mathcal{M}$\TeX Is Free

$\mathcal{M}$\TeX Is Integrated

$\mathcal{M}$\TeX Is Powerful

$\mathcal{M}$\TeX Is Small

$\mathcal{M}$\TeX Is Extendable

$\mathcal{M}$\TeX Is Green and Portable

$\mathcal{M}$\TeX Is Cutting Edge

$\mathcal{M}$\TeX Has Multi-language Interface

$\mathcal{M}$\TeX Has Special Design for Chinese

$\mathcal{M}$\TeX Has Special Design for Beginners
4 Installation and Configuration

**Typical Installation**

Just 3 Steps:

(i) Download self-extractor `mtex20???.exe` (about 50 Megabytes) from any server.

(ii) Run the downloaded self-extractor and input the destination of `MTeX` folder when prompted.

(iii) Wait one minute until the self-extractor finishes extraction and quits.
4. Installation and Configuration

Customized Installation

Just 4 Steps:

(i) Download installer `m-setup.exe` (about 80 Kilobytes) and files `m-setup.*.*`.  

(ii) Run the installer and customizes components.  

(iii) Let the installer download and extract selected components.  

(iv) Make further fully customized configuration after installing \( \mathcal{M}\TeX \).
4. Installation and Configuration

安装组件文件夹：J:\m-setup\current
安装目标文件夹：C:\MTeX

请您在左框中选择您要安装的组件，然后点击按钮[开始安装]。

当您选择组件时，您可以在本区域看到对所选组件的说明。

多数情况下，典型的组件已经为您自动选中，因此您可以直接点击按钮[开始安装]来进行默认的安装。

如果您只是升级，请不要选中“安装前清空您选择的目标文件夹”。

您选择的组件需要的空间大致为：181065KB

清除所有选择/恢复默认选择

设置网络 | 开始安装 | 检查更新 | 退出

本程序能从CTEX的ftp服务器上下载安装需要的文件，下载的文件将放在本程序所在的目录内。因此强烈建议您把本安装程序放在一个单独的目录中，再运行本安装程序。请按此按钮[设置网络]设置网络（如果本地已有需要的文件，则可跳过此步），然后点击按钮[开始安装]，该程序将自动根据您的网络设置和选择的组件列表，自动下载并安装缺少的组件。

注意：通过本程序下载的文件您不必删除，今后再次运行本安装程序时可以直接使用这些文件，不需要再次下载。
5 Teaching TeXing with \texttt{M}\texttt{TeX}

30 Minutes Course

- Compile some demos to illustrate powerful \texttt{LaTeX};
- Start from scratch to teach basic \texttt{LaTeX} commands;
- Teach basic \texttt{LaTeX} mathematics typesetting by examples;
- Request students to practice by assignments.
5. Teaching \TeX\ing with \texttt{M\TeX}

### Philosophy

- \LaTeX\ is to represent \textbf{what you think} rather than \textbf{what it looks like}.
- Learning to use \LaTeX\ is not difficult at all by starting with simple easy-to-understand template.
- \texttt{M\TeX}\ provides many convenient ways to help the users in \TeX\ing.
- \textbf{learning \LaTeX} by practice and searching is the most important key to help a \LaTeX\ beginner become an expert gradually.

---

OUTLINE

1. Introduction 3
2. Motivations of \texttt{M\TeX} 7
3. Features of \texttt{M\TeX} 9
4. Installation and Configuration 10
5. Teaching \TeX\ing with \texttt{M\TeX} 13
6. Useful \texttt{M\TeX} Tools 15
7. Sc1IDE: All-In-One IDE 18
8. Contact Us ... 25
6 Useful \LaTeX \textbf{Tools}

![Image of LaTeX symbols and code]

**OUTLINE**

1. Introduction 3
2. Motivations of \LaTeX 7
3. Features of \LaTeX 9
4. Installation and Configuration 10
5. Teaching \TeX\textit{ing} with \LaTeX 13
6. Useful \LaTeX Tools 15
7. Sc1IDE: All-In-One IDE 18
8. Contact Us ... 25
6. Useful \LaTeX\ Tools

\sqrt{a^2 + b^2}
6. Useful Mi\TeX Tools

OUTLINE

1. Introduction 3
2. Motivations of Mi\TeX 7
3. Features of Mi\TeX 9
4. Installation and Configuration 10
5. Teaching \TeX\ing with Mi\TeX 13
6. Useful Mi\TeX Tools 15
7. Sc1IDE: All-In-One IDE 18
8. Contact Us ... 25
7 Sc1IDE: All-In-One IDE

Sc1IDE has the following main features:

- Customizable locales;
- Support Unicode encoding;
- Customizable tools menu even submenus;
- Customizable toolbar buttons;
Customizable keyboard shortcuts;

Multi-buffer editing;

Row block and column block operations;

Output buffer for running commands;

Richful command-line arguments;

Customizable language support;

Customizable syntax highlight;

Customizable code folding;

Customizable code auto-completion;

Customizable code API call-tips;

Customizable abbreviation expansion;

Built-in lua scripting;

Customizable lua extensions;
7. Sc1IDE: All-In-One IDE

- Regular expression searching and replacing;
- Full-screen editing;
- Editing macros support;
- Compilation error locating;
- Brace auto matching;
- Block or line commenting;
- Unique Files panel to show files in current folder, favorite files, and project files;
- Unique Outline panel to show structure and bookmarks of current file;
- Unique Abbrev panel to show available abbreviations and code completion API;
- Unique Docs panel to show classified help documents or on-line documents and even searching engines;
7. Sc1IDE: All-In-One IDE

▶ Unique **Ltx-Labels** panel to show labels, bibitems, and included filenames in current file;

▶ Unique **Ltx-Cmds** panel to show insertable \LaTeX Greek commands, environments, mathematics functions;

▶ Unique integrated debugging for C/C++, Pascal, C#, and Lua with the help of gdb /mdb;

▶ Unique integrated subversion version control;

▶ Unique \LaTeX block compilation;

▶ Unique customizable F1 keyword help;

▶ Unique embedded expression calculator;

▶ Unique E-book mode for viewing or reading files;

▶ Unique preconfigured monofont schemes for programming jobs;

▶ Unique Hex editing mode for editing arbitrary files;
Unique word counting for both ASCII files and Chinese files;

Spell checking by internal or external spell checkers;

Many additional features provided by lua scripts.
Special features for happy \TeX\xing:

► Automatic brace completion, e.g. completing \{ by \}, completing \( \text{\textbackslash left}( \text{by} \ \text{\textbackslash right}) \).

► Automatic environment completion, e.g. completing \begin{xyz} by \end{xyz}.

► Automatic Con\TeX\ command completion, e.g. completing \starttext by \stoptext.

► Automatic inserting matching $ when typing $.

► Automatic quote replacement, e.g. typing " yielding ‘‘ and ’’ in turn.

► Automatic inserting braces for mathematics type-setting when typing _ or ^, e.g. typing _ yielding _\{\} with cursor inside the braces.

► Customizable folding support for sectioning commands (like \section, \subsection, etc.), environments (\begin{...} and \end{...}), code blocks (like \if, \def, etc.).
Two useful sidebar panels for \LaTeX{} labels, references, subfiles, commands.

Easy inserting of label references and citations, e.g. clicking the braces of $\texttt{\ref{}}$ or $\texttt{\cite{}}$ yielding a pop-up list of defined labels or found bibitems for selection.

Integrating support to more \TeX{} engines such as Xe\TeX{}.

Integrating many tools related with \LaTeX{} in the Tools menu, e.g. converting \LaTeX{} file to HTML or RTF file.

Smart compilation for \TeX{} files.

Support for compiling selected text only.

Switching between \TeX{} file and log file.

......
8  Contact Us ...

Questions or Suggestions?

- **MTEX-Suite Forum:**
  [http://groups.google.com/group/mtex-suite](http://groups.google.com/group/mtex-suite)

- **Subscription:** [mtex-suite+subscribe@googlegroups.com](mailto:mtex-suite+subscribe@googlegroups.com)

- **MTEX-Suite Web Page:** [http://mtex.sf.net](http://mtex.sf.net)

- **Homepage of mathmhb:** [http://mathmhb.sf.net](http://mathmhb.sf.net)

- **Email:** [mathmhb@bit.edu.cn](mailto:mathmhb@bit.edu.cn)
Thank You!

Questions?