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① 简介 T_EX 与 ET_EX ET_EX 的获取安装

总结常见问题学习资源



1 简介

TEX 与 ETEX

LATEX 的获取安装

2 总结

常见问题 学习资源



TEX 与 ETEX

- Τ_ΕΧ: τεχ (/'tex/, /'tek/)
 - ▶ 生成精美图书的排版系统,由高德纳 (Donald E. Knuth) 于开发
 - ▶ 发音接近 "泰赫", "泰克", 而非 "泰克斯"
 - ▶ 最新版本为 T_EX 3.14159265,漂亮、美观、稳定、通用,尤其擅长数学 公式排版
- LATEX (/'la:tex/, /'le:tek/)
 - ▶ 后人在 T_FX 的基础上的宏包
 - 降低使用门槛极其丰富的宏包、模板
 - ▶ 提供扩展功能广泛用于学术界,期刊会议论文模板、大学学位论文 模板





和 Word 对比

Microsoft® Word 文字处理丁具 容易上手,简单直观 所见即所得 高级功能不易掌握 处理长文档需要丰富经验 花费大量时间调格式 公式排版差强人意 二进制格式,兼容性差 付费商业许可

LATEX 专业排版软件 需要一定的门槛 所见即所想,所想即所得 进阶难,但一般用不到 和短文档处理基本无异 无需担心格式,专心作者内容 尤其擅长公式排版 文本文件,易读、稳定 自由免费使用



TEX 排版举例:公式

无编号公式

$$\mathcal{F}(\xi) = \int_{-\infty}^{\infty} f(x) e^{-j2\pi \xi x} dx$$

多行多列公式

$$y = d$$
 $z = 1$
 $y = cx + d$ $z = x + 1$
 $y_{12} = bx^{2} + cx + d$ $z = x^{2} + x + 1$
 $y(x) = ax^{3} + bx^{2} + cx + d$ $z = x^{3} + x^{2} + x + 1$

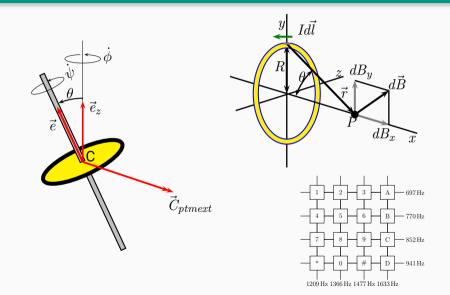
(1) (2)

TEX 排版举例:公式

编号多行公式

$$A = \lim_{n \to \infty} \Delta x \left(a^2 + \left(a^2 + 2a\Delta x + (\Delta x)^2 \right) + \left(a^2 + 2 \cdot 2a\Delta x + 2^2 (\Delta x)^2 \right) + \left(a^2 + 2 \cdot 3a\Delta x + 3^2 (\Delta x)^2 \right) + \dots + \left(a^2 + 2 \cdot (n-1)a\Delta x + (n-1)^2 (\Delta x)^2 \right) \right)$$

TEX 排版举例:图形





TrX 排版举例:文档

N. Fernanda et al. / Future Generalise Computer Systems 28 (2013) 84-106

potential to have context sources or sensors (and sensor networks) present in order to "elastically" on-demand form clouds of services

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TEX 排版举例:幻灯片





① 简介 T_EX 与 ET_EX ET_EX 的获取安装

② 总结 常见问题 学习资源



安装镜像下载

LATEX 的发行版包括很多版本,这里我们选择的发行版本是 TEX Live

- 为什么选择 TFX Live 发行版?
 - ▶ 跨平台: Windows, Linux, Mac OS
 - ▶ 即时更新,稳定的开源社区,工具集完整
- 离线安装镜像 (约 3GB 大小)
 - https://mirrors.tuna.tsinghua.edu.cn/CTAN/systems/texlive/Images/texlive.iso
 - https://mirrors.aliyun.com/CTAN/systems/texlive/Images/texlive.iso
- 注意!!!
 - ▶ 镜像文件的安装使用虚拟光驱,尽量不要解压缩
 - ▶ 截图……



镜像的安装

archive	2016/5/23 7:06
readme-html.dir	2016/4/22 6:31
readme-txt.dir	2016/4/22 6:30
source	2016/5/21 6:14
texlive-doc	2016/5/23 7:05
lpkg	2016/5/23 7:06
.mkisofsrc	2016/4/6 1:16
autorun.inf	2014/5/29 16:22
index.html	2016/4/22 6:33
install-tl	2016/5/18 6:24
install-tl-advanced.bat	2014/4/19 17:41
install-tl-windows.bat	2016/4/22 21:12
LICENSE.CTAN	2006/9/29 0:31
LICENSE.TL	2011/6/5 23:38
README	2016/5/8 22:35
README.usergroups	2008/8/9 21:39
release-texlive.txt	2016/5/23 7:04
🍓 tl-tray-menu.exe	2011/6/25 6:38









安装后测试

编辑 hello.tex (Windows 下不要用中文文件名;注意 內內 文档对大小写敏感。)

```
\documentclass{article}
\usepackage{ctex} % 加入中文支持
\begin{document}
\TeX{}你好!
\end{document}
```

- ▶ Windows 下缺省使用中易字体
- ▶ Linux、Mac OS X 下需要注意字体 (参见 ctex 文档)
- 使用 XeLaTeX 引擎编译,得到 PDF 文档



① 简介 T_EX 与 LAT_EX LAT_EX 的获取安装

2 总结常见问题学习资源



常见问题

- 编译不通过 缺少必要宏包,命令拼写错误,括号未配对等
- 表格图片乱跑 LATEX 自身的浮动定位算法
- 段落间距变大 LATFX 排版算法
- 参考文献 推荐使用 BIBTFX,也可以手写 \bibitem



① 简介 T_EX 与 LAT_EX LAT_EX 的获取安装

2 总结常见问题学习资源



系统学习

- 包太雷《LATEX Notes(第二版)》(3 小时)
- ShareLaTeX Online https://cn.sharelatex.com/project
- WikiBooks
 - https://en.wikibooks.org/wiki/LaTeX
 - https://zh.wikibooks.org/wiki/LaTeX
- 经典文档
 - ▶ 仔细阅读《一份不太简短的 ΔT_{E} X 2_{ε} 介绍》(Ishort-zh) (1-2 天)
 - ▶ 粗略阅读《 $\operatorname{ET}_{\mathbf{E}}$ X $\mathbf{2}_{\varepsilon}$ 插图指南》 $\overline{(2-3)}$ 小时)



扩展阅读

- 一份其实很短的 YEX 入门文档 (Liam Huang)
 http://liam0205.me/2014/09/08/latex-introduction/
- 网站推荐:
 - http://www.latexstudio.net/
 - http://www.chinatex.org/
- 知乎专栏: http://zhuanlan.zhihu.com/LaTeX
- LATEX 杂谈(刘海洋)
- 《LATEX 入门》(刘海洋)
- LATEX Tips:
 - https://alick.fedorapeople.org/fudcon-apac-2014/latex-tips.pdf
- Linux 用户:https://github.com/alick/fad-texlive-talk



利用文档

• 常用文档

▶ symbols: 符号大全

► Mathmode: 数学参考

▶ ctex, xeCJK: 中文支持

▶ texlive-zh: TEX Live 安装与使用

▶ 所用宏包文档

工具

▶ tlmgr: T_EX Live 管理器

▶ texdoc: T_EX 文档查看器 例如:texdoc lshort-zh

http://texdoc.net/

► TeX Studio 和 WinEdt 都支持在帮助里看文档



一点人生的经验

- 不要过于相信网上的中文文档
 - 简单鉴别方法: 排版的好看程度
- 如果你要处理中文
 - ▶ 使用 XeLaTeX, 使用 XeLaTeX, 使用 XeLaTeX
 - ▶ 忘记 CJK, 忘记 CJK, 忘记 CJK
 - ▶ 使用 xeCJK
 - ▶ 使用 ctex 宏包 (2.0 以上版本) (跟 CT_EX 套装仅仅是名字像)
- 写一点,编译一次,减小排错搜索空间



求助

- BBS
 - bbs.ctex.org
- UK FAQ
- TeX StackExchange
- Google
 - ▶ 使用英语搜索





你也可以帮助

- 错误反馈: GitHub Issues
- 改进建议: GitHub Issues
- 出力维护:LaTeX 宏包编写、Git
- 科普、答疑



- 本幻灯片
 - https://github.com/Lynn-Lau/LaTeX-Presentation
 - 免费下载、修改、使用
- 本幻灯片基于:
 - http://github.com/alick/fad-texlive-talk
 - ▶ 表示感谢
- 许可证:CC BY-SA 4.0 Unported ◎ ☞ ②



Thank you!