

Sorry, Professor,  
the dog ate my thesis  
*How to expect the unexpected  
when using L<sup>A</sup>T<sub>E</sub>X*

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Living and Working with L<sup>A</sup>T<sub>E</sub>X  
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- 1 A little bit of background
- 2 Trips and traps
- 3 Expectans expectavi

The full paper is available online at  
<http://epu.ucc.ie/articles/lms06>



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# Sounds familiar?

- Probably because it is
- Breakdowns are the last thing you want
- They always occur at the last minute
- They usually involve things that have been working fine until now
- They require expertise you haven't acquired yet
- 'Why don't "they" fix it?'
- Expect the unexpected



# A little bit of background

- T<sub>E</sub>X was designed for computer scientists and mathematicians
- Interfaced with programmable logic via a dumb terminal
- No other interface available or envisaged



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- $\text{T}_{\text{E}}\text{X}$  was designed for computer scientists and mathematicians
- Interfaced with programmable logic via a dumb terminal
- No other interface available or envisaged
- Knowledge of the original  $\text{T}_{\text{E}}\text{X}$  language no longer required
- $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$  and  $\text{ConT}_{\text{E}}\text{Xt}$  provide an extensible logic-based interface
- Some regularisation and standardisation of command syntax



# A little bit of background

## Visual interfaces

- Extensive selection of editors
- Available on all platforms
- Penny plain, twopence coloured
- Some have synchronous typographical interfaces
- None of them approach the expectations of new users outside computing and maths
- $\text{\LaTeX}$  is not alone: XML has the same problem



# Trips and traps

- Tips based on support experience
- Wholly unscientific
- Factual, not anecdotal



# Trips and traps

- Tips based on support experience
- Wholly unscientific
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- L<sup>A</sup>T<sub>E</sub>X is better-looking. . .
- . . . longer-lasting. . .
- . . . and can save about two months formatting time off the average 3–4 year PhD writing cycle



# The FAQ

- The FAQ is at **<http://www.tex.ac.uk/faq>**
- Your first port of call for queries
- Check here before asking questions in other public forums
- Covers only *frequently*-asked questions



# CTAN

- The Comprehensive T<sub>E</sub>X Archive Network
- Hosts all the free software relating to T<sub>E</sub>X systems
- Rooted at <http://tug.ctan.org> (TUG),  
<http://www.dante.de/software/ctan> (DANTE),  
and <http://www.tex.ac.uk> (UKTUG)
- Everything from CD/DVD images down to the smallest configuration file



## Packages

- The plug-in components of  $\text{\LaTeX}$
- Hundreds of them, providing refinements, formatting solutions, and fonts
- Learn how to download and install them
- Some  $\text{\TeX}$  systems (eg  $\text{\MiKTeX}$ ) provide automated download-and-install-on-demand



# Usenet News

- The **comp.text.tex** newsgroup
- The primary discussion forum for T<sub>E</sub>X matters
- Assumes you have checked the FAQ first before asking a question
- Access it via a newsreader, news-capable mailer, or Google Groups
- High traffic (100 posts a day is not unusual, so a good newsreader will save you time and effort)



# 'My equations won't...'

**... line up, number themselves, use the right font, fit the width, etc**

- A significant topic of enquiry on the newsgroup
- Mathematicians are constantly reinventing mathematics
- No substitute for RTFM
- See reading list in *Formatting Information*, p. ix



# Get equipped!

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- Graphics editor (bitmap and vector)
- Spellchecker
- Thesaurus



# Bibliography

- Use  $\text{BIB}_{\text{T}}\text{E}_{\text{X}}$
- Use *JabRef*
- Download formats like RIS or SilverPlatter
- Find out what reference format is required
- Try to avoid obtuse or degenerate reference formats



## *Keep a copy online*

- Upload relevant documents to your web site
- Hide them if you don't want them browsed
- Give the URI to contacts and colleagues
- Create a site (or a page) describing your research
- (Some institutions mandate this anyway)



## *Learn to write simple macros*

- Even simple definitions can be used to avoid mistyping
- Useful for very frequently-repeated objects
- Provides consistent formatting
- Can act as a label for use when searching
- Can be re-used without limit



# *The best form of attack is defence*

- *Your* defence
- You're the expert
- Make your document bulletproof (whatever about your arguments!)
- It's about communication, not showing off



# Formatting style

- Keep It Simple, Stupid!
- Don't use quirky layouts
- Avoid flowery typefaces
- Stick to the conventions of your discipline
- Obey the institution's formatting rules
- Be consistent
- $\text{\LaTeX}$  will make it legible: *you* have to make it readable



# Structural style

- *Entia non sunt multiplicanda praeter necessitatem*
- Most readers can hold three levels of sectional structure in their head while reading
- More than that and you'll lose them
- If unavoidable, make sure there are indications on the page as to what depth you're at
- Same goes for lists (avoid nesting)
- Stick to simple decimal numbering scheme (unless mandated otherwise)



# Writing style

- Eschew obfuscation
- Write for the intelligent, informed, and expert reader from a closely-related domain
- No need to explain the obvious
- Cite anything that requires a leap of faith
- Extraordinary claims require extraordinary proof
- Keep sentences short
- Don't be afraid to use a long one where there is a complex point to be made
- Write complete sentences
- Use the first person unless otherwise instructed



# Backup

- Try not to lose your thesis
- Document, illustrations, data, supporting material
- Use an editor which creates a safety copy
- Duplicate the whole thing onto CD, DVD, or USB memory regularly
- Keep a recent copy out of the office or lab or home
- Be aware of the media lifetime



# Expectans expectavi

- Patience is a virtue in a researcher
- Background skills are needed as much as foreground
- ECDL is not all it's cracked up to be
- Become competent in using your computer
- Be aware that the way you (or your colleagues, or institution) do things is not the only way



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- Have fun!

