BibTex:
Seamless Application with LaTex

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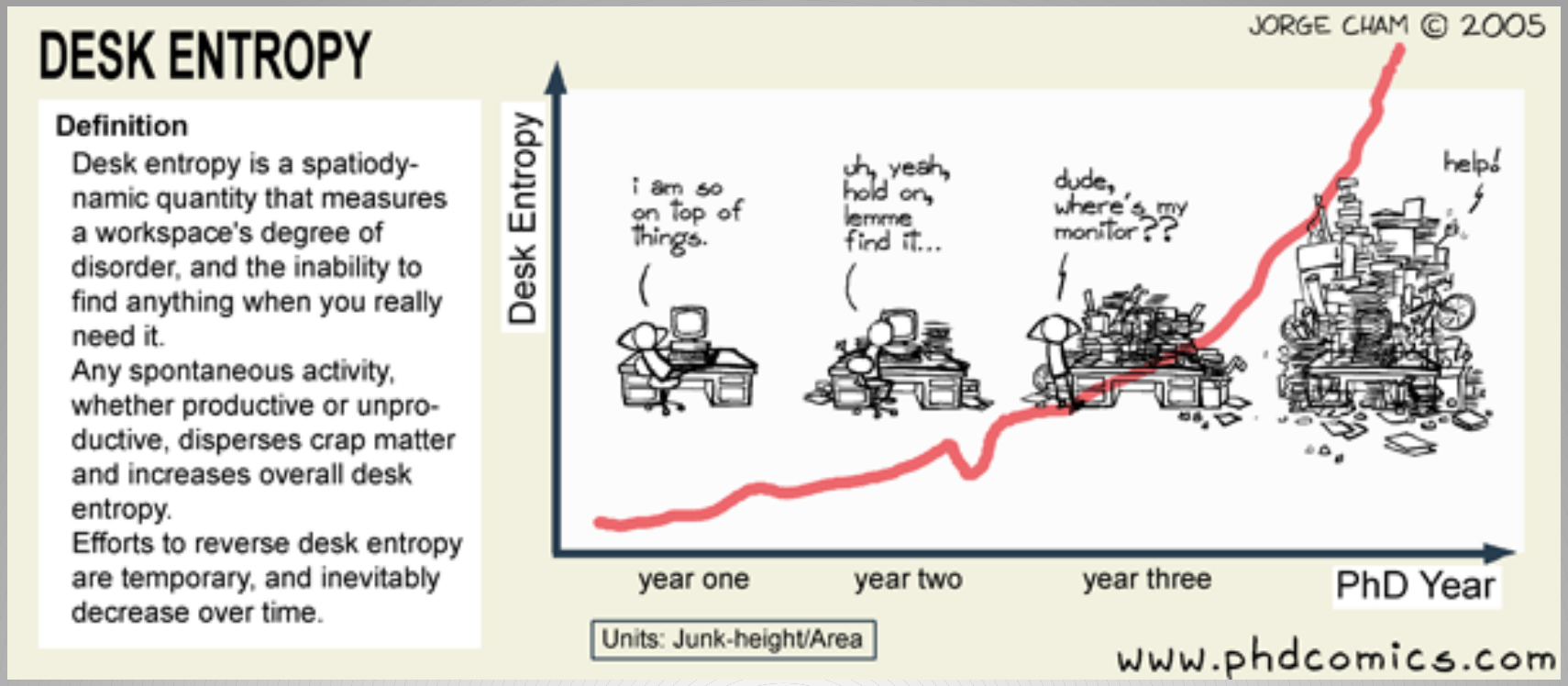
What is PHD?

Piled Higher and Deeper*

*Definition by Jorge Cham www.phdcomics.com

Desk Entropy



"Piled Higher and Deeper" by Jorge Cham www.phdcomics.com

Does Your Workstation Look Like this?

I will find it…eventually

- I forgot the title of the paper
- I forgot where I got the idea
- I took an important note in a paper

Outline

- Introduction to BibTex
- JabRef Tutorial
  - Import BibTex file from difference sources
  - Link PDF files to BibTex entry
- Create bibliography in LaTex
- LaTex Thesis Template of U of S

What is BibTex

- BibTex is a tool and a file format which are used to describe and process lists of references, mostly in conjunction with LaTex documents*
- BibTex stores all references in a plain text database external to a LaTex document.
- References in a BibTex database can be cited in any LaTex document
- Bibliography can be created in many styles
- **BibTex file must have a file extension .bib**
- **Save BibTex file in the same folder as LaTex file**

*http://www.bibtex.org

A Sample BibTex Database Entry

General format:

```
@ReferenceType{BibTexKey,
   FieldName ={field content},
   ...
}
```

```
@Article{Chishtie2008,
  Title      = {Renormalization group determination of the five-loop effective potential for
     massless scalar field theory},
  Author     = {Chishtie, F.A. and McKeon, D.G.C. and Steele, T.G.},
  Journal    = {Canadian Journal of Physics},
  Year       ={2008},
  Volume     = {86},
  Number     = {4},
  Pages      = {623-627},
}
```

Common Types of BibTex Entries

@article: an article from a journal

@book: A published book

@inbook: a section of a book without title

@incollection: a section of a book having its own title

@inproceedings: an article in a conference proceeding

@proceedings: an entire proceeding of a conference

@electronic: website, internet resources, etc

@phdthesis: PHD thesis

@mastersthesis: Master's thesis

@manual: technical manual

@unpublished: unpublished work

@**patent**: patent documents

@mics: for other kinds of publications that do not fit in existing types

Author Field

- Multiple authors:

  List all author names with **and**

  author ={Last Name, First Name **and** Last Name, First Name **and** Last Name, First Name},

  Example:

  author ={Zhang, Li and Sampson, Margaret},

- Corporate author:

  Use curly braces to enclose corporate author,

  Example:

  author ={{NAC Science Committee}},

Capitalization

- The capitalization of reference titles depends on the bibliography styles.
- Use curly braces to enclose the capital letter(s) to protect the capitalization of some special letter(s)/word(s), e.g.

Title ={The {F}ourier transform and its applications},

Math Mode in Title

Use set of {$.....$} curly braces and $...$ to enclose math expressions:

Example:

The title “How to factor x^2-y^2” should be entered:

title ={How to factor {x^2-y^2}},

About JabRef

- JabRef is an open source bibliography reference manager for BibTex
- Runs on Java VM
- Works on Windows, Linux, and Mac OS X
- Has graphical interface, making it easy to manage your BibTex database
- Ability to link to PDF files and web sources
- Available from http://www.jabref.org/

Next...

Build BibTex database using JabRef

- From Scopus
- From Engineering Village
- From Google Scholar
- Manually

Manually Create BibTex Entry:

BESIII Collaboration. Amplitude analysis of the $D^+ \to K^0_S\pi^+\pi^0$ Dalitz plot. *Physical Review D 89*, 5 (2014), 052001(14 pages).

```
@Article{BESIIICOLLABORATION2014,
  Title          = {Amplitude analysis of the {$D^+ \rightarrow K^o_s\pi^+\pi^0$} {D}alitz plot},
  Author         = {{BESIII COLLABORATION}},
  Journal        = {Physical Review D},
  Year           = {2014},
  Number         = {5},
  Pages          = {052001(14 pages)},
  Volume         = {89},

}
```

Cite in LaTex

- When we want to cite a reference in LaTex, use command:
  \cite{BibtexKey}. e.g.
  \cite{Chishtie2008}

- If you want to create a bibliography of all references, use command:
  \nocite{*}

Bibliography Styles

- After we finish writing and citing, we need to create the reference list using a bibliography style
- A bibliography style determines how a reference is formatted
- A bibliography style file has the extension **.bst**

Bibliography Styles

- Built-in bibliography styles:

plain	abbrv
unsrt	ieeetr
alpha	acm

- Additional styles can be found:
  - CTAN: Comprehensive Tex Archive Network
    http://www.ctan.org/
  - LaTex style templates provided by journals or conference organizers

Commands to Create Bibliography

- To specify which bibliography style for your LaTex document, use this command:

  \bibliographystyle{stylename}

- To specifiy from which BibTex database to create your bibliography, use this command:

  \bibliography{bibfilename}

- Insert the two commands to where you want to create bibliography
- **Example**:

  \bibliographystyle{plain}
  \bibliography{mybibtex}

Typeset a LaTex Document

We have everything in place:

- BibTex database has been created
- Writing and citing has been completed
- Bibliography style has been chosen
- \bibliography command is in place

What’s next?

Typeset a LaTex Document

- In general, to typeset your LaTex and generate bibliography, run the following commands:
  - PDFLaTex
  - BibTex
  - PDFLaTex
  - PDFLaTex

In TeXstudio, from Tools:
Compile
Bibliography
Compile
Compile

- Then view your document.

  In TeXstudio: Tools – View
- You should see a PDF file with citations and bibliography

U of S Thesis Template

- Developed by Professor Mark Eramian in the Department of Computer Science
- Conforms to the College of Graduate Studies and Research Thesis Preparation Guide
- Suitable for both paper and electronic theses

https://www.cs.usask.ca/documents/latex/uofsthesis-cs.tar.gz

Tips for Using U of S Thesis Template:

- Default reference style is Plain. If you would like to use another style use this command:

  \uofsbibliography[stylename]{yourbibfile}
- If your thesis is to be printed and bound(i.e., wider left margin), use this class:

  \documentclass[bound]{uofsthesis-cs}
- For thesis proposal, use this class:

  \documentclass[proposal]{uofsthesis-cs}
- Read the PDF document in the template package

Important points

- BibTex file must have a file extension .bib
- Save your LaTex and BibTex files in the same directory
- Cite a reference in LaTex: \cite{BibtexKey}
- Specify bibliography style: \bibliographystyle{stylename}
- Specify BibTex database: \bibliography{bibfilename}
- Commands to typeset a LaTex document:
  - PDFLaTex
  - BibTex
  - PDFLaTex
  - PDFLaTex
- Some bibliography style cannot be used “alone”; it must be used by the call to the package
- BibTex and LaTex Research Guide

http://libguides.usask.ca/bibtex

Questions?

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