Version Control

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MEOPAR

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http://douglatornell.ca/training/meopeers-2015-06-15/

What Is Version Control (VC)?

Use software tools to keep a running record of 1 or more files.

What Is VC?

Use software tools to keep a running record of 1 or more files.

Why You Should Use VC?

- Lets you revert to earlier versions of your work
- Provides a record of what changed when
- Lets you mark significant points in time
- Allows you to play "what-if?"
- Facilitates organized collaboration (with your future self, as well as with other people)

What You Should Use VC For

- Model Code
- Python, R, Matlab, etc. Scripts
- Plotting Scripts
- Processed Data Files & Scripts That Made Them
- Complicated Marking Spreadsheets (especially if shared)
- Thesis
- Papers
- ToDo List
- ...

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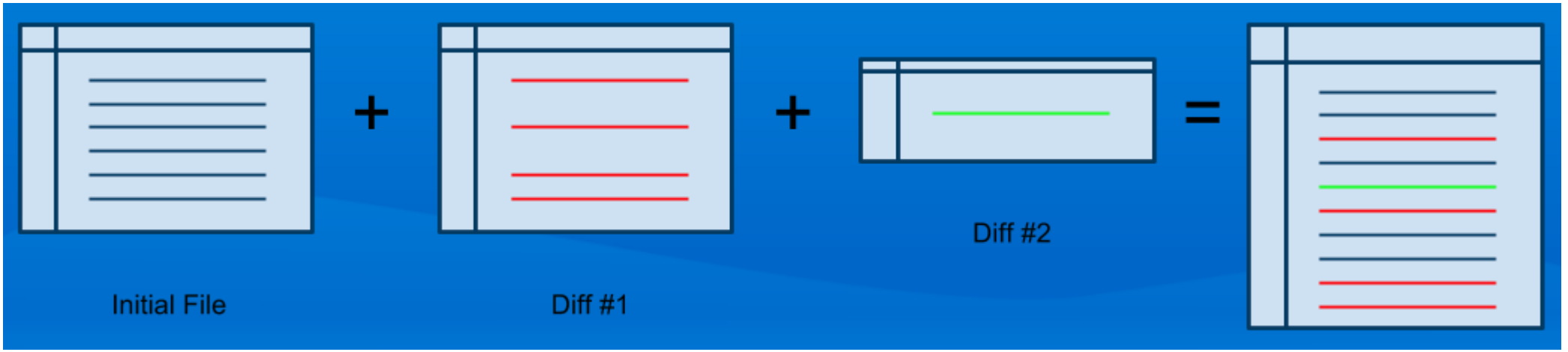
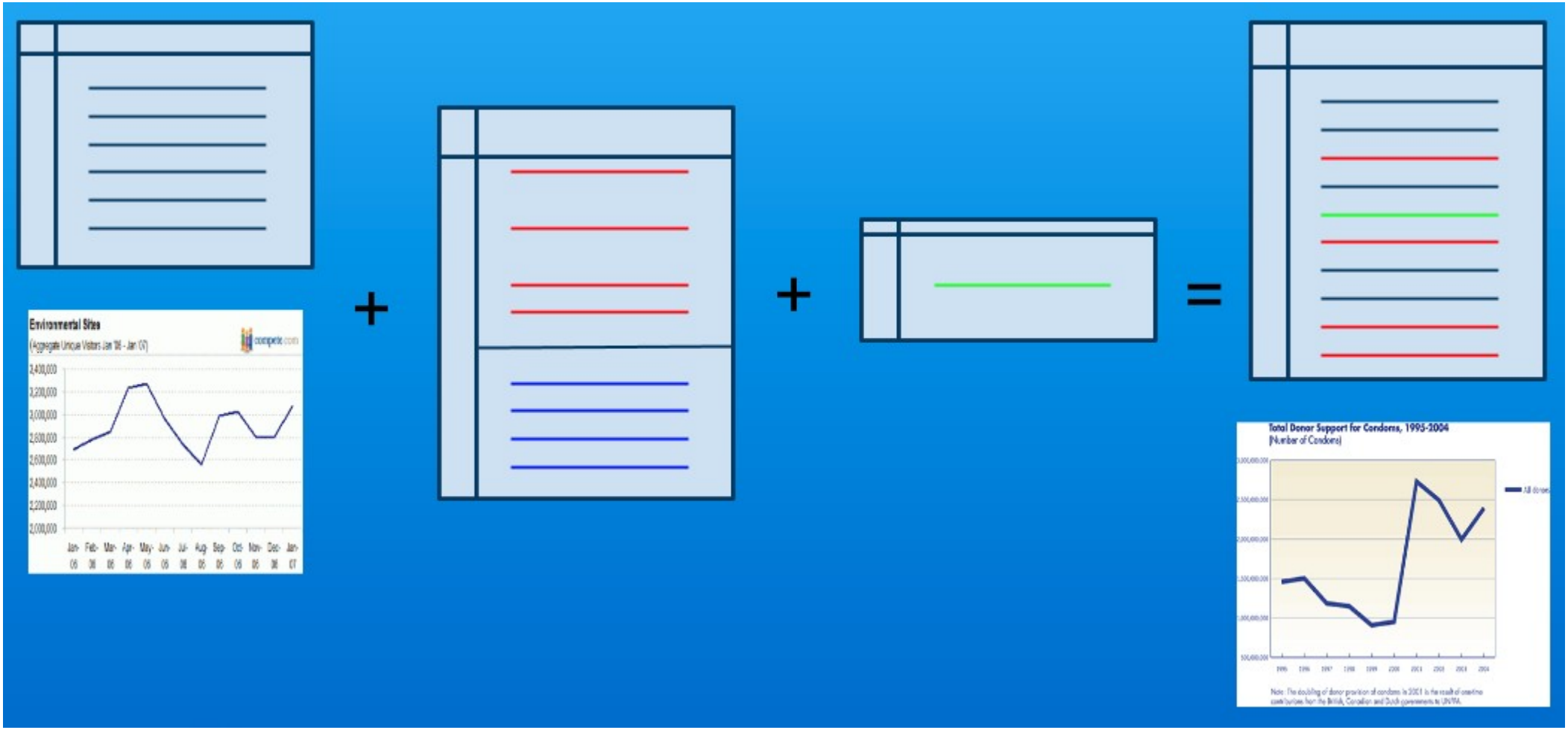
Key Concept

- Data Differencing
- Given a file, and a complete set of diffs between 1 state and another, any intermediate state for which there is a diff can be reconstructed.

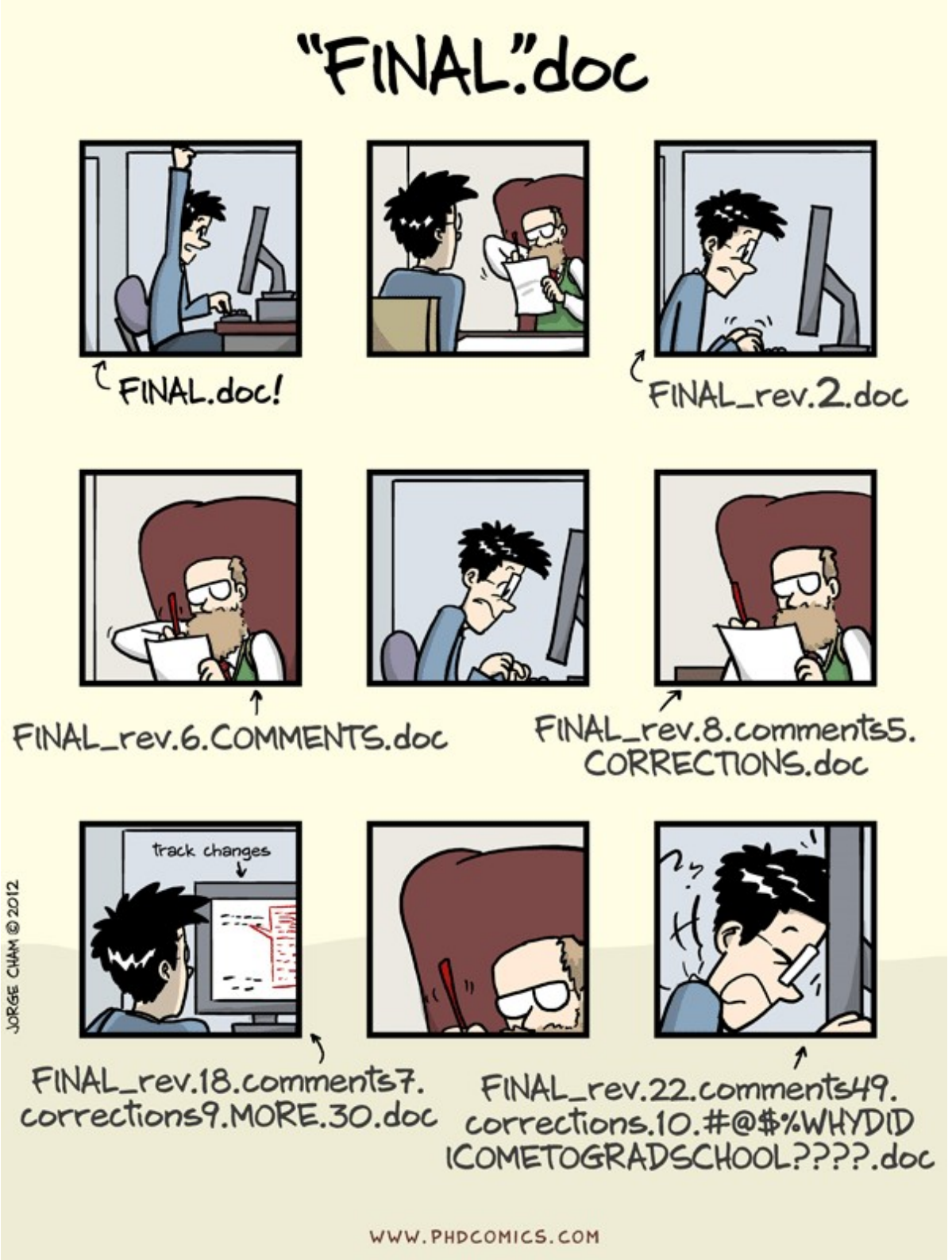



Environmental Sites
(Aggregate Unique Visitors Jan '06 - Jan '07)
compete.com
2,400,000
2,200,000
2,000,000
2,800,000
2,600,000
2,400,000
2,200,000
2,000,000
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Total Donor Support for Condoms, 1995-2004
(Number of Condoms)
All donors
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004

Version Control Tools

https://en.wikipedia.org/wiki/Revision_control

Ad hoc


"FINAL".doc
FINAL.doc!
FINAL_rev.2.doc
FINAL_rev.6.COMMENTS.doc
FINAL_rev.8.comments5.
CORRECTIONS.doc
track changes
FINAL_rev.18.comments7.
corrections9.MORE.30.doc
FINAL_rev.22.comments49.
corrections.10.#@$%WHYDID
ICOMETOGRADSCHOOL????.doc
JORGE CHAM © 2012
WWW.PHDCOMICS.COM

Version Control Tools

- Ad hoc

thesis2.tex, JFM-21mar.doc

pooh.txt, ...

- Mists of time...

SCCS

RCS

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Visual SourceSafe

Perforce

BitKeeper

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- Old School (Client/Server)

CVS (Concurrent Versions System)

SVN (Subversion)

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- Distributed & Open Source

GNU arch

Darcs

Monotone

Bazaar

Git

Mercurial