A 5 minute introduction to Dulwich

Jelmer Vernooij
http://samba.org/~jelmer

25 October 2010
Project goals

- Complete, independent, Python library that supports the Git file formats and network protocols
  - compatible with C git
  - independent of C git
- “Pure Python”
  - C implementations are sometimes available, but optional (for improved performance)
- NOT a UI
  - although it would be great to see a UI based on Dulwich
“Git as first-class citizen in the Bazaar world”

- started by Rob Collins in 2005
- originally invoked ”git” manually
- later changed to use stgit
- Jelmer Vernooij took over maintainance in 2008
  - switched to python-git based bindings, renamed to dulwich

https://launchpad.net/bzr-git
Background

- “python-git” project by James Westby in 2007, as a one-weekend hack
- Renamed to “Dulwich” to avoid confusion with GitPython
  - Youtube is a great place to stumble upon great project names
    - [http://www.youtube.com/watch?v=Hty04tmpPdk](http://www.youtube.com/watch?v=Hty04tmpPdk)
- Originally developed in lockstep with bzr-git
Functionality

- Basic objects read/write (Tree, Blob, Tag, Commit)
- Pack (read/write)
- Smart server client / server
- HTTP Smart server
- Index (read/write)
- Patch parsing/generation
- Fastimport/fastexport
Dulwich users

- hg-git
- bzr-git
- rabbitvcs
- anyvc
- ...

A 5 minute introduction to Dulwich

Jelmer Vernooij

http://samba.org/~jelmer
Other Python Git implementations

- git-python
  - invokes cgit
  - recently started implementing more natively
- PyGit
  - pinin’ for the fjords?
Future

- completer implementation
  - history walking
  - notes
  - rename detection
- improved performance
  - pack delta’s
  - large packs
- optional libgit support (?)
Resources

- http://samba.org/~jelmer/dulwich
- Repo: git://git.samba.org/jelmer/dulwich.git
- IRC: #dulwich on Freenode
- Mailing list: dulwich-users@lists.launchpad.net
- Bugs: https://bugs.launchpad.net/dulwich