



FOSSIL

Who Is This Guy?







CHARLOTTE™



wrote



FOSSIL



FOSSIL

Hg
mercurial



Bazaar



FOSSIL




?



Fossil Summary

- Distributed Version Control System (DVCS)
 - Plus wiki, tickets, reports, blob, etc...
- Created to manage SQLite development

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Fossil uses TCL and TCL-like languages

Fossil Summary

- Distributed Version Control System (DVCS)
 - Plus wiki, tickets, reports, blob, etc...
- Created to manage SQLite development
 -  SQLite is a TCL extension that escaped
 -  Fossil uses TCL and TCL-like languages
 -  Tcl/Tk switched to Fossil on 2011-02-28

Agenda

- Fossil features
- Fossil philosophy
- How to get started using Fossil
- Hints for getting the most benefit from using Fossil

Fossil Features

- DVCS
- Wiki
- Tickets
- Blog
- Built-in Web Interface
- Cross-platform
- Self-contained
- Single-file repository
- Highly reliable
- Easy to use
- Timeline
- BSD license

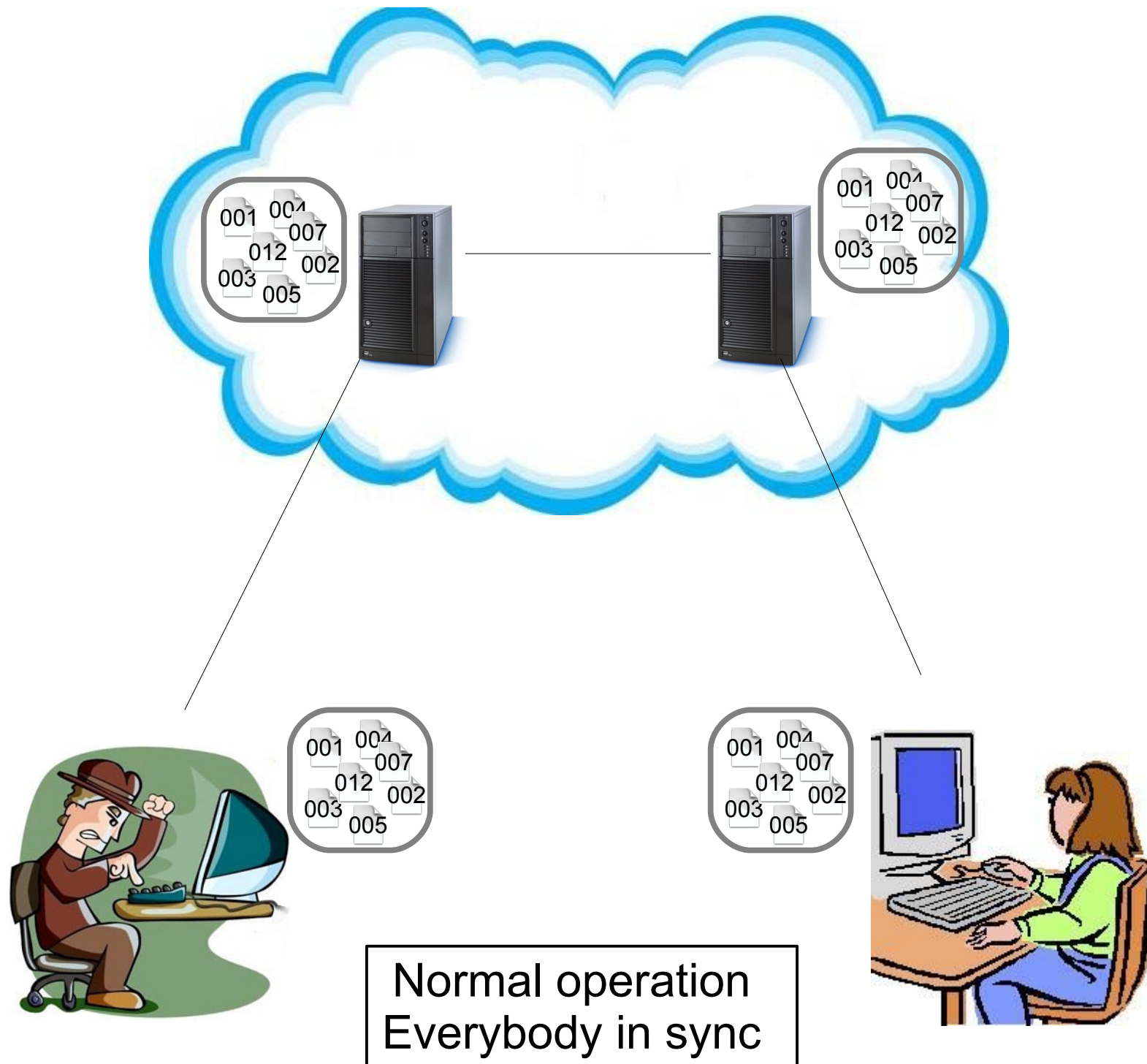
Concurrent vs. Distributed

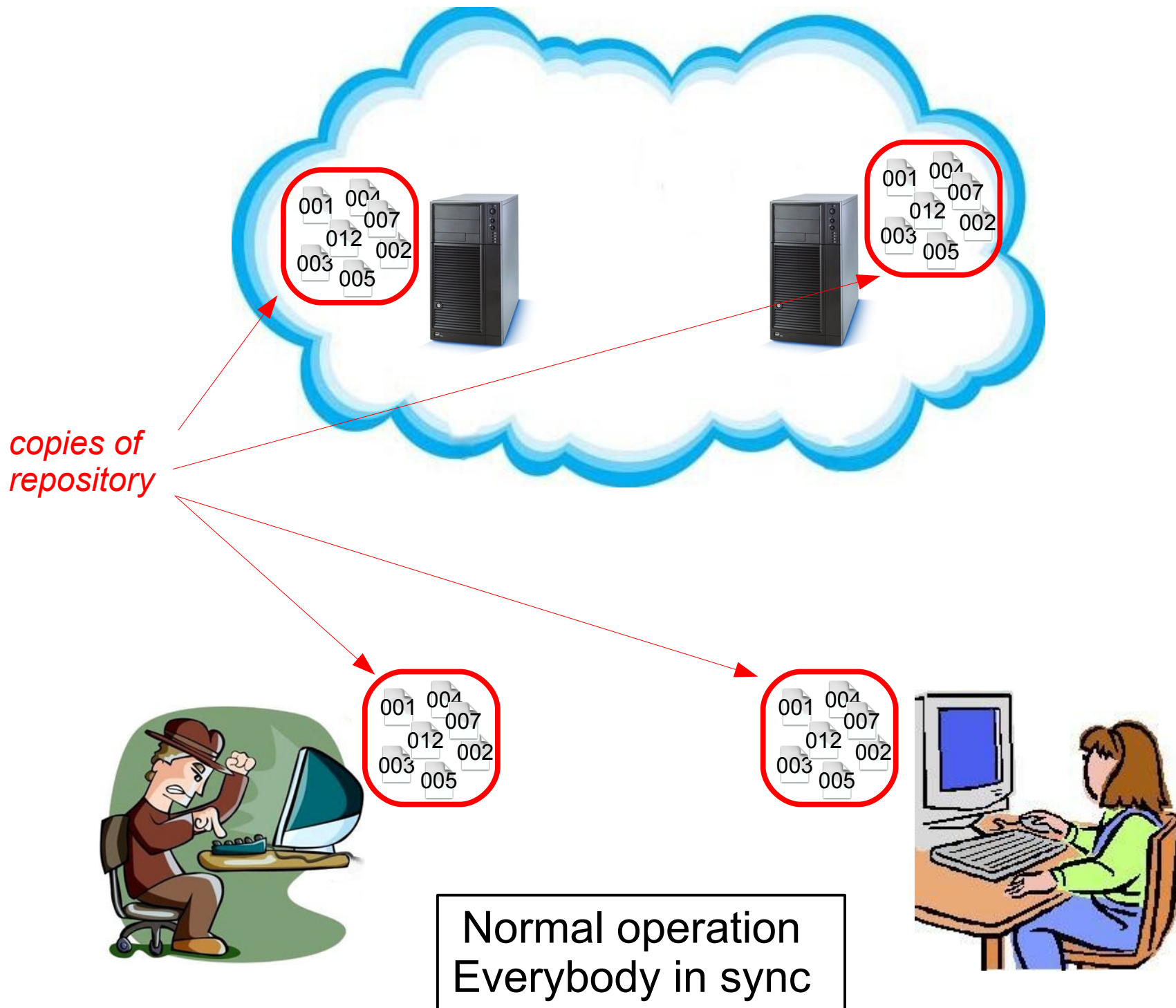


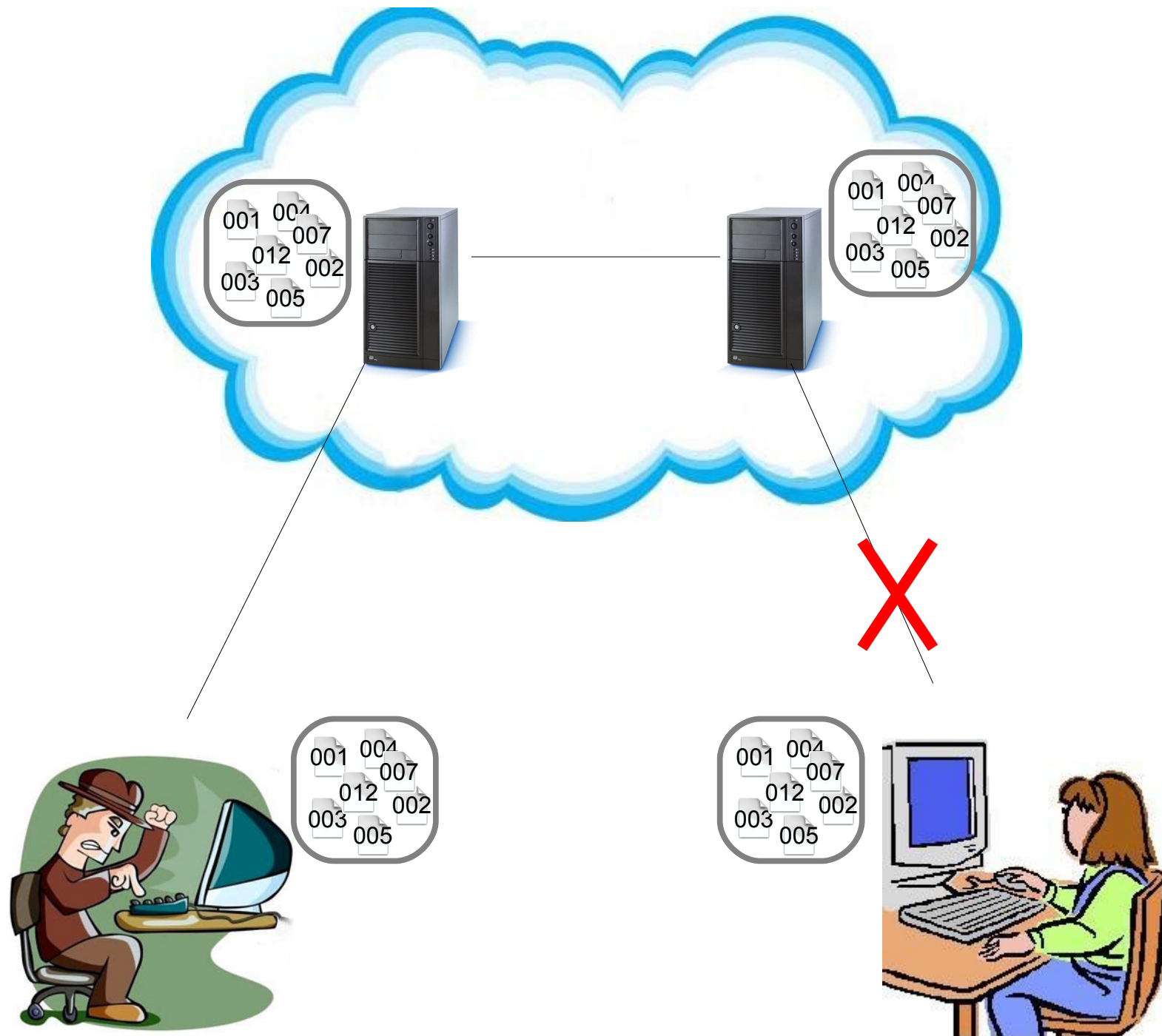
- One central repo
- Need backups
- Slow check-out, check-in & diff
- Works only on-network
- cvs, svn



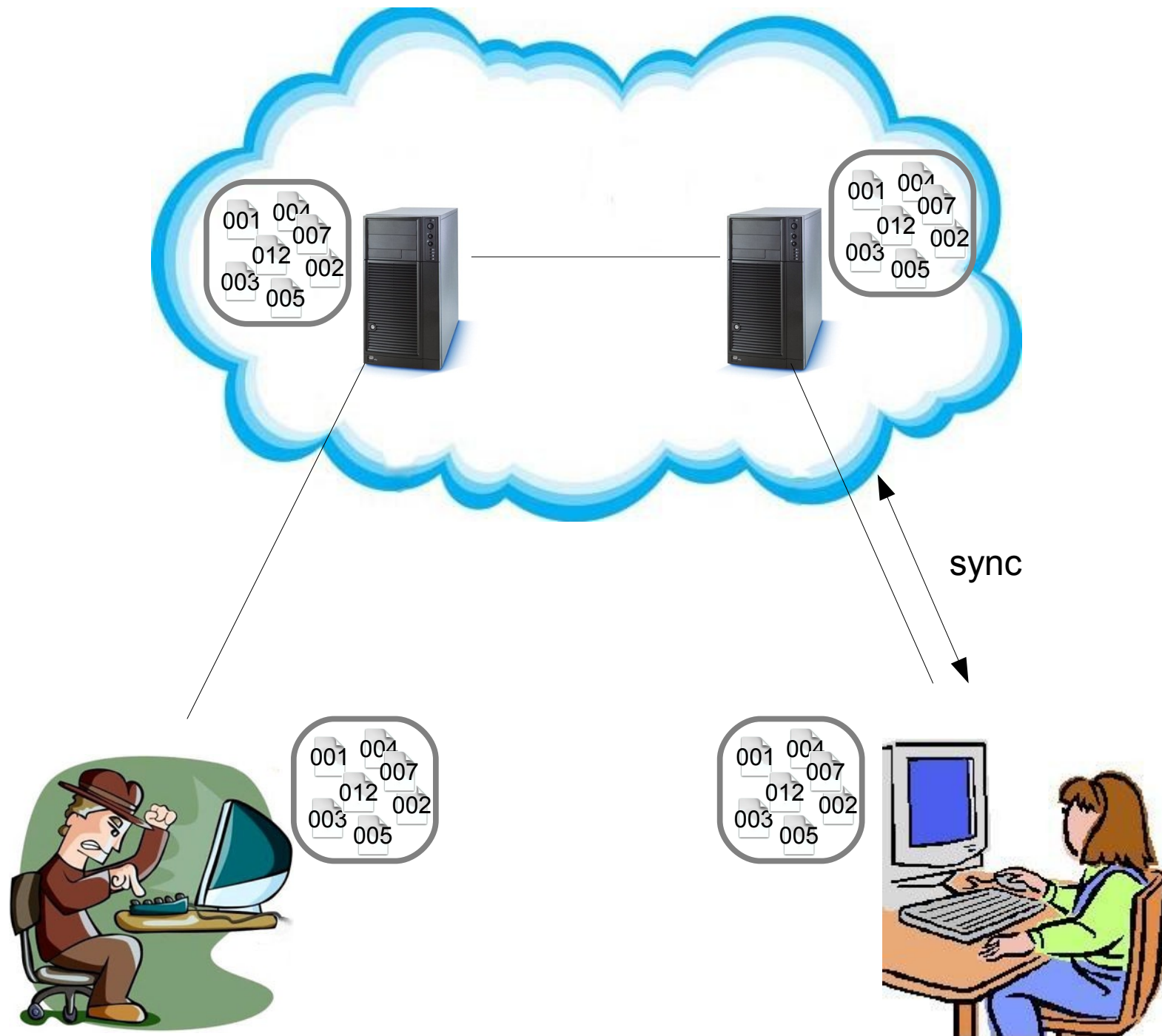
- Each user has a copy
- Automatic backup
- Fast check-out, check-in & diff
- Disconnected operation
- git, hg, bzip, mercurial



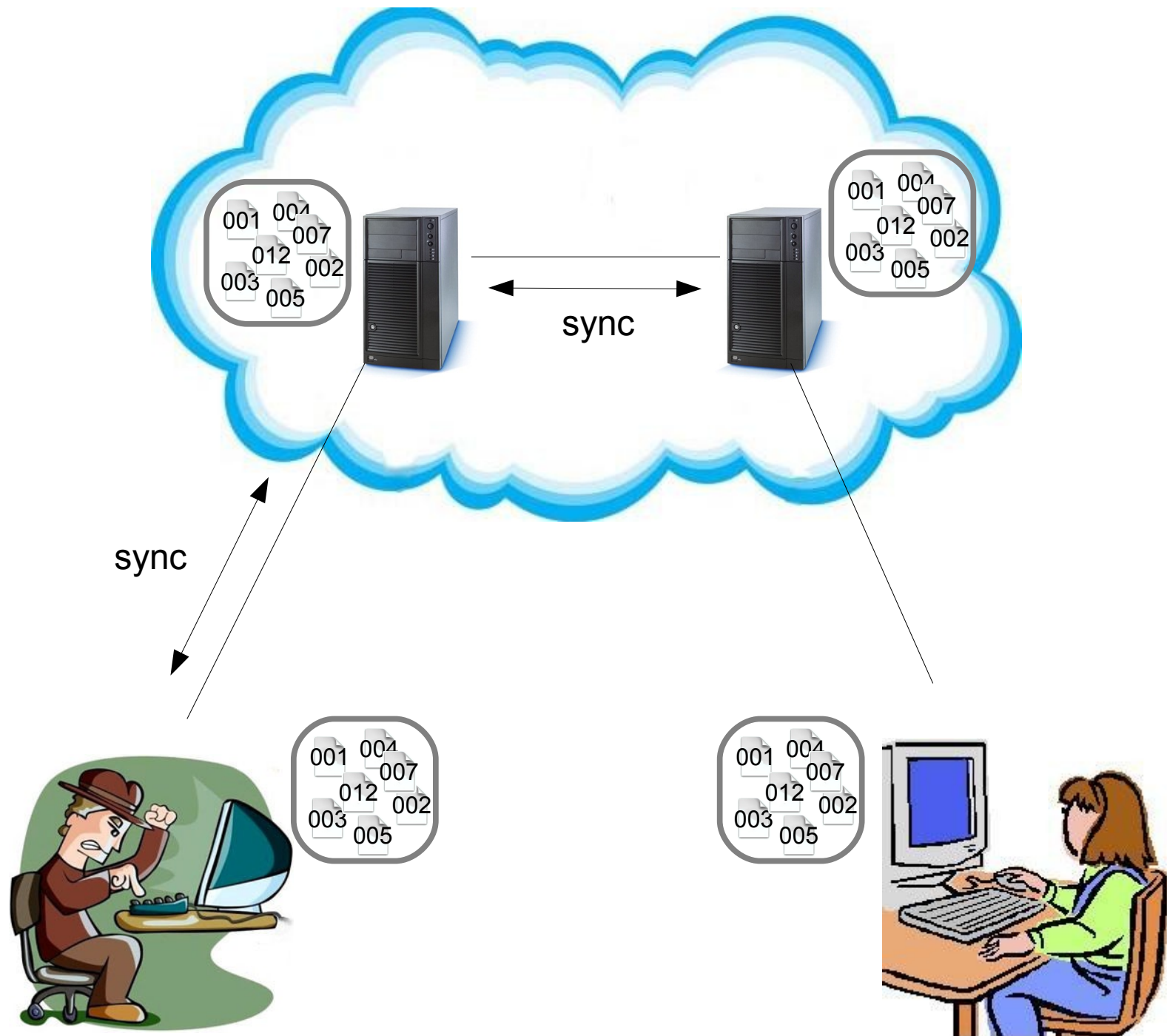




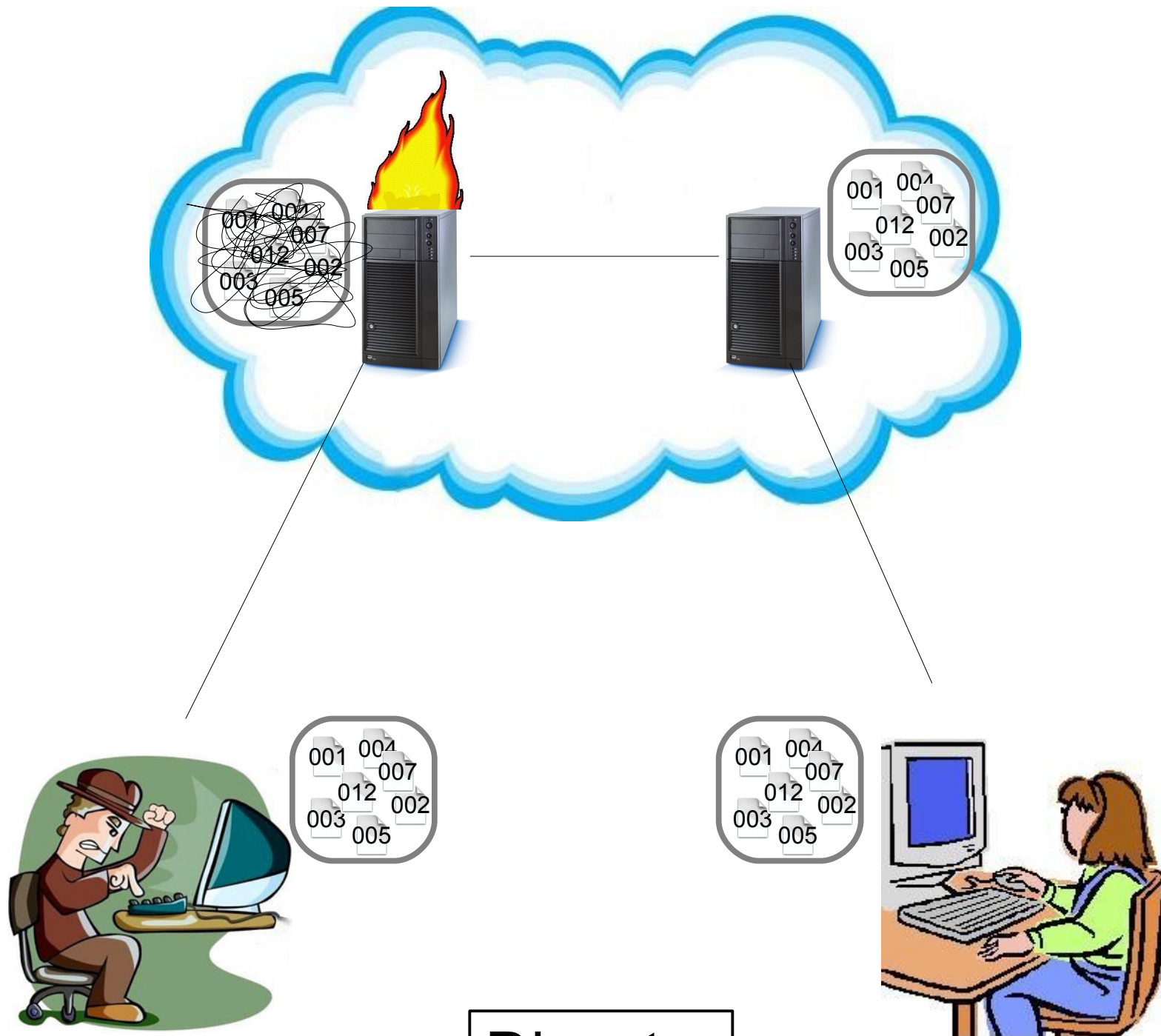
Disconnected operation



Resynchronization



Resynchronization



Disaster

<http://www.firebirdsql.org/>

18-Dec-2009 Catastrophic Events at Our Internet Host

Thanks to the progressive death of the NAS server from which all our Internet facilities are served, we lost everything - Tracker, website, Wiki and news mirrors - piece-by-piece over the past days.

By gargantuan effort, Sean Leyne and his colleagues at Broadview have been reconstructing our infrastructure from scratch. The main website is up (obviously!). Others are more challenging, requiring radical reconstruction using new versions of underlying software, and will take time.

For now, if you find broken links (other than those to our other servers) then please feel free to inform us via a message to the firebird-general list (joining instructions [HERE](#)).



Jun 1, 2009 23:37 UTC (Mon) by jake

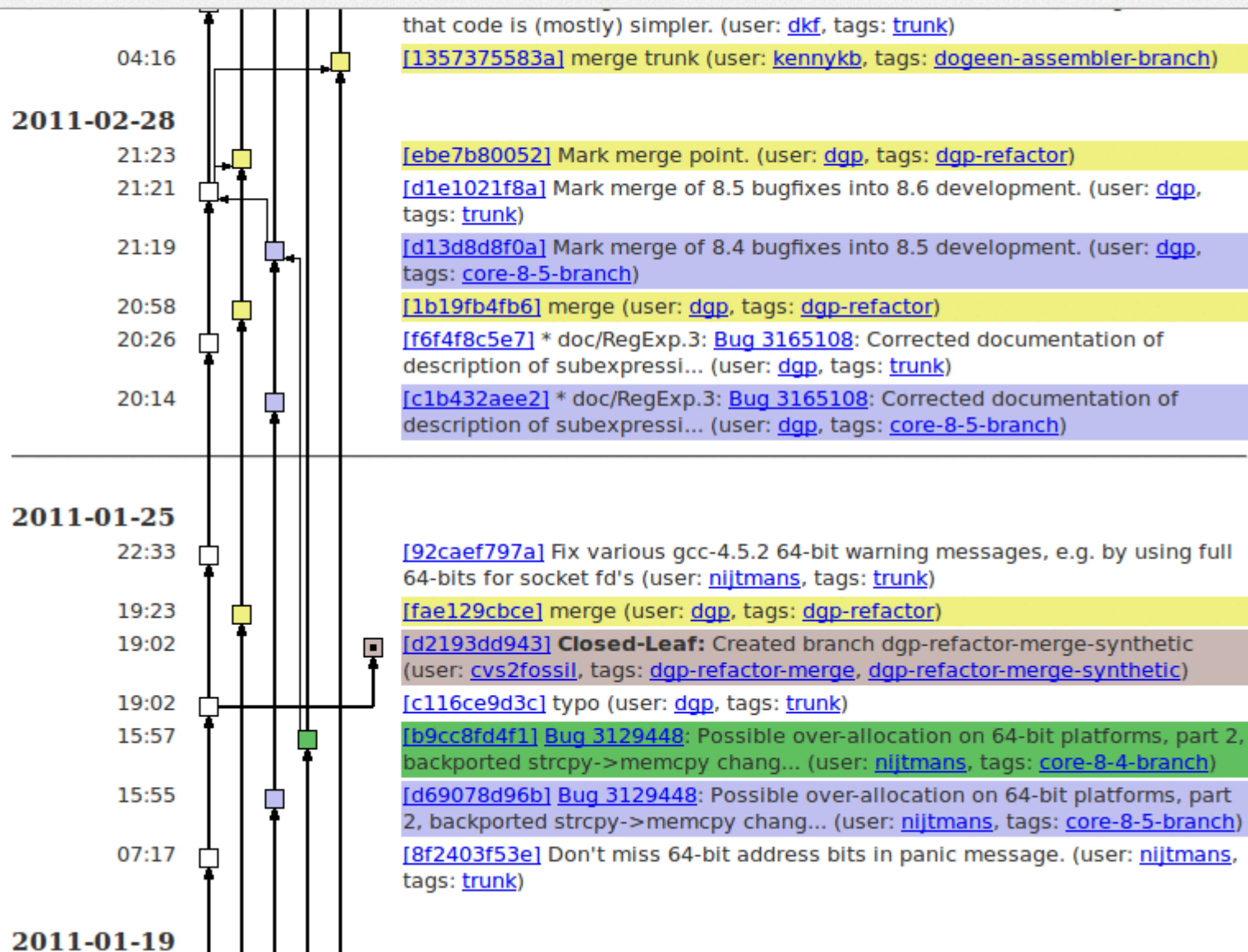
The server that hosts GNU and other projects, savannah.gnu.org had a catastrophic failure over the weekend. A message in the savannah-users mailing list describes the problems with a RAID array which eventually led to filesystem corruption. This took out the source code repositories for the projects hosted there. "The last backup was performed while RAID was buggy, and lots of files were reported missing, in particular for CVS/SVN/Git/Hg. Hence the last backup is incomplete. [...] And, our last full backup from tape is from end of April. Normally tape backups are more recent, but there were independent backup issues. We've not discussed since in detail as we're focusing on recovering the data asap. "

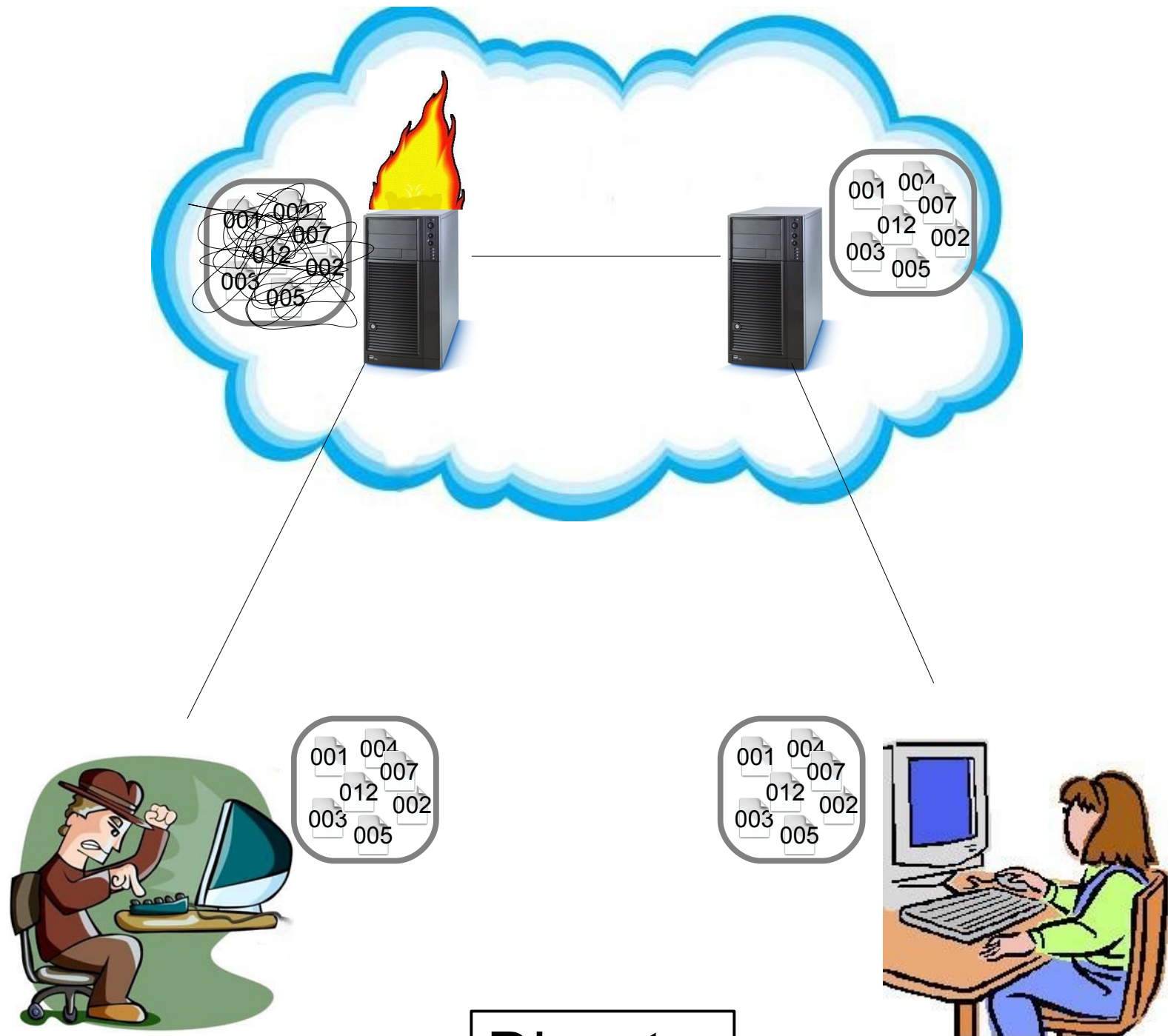


Jan 30, 2011 by jake

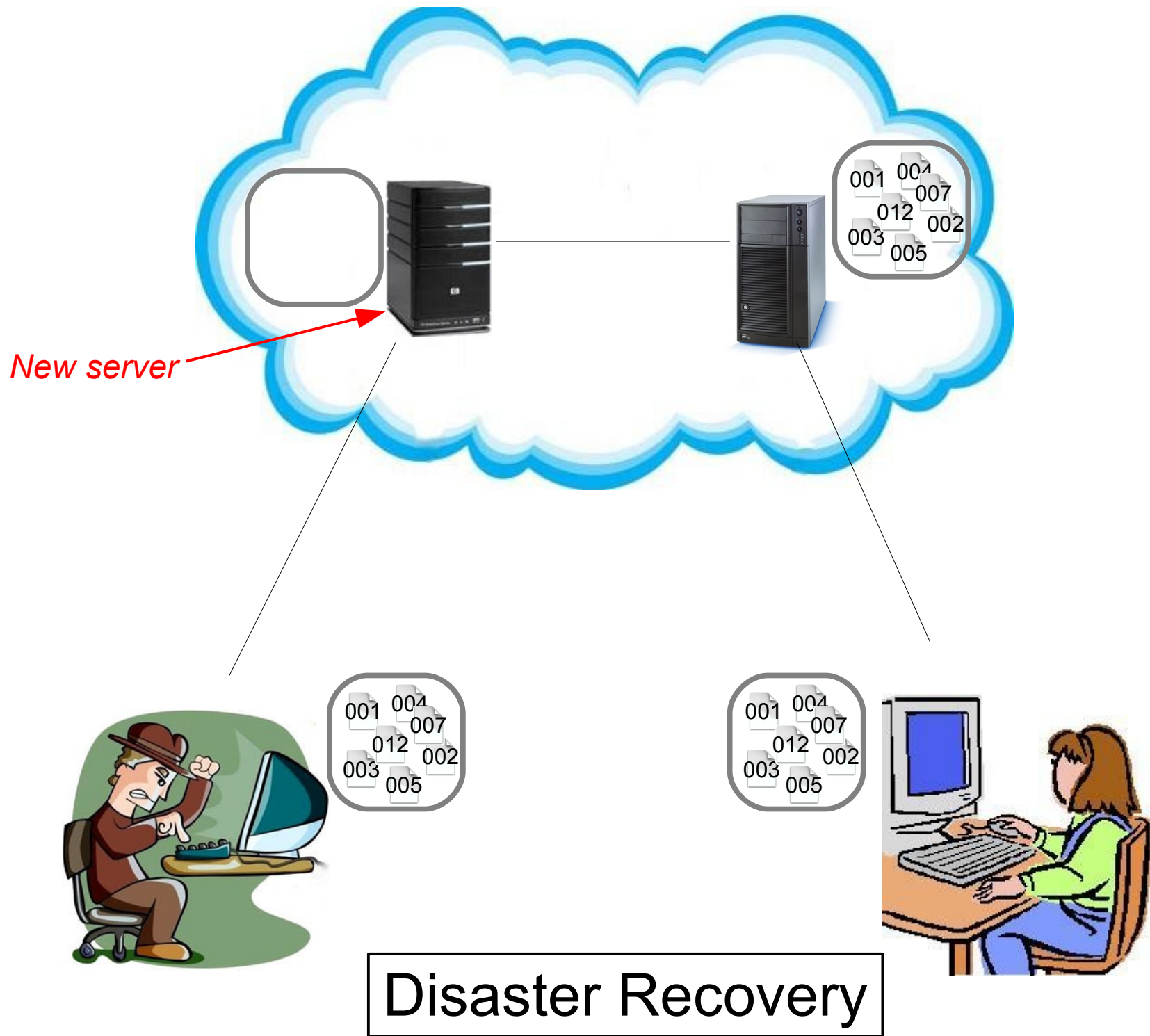
Sourceforge.net briefly reported an attack on its infrastructure on Thursday January 27 that resulted in some services (CVS, interactive ssh shells, and others) being suspended....

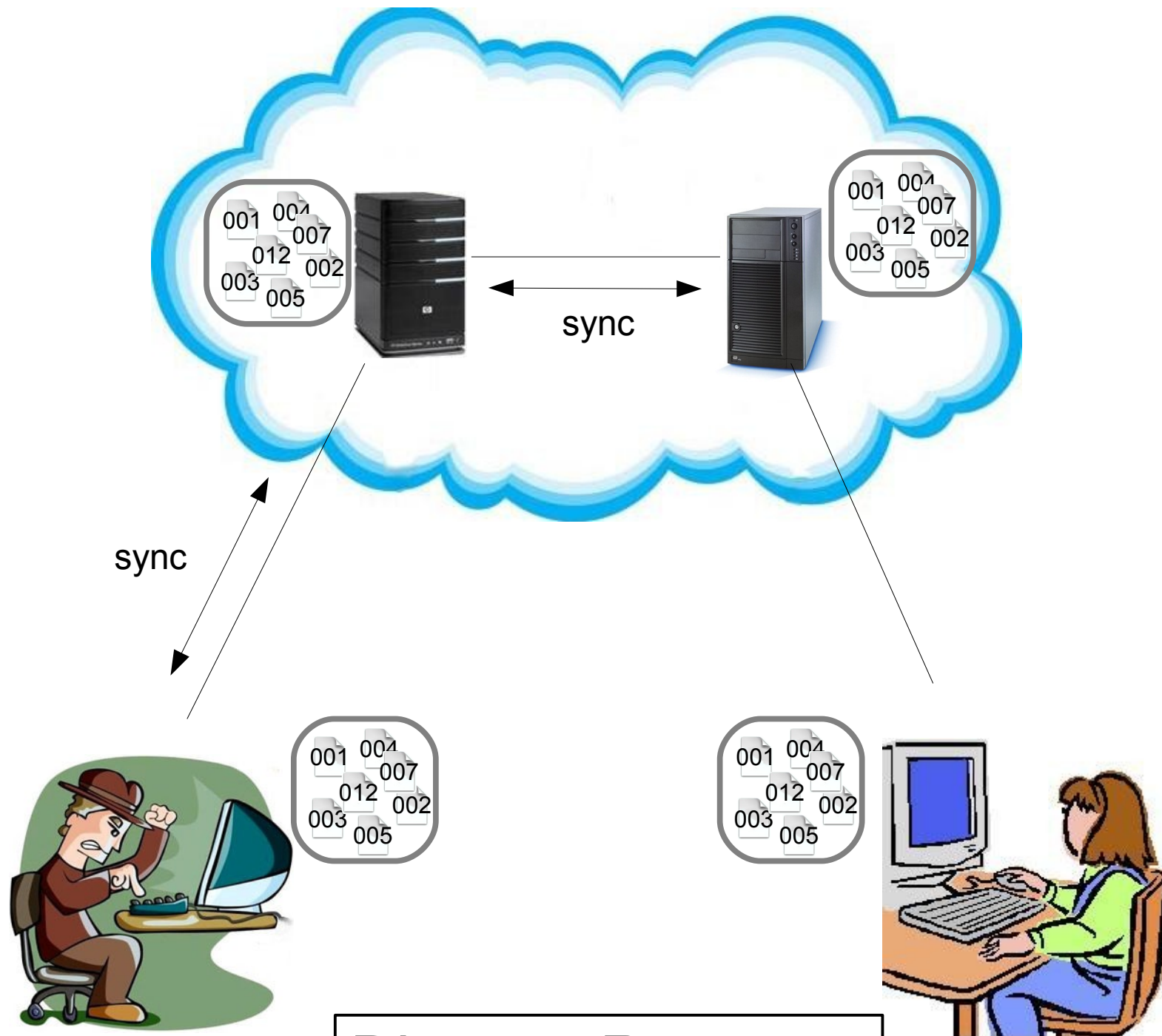
“The Great Sourceforge Outage”





Disaster





Disaster Recovery

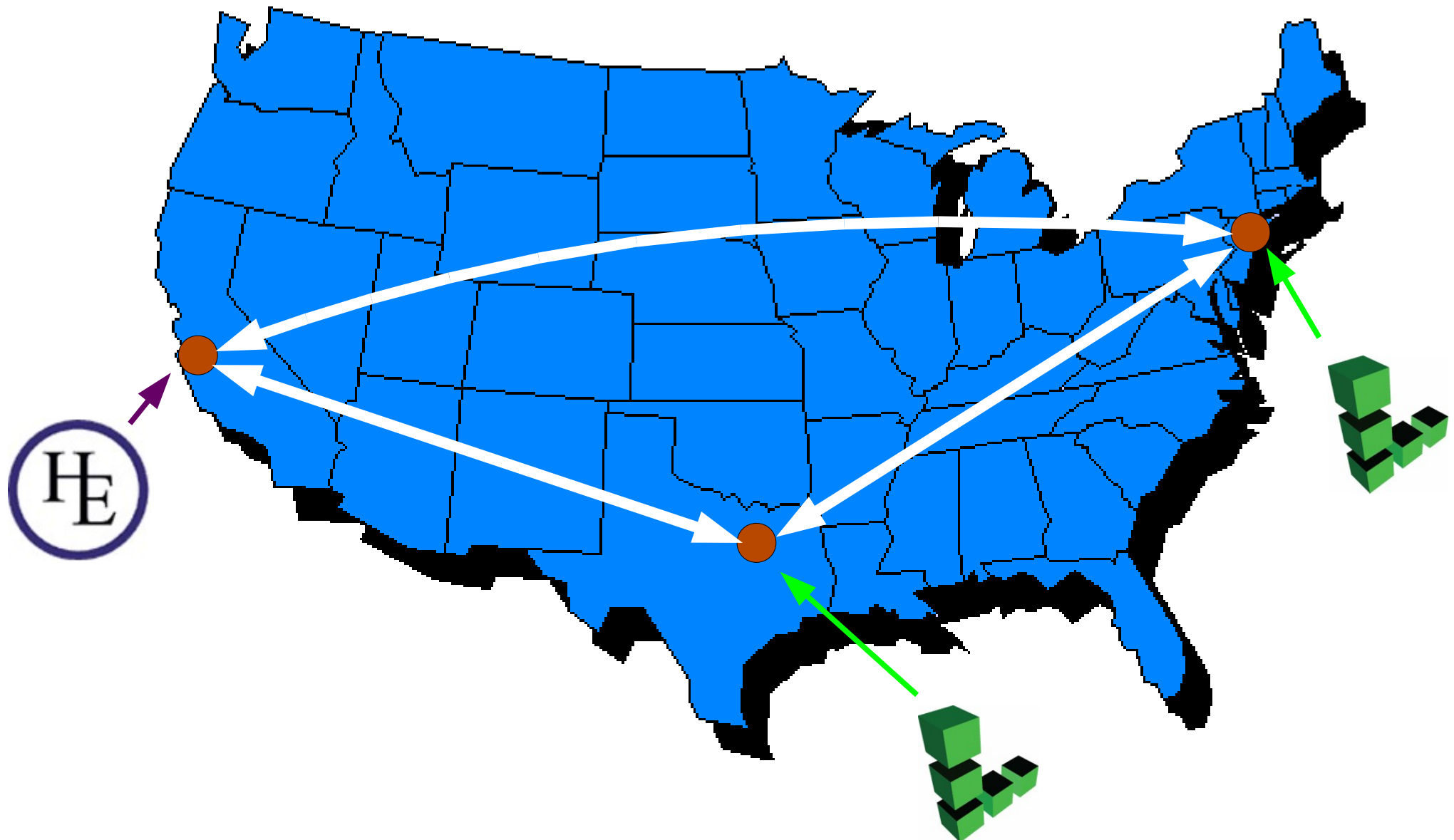
Concurrent vs. Distributed



- One central repo
- Need backups
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- Each user has a copy
- Automatic backup ✓
- Fast check-out, check-in & diff
- Disconnected operation ✓
- git, hg, bzip, mercurial

Disaster Preparedness



Git vs. Fossil



- Distributed
- Lots of little tools
- Lots of little files
- Developer branches
- GPL
- Separate web tools
- Complicated
- Undocumented file format
- Versioning only

- Disconnected
- One executable
- Single file repository
- Feature branches
- BSD
- Built-in web interface
- Simple
- Enduring file format
- VCS, tickets, wiki, & blog

Git vs. Fossil



- 133777 SLOC
- 2434 source files
- 159 separate binaries
 - 63 w/o links
- Lots of dependencies

- 139512 SLOC
 - 65158 w/o SQLite
- 367 source files
- 1 self-contained binary
- No dependences

Rebasing

“In the fossil community - and hence in fossil itself - development history is pretty much sacrosanct. The very name "fossil" was chosen to reflect the unchanging nature of things in that history.

In git (or rather, the git community), the development history is part of the published aspect of the project, so it provides tools for rearranging that history so you can present what you "should" have done rather than what you actually did.”

Mike Meyer - mwb@mired.org
Fossil mailing list
2011-10-04

Quotes About Git

Git is not a Prius. Git is a Model T. Its plumbing and wiring sticks out all over the place. You have to be a mechanic to operate it successfully or you'll be stuck on the side of the road when it breaks down. And it **will** break down.

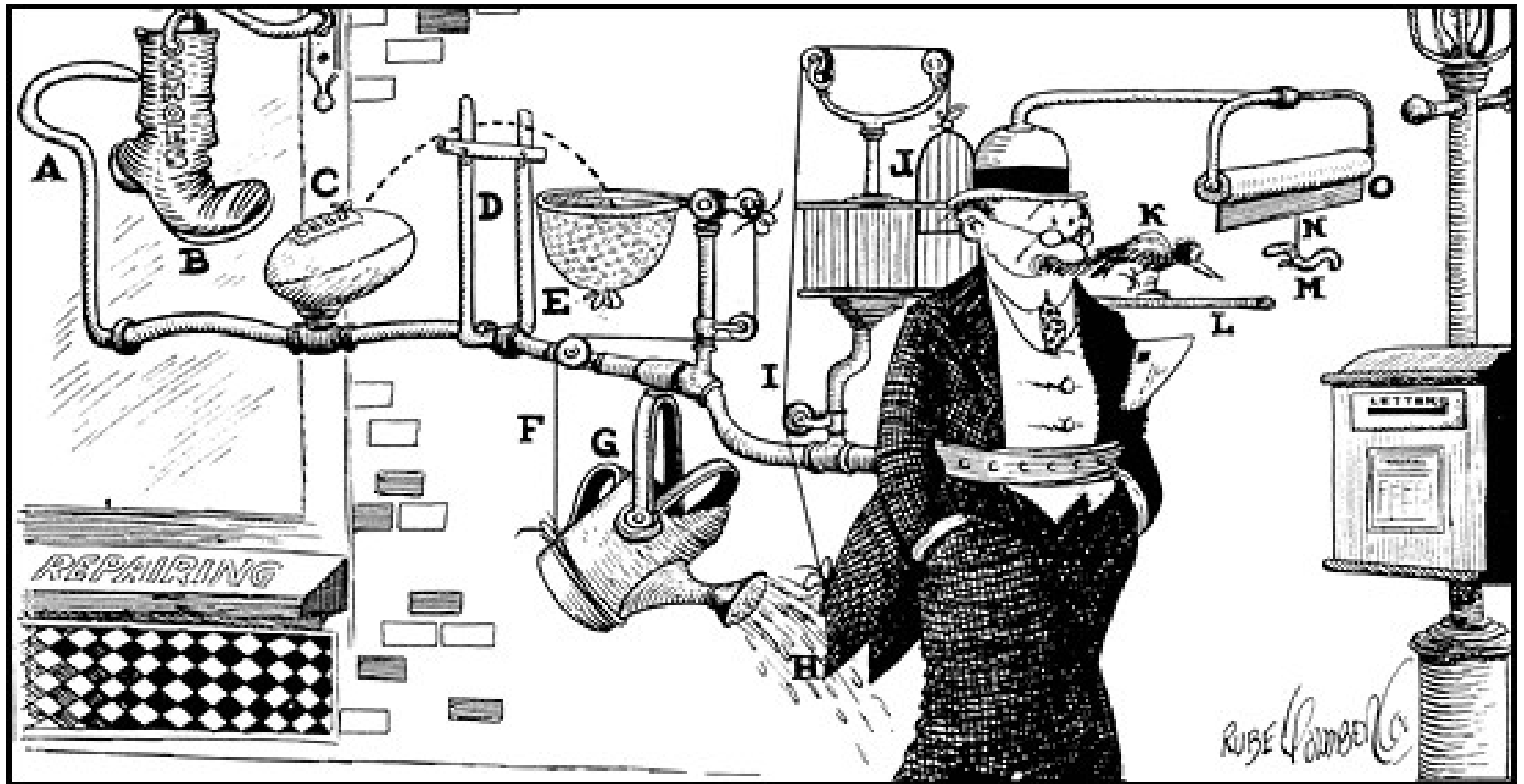
Nick Frina

Git Is Simpler Than You Think

<http://nfarina.com/post/9868516270/git-is-simpler>

2011-09-07

“Lots of little tools working together”



“It just works”



Quotes About Git

Git approaches the useability of iptables, which is to say, utterly unusable unless you have the manpage tattooed on you arm.

by mml

<http://news.ycombinator.com/item?id=1433387>

Quotes About Git

It's simplest to think of the state of your [git] repository as a point in a high-dimensional "code-space", in which branches are represented as n-dimensional membranes, mapping the spatial loci of successive commits onto the projected manifold of each cloned repository.

<http://tartley.com/?p=1267>

Quotes About Fossil

Fossil mesmerizes me with simplicity especially after I struggled to get a bug-tracking system to work with mercurial.

rawjeev at

<http://stackoverflow.com/questions/156322/what-do-people-think-of-the-fossil-dvcs>

Quotes About Fossil

Fossil is awesome!!! I have never seen an app like that before, such simplicity and flexibility!!!

zengr at

<http://stackoverflow.com/questions/138621/best-version-control-for-lone-developer>

Quotes About Fossil

Just want to say thanks for fossil making my life easier.... Also [for] not having a misanthropic command line interface.

Joshua Paine at

<http://www.mail-archive.com/fossil-users@lists.fossil-scm.org/msg02736.html>

Quotes About Fossil

We use it at a large university to manage code that small teams write. The runs everywhere, ease of installation and portability is something that seems to be a good fit with the environment we have (highly distributed, sometimes very restrictive firewalls, OSX/Win/Linux). We are happy with it and teaching a Msc/Phd student (read complete novice) fossil has just been a smoother ride than Git was.

viablepanic at

http://www.reddit.com/r/programming/comments/bxcto/why_not_fossil_scm/



Using Fossil

Installing Fossil

- Get the self-contained fossil binary
 - Download a precompiled binary
 - Download and build sources
 - `configure; make`
 - `cd win; nmake /f makefile.msc`
- Put the self-contained binary on your \$PATH

Man Pages

- fossil help
- fossil help command
- fossil command --help

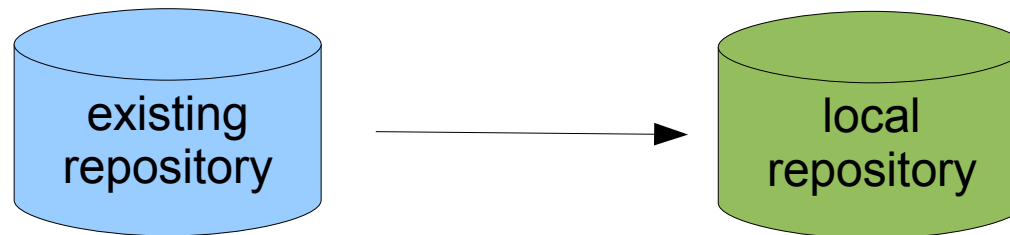
Creating A Fossil Repo

```
fossil init filename
```



Creating A Fossil Repo

`fossil clone url filename`



```
fossil clone http://www.fossil-scm.org/fossil x.fossil
```

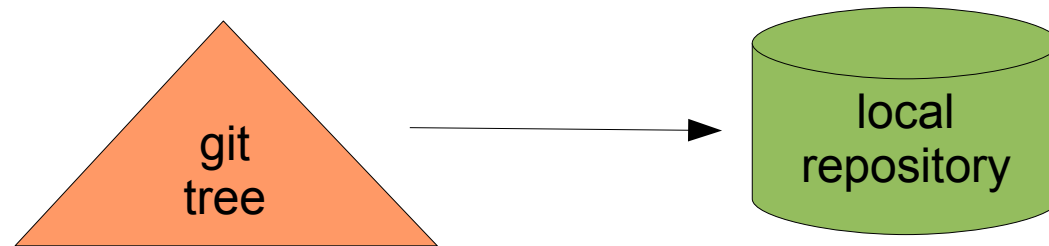
```
fossil clone http://core.tcl.tk/tcl tcl.fossil
```

```
fossil clone file:../y.fossil x.fossil
```

```
fossil clone ssh://drh@iMac/Users/drh/y.fossil x.fossil
```

Creating A Fossil Repo

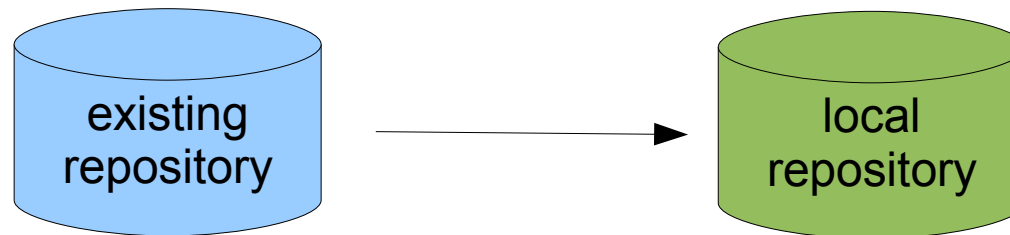
```
fossil import --git filename
```



```
git fast-export --all | fossil import --git x.fossil
```


Creating A Fossil Repo

`scp` *remote* *filename*



Maybe do “fossil scrub” first....

Creating A Fossil Repo

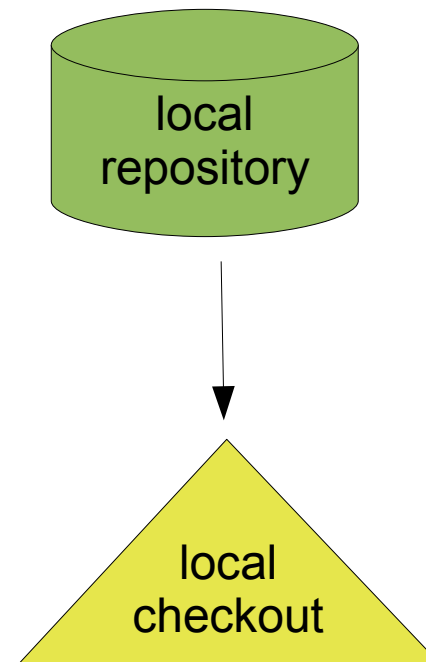
```
fossil clone http://core.tcl.tk/tcl tcl.fossil
```

mirror1.tcl.tk

tk
tdbc
itk
tclws
itcl
tcloo
thread
tclconfig

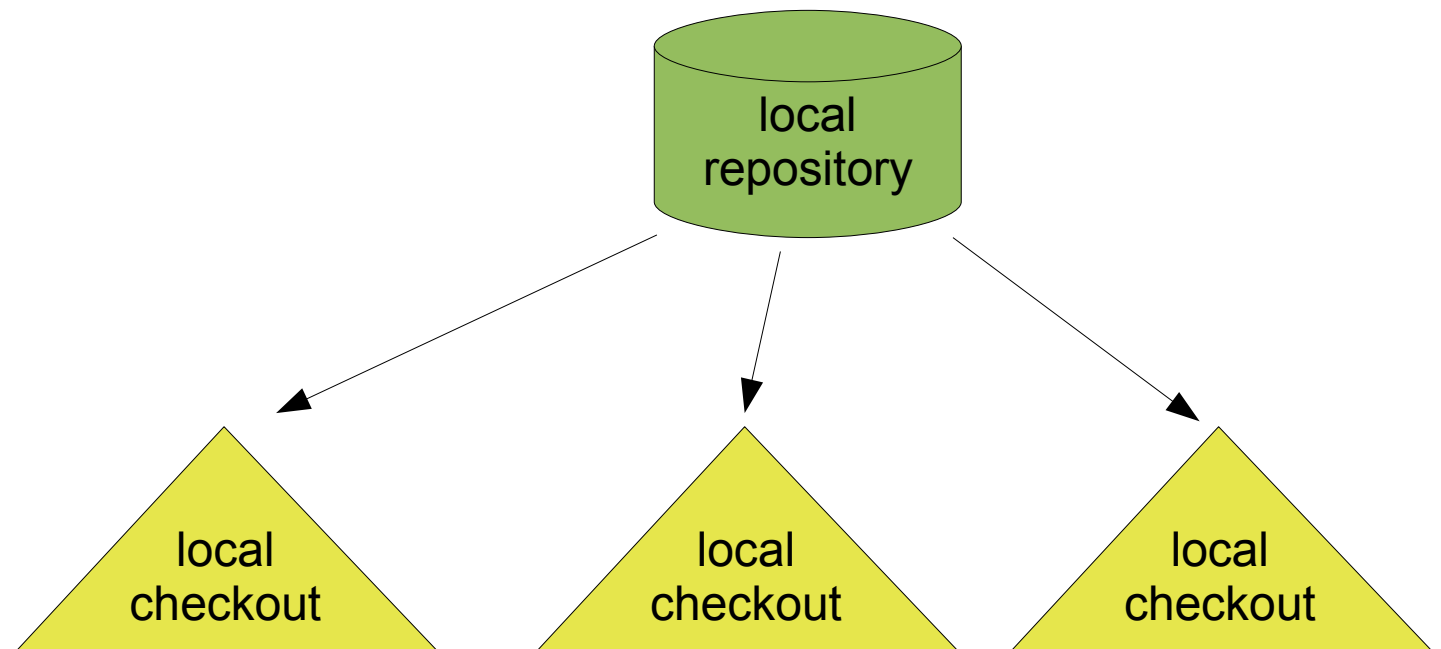
Creating A Local Checkout

```
cd working-directory  
fossil open filename
```



Creating A Local Checkout

```
cd working-directory  
fossil open filename
```



Changing Versions

```
fossil update [version]
```

Concurrent vs. Distributed




- 1.1
- 1.2
- 1.3



- 72b84d066a4eac90a77142c3ea66ef3d21a1104e
- 934cda2987c331b57a195ed45e9a91794896672
- 8166f33885b86029bb8a0fbaf70606a0d2d5ec2e

Changing Versions

`fossil update [version]`

- 
- unique prefix of SHA1 hash
 - branch name
 - tag
 - date/time
 - branch-name : date/time
 - next
 - previous

Changing Versions

`fossil update [version]`



trunk
core-8-5-branch
ferrieux-nacl
mig-no280
tip-389-impl
...

Changing Versions

`fossil update [version]`



`trunk:2011-02-29
2011-03-01t15:08
...`

Changing Versions

`fossil update [version]`



`core-8-6-b2`

`tclpro-1-4-0`

`...`

Changing Versions

`fossil update [version]`



next
previous

When you make a mistake...

fossil undo

Works for: update, merge, revert,
and stash

Not for: commit, clean, scrub, or
sync

fossil revert

Restores working directory to
the state of the check-in

Viewing History

```
fossil ui [repo-filename]
```

- Automatically finds unused TCP port
- Automatically starts web browser
- Listens on 127.0.0.1 only
- Automatic administrator login



Tcl Source Code

Timeline

Logged In as drh

[Home](#) [Timeline](#) [Files](#) [Branches](#) [Tags](#) [Tickets](#) [Wiki](#) [Admin](#) [Logout](#)

200 Entries

Checkins Only

Events Only

Older

Show Files

Tags Only

Tickets Only

Wiki Only

20 most recent timeline items

2011-10-17

17:38

[\[bde0ffa6e5\]](#) Leaf: merge trunk (user: [dgp](#), tags: [remove-pathappend-intrep](#))

2011-10-15

16:48

[\[ae57dfb77e\]](#) Leaf: And the failing test file too... (user: [dkf](#), tags: [bug-3418547](#))

15:57

[\[5ba2c5ac72\]](#) Commit of patch relating to interp resolvers (user: [dkf](#), tags: [bug-3418547](#))

10:28

[\[95db49a59b\]](#) Leaf: Update to Olson's tzdata2011i (user: [venkat](#), tags: [trunk](#))

10:21

[\[d11be2712d\]](#) Leaf: Update to Olson's tzdata2011i (user: [venkat](#), tags: [core-8-5-branch](#))

2011-10-13

21:10

[\[e7017fcc72\]](#) Leaf: merge trunk (user: [dkf](#), tags: [dkf-utf16-branch](#))

21:09

[\[96352b53af\]](#) Leaf: merge trunk (user: [dkf](#), tags: [dkf-notifier-poll](#))

21:04

[\[a6843c662e\]](#) Leaf: Ugh; Tcl_DStringInit in wrong place... (user: [dkf](#), tags: [bug-1224888](#))

19:18

[\[610f5b391c\]](#) merge trunk (user: [dgp](#), tags: [remove-pathappend-intrep](#))

18:19

[\[f0486f9bbd\]](#) Correct botch. (user: [dgp](#), tags: [trunk](#))

18:10

[\[d287fac6bb\]](#) 3423059 silence compiler warning (user: [dgp](#), tags: [trunk](#))

18:02

[\[d6b80e8cf1\]](#) 3423069 silence compiler warnings. (user: [dgp](#), tags: [trunk](#))

12:34

[\[fbc6fd24c0\]](#) Getting better; now possibly with autoconf magic! Comments too. (user: [dkf](#), tags: [bug-1224888](#))

12:16

[\[9856078e30\]](#) A little more resilience. (user: [dkf](#), tags: [bug-1224888](#))

Making Changes

fossil add files...

fossil rm files...

fossil mv files...

fossil addremove files...

If a directory name is used, the operation applies to all content of that directory.

Status Of Working Check-out

`fossil status`

`fossil changes`

`fossil diff`

`fossil gdiff`

`fossil extra`

`fossil ls`

Checking In Changes

```
fossil commit
```

```
--branch branch-name  
--bgcolor color  
--private  
--force  
--tag tag-name  
--comment message  
-m message
```

Sharing With Others

```
fossil push [url]
```

```
fossil pull [url]
```

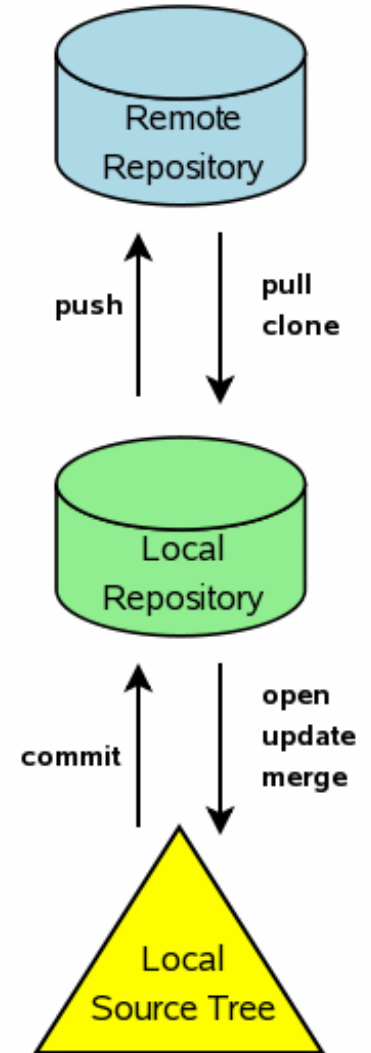
```
fossil sync [url]
```

Set/Query Default Peer

```
fossil remote [url]
```

Autosync mode

- Pull before update
- Pull before commit
- Push after commit
- Enabled by default
- `fossil setting autosync [on/off]`



Branching

```
fossil commit --branch brname
```

Branching Example


```
fossil init demo.fossil
fossil open demo.fossil
# Write some code
fossil addremove
fossil commit
# Add code for a new feature
fossil addremove
fossil commit --branch new-feature
```

FileEditViewHistoryBookmarksToolsHelp

localhost:8080/timeline?n=20&y=ci

Google

Demo Project: Timeline



Demo Project Timeline

Logged In as drh


HomeTimelineFilesBranchesTagsTicketsWikiAdminLogout

200 EntriesAll TypesEvents OnlyShow FilesTags OnlyTickets OnlyWiki Only

3 most recent checkins


2011-10-18

12:56




[\[a5c0c000a1\]](#) **Leaf:** Add more code (user: [drh](#), tags: [new-feature](#))

12:55



[\[d2c808cd9a\]](#) **Leaf:** First code check-in (user: [drh](#), tags: [trunk](#))

12:54



[\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Fossil version 1.19 [a47fde8eed] 2011-10-17 11:37:26

Branching Example

```
fossil init demo.fossil
fossil open demo.fossil
# Write some code
fossil addremove
fossil commit
# Add code for a new feature
fossil addremove
fossil commit --branch new-feature
```

Oop! Forgot the --branch option!


FileEditViewHistoryBookmarksToolsHelp

localhost:8080/timeline

☆Google

Demo Project: Timeline

+



Demo Project Timeline

Logged In as drh


HomeTimelineFilesBranchesTagsTicketsWikiAdminLogout

200 EntriesCheckins OnlyEvents OnlyShow FilesTags OnlyTickets OnlyWiki Only

3 most recent timeline items


2011-10-18

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[\[a5c0c000a1\]](#) **Leaf:** Add more code (user: [drh](#), tags: [trunk](#))

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Fossil version 1.19 [a47fde8eed] 2011-10-17 11:37:26


[File](#) [Edit](#) [View](#) [History](#) [Bookmarks](#) [Tools](#) [Help](#)

←

localhost:8080/timeline

☆ ▾


 Google 



□ Demo Project: Timeline

+

▾



Demo Project Timeline

Logged In as drh

Home

Timeline

Files

Branches

Tags

Tickets

Wiki

Admin

Logout

200 Entries

Checkins Only

Events Only

Show Files

Tags Only

Tickets Only

Wiki Only

3 most recent timeline items

2011-10-18

12:56

□

[\[a5c0c000a1\]](#)

Leaf: Add more code (user: [drh](#), tags: [trunk](#))

12:55

□

[\[d2cf08cd9a\]](#)

First code check-in (user: [drh](#), tags: [trunk](#))

12:54

□





[\[3b7ee4513b\]](#)


initial empty check-in (user: [drh](#), tags: [trunk](#))


Fossil version 1.19 [a47fde8eed] 2011-10-17 11:37:26

Click Here

[File](#) [Edit](#) [View](#) [History](#) [Bookmarks](#) [Tools](#) [Help](#)

☐ Demo Project: Check-in [a5c0c... 



Demo Project Check-in [a5c0c000a1]

Logged In as drh

[Home](#) [Timeline](#) [Files](#) [Branches](#) [Tags](#) [Tickets](#) [Wiki](#) [Admin](#) [Logout](#)

Overview

SHA1 Hash: a5c0c000a136f8028dcb73d6550d80c9327a9031 (Record ID: 5)

Date: [2011-10-18 12:56:07](#)

User: [drh](#)

Comment: Add more code

Received From: drh @ on 2011-10-18 12:56:07

Timelines: [family](#) | [ancestors](#) | [trunk](#)

Other Links: [files](#) | [Tarball](#) | [ZIP archive](#) | [manifest](#) | [edit](#)

Tags And Properties

- **branch=trunk** inherited from [\[3b2ee4513b\]](#)
- **sym-trunk** inherited from [\[3b2ee4513b\]](#)

Changes

Click Here



User: drh

Comment: Add more code

Check-in Time: 2011-10-18 12:56:07

Background Color:

☐ Propagate color to descendants

- | | | | | | | | |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <input checked="" type="radio"/> (none) | <input type="radio"/> #f2dcdc | <input type="radio"/> #bde5d6 | <input type="radio"/> #a0a0a0 | <input type="radio"/> #b0b0b0 | <input type="radio"/> #c0c0c0 | <input type="radio"/> #d0d0d0 | <input type="radio"/> #e0e0e0 |
| <input type="radio"/> #c0fff0 | <input type="radio"/> #c0f0ff | <input type="radio"/> #d0c0ff | <input type="radio"/> #ffc0ff | <input type="radio"/> #ffc0d0 | <input type="radio"/> #fff0c0 | <input type="radio"/> #f0ffc0 | <input type="radio"/> #c0ffc0 |
| <input type="radio"/> #a8d3c0 | <input type="radio"/> #a8c7d3 | <input type="radio"/> #aaa8d3 | <input type="radio"/> #cba8d3 | <input type="radio"/> #d3a8bc | <input type="radio"/> #d3b5a8 | <input type="radio"/> #d1d3a8 | <input type="radio"/> #b1d3a8 |
| <input type="radio"/> #8eb2a1 | <input type="radio"/> #8ea7b2 | <input type="radio"/> #8f8eb2 | <input type="radio"/> #ab8eb2 | <input type="radio"/> #b28e9e | <input type="radio"/> #b2988e | <input type="radio"/> #b0b28e | <input type="radio"/> #95b28e |
| <input type="radio"/> #80d6b0 | <input type="radio"/> #80bbd6 | <input type="radio"/> #8680d6 | <input type="radio"/> #c680d6 | <input type="radio"/> #d680a6 | <input type="radio"/> #d69b80 | <input type="radio"/> #d1d680 | <input type="radio"/> #91d680 |

custom

☐ Add the following new tag name to this check-in:

☐ Cancel special tag **branch**

☐ Cancel tag **trunk**

Branching: ☒ Make this check-in the start of a new branch named:

new-feature

Leaf Closure: ☐ Mark this leaf as "closed" so that it no longer appears on the "leaves" page and is no longer labeled as a "Leaf".

Preview

Apply Changes

Cancel

Enter Branch Name Here

Click Here


FileEditViewHistoryBookmarksToolsHelp

localhost:8080/timeline?n=20&y=ci

Google

Demo Project: Timeline

+



Demo Project Timeline

Logged In as drh


HomeTimelineFilesBranchesTagsTicketsWikiAdminLogout

200 EntriesAll TypesEvents OnlyShow FilesTags OnlyTickets OnlyWiki Only

3 most recent checkins



2011-10-18

12:56




[\[a5c0c000a1\]](#) **Leaf:** Add more code (user: [drh](#), tags: [new-feature](#))

12:55



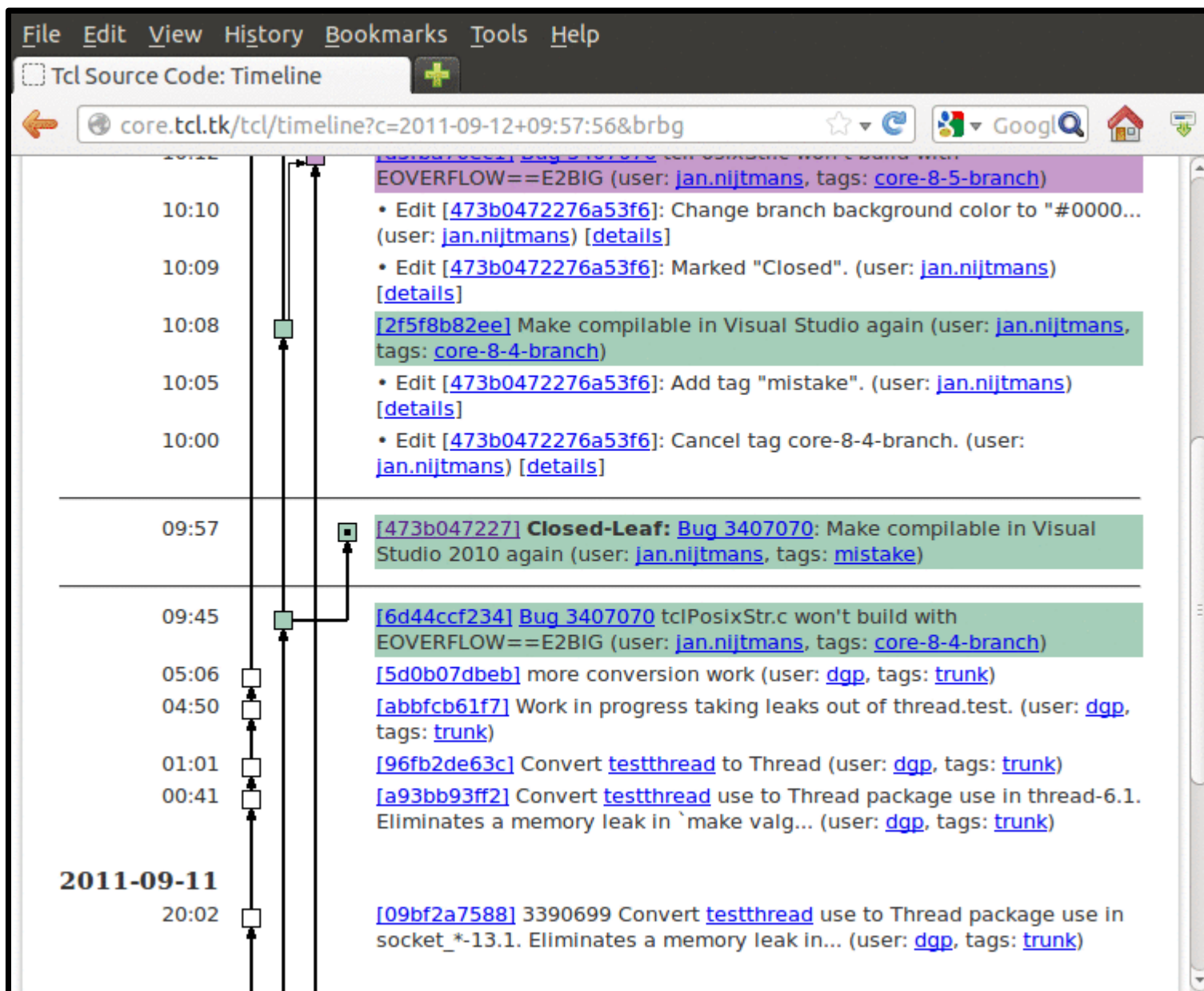
[\[d2c808cd9a\]](#) **Leaf:** First code check-in (user: [drh](#), tags: [trunk](#))

12:54



[\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Fossil version 1.19 [a47fde8eed] 2011-10-17 11:37:26



FileEditViewHistoryBookmarksToolsHelp

Tcl Source Code: Check-in [473... +

←→

core.tcl.tk/tcl/info/473b047227

☆

Google

Date:2011-09-12 09:57:56

User:jan.nijtmans

Comment:Bug 3407070: Make compilable in Visual Studio 2010 again

Received From:jan.nijtmans @ 92.254.115.234 on 2011-09-12 09:58:01

Timelines:family | ancestors | mistake

Other Links:files | Tarball | ZIP archive | manifest | edit

Tags And Properties

- bgcolor=#000000 propagates to descendants added by [197185411d] on 2011-09-12 10:10:22
- branch=core-8-4-branch inherited from [8003bbacd1]
- closed added by [a3791b2e78] on 2011-09-12 10:09:10
- ~~sym-core-8-4-branch~~ cancelled by [42d68c72a4] on 2011-09-12 10:00:47
- sym-mistake added by [7aa0c638f8] on 2011-09-12 10:05:46

Changes

hide diffs

unified diffs

patch

Modified win/Makefile.in from [d6355fb171eaeaa7] to [eb267e2bac60ce1a].

1 #

2 # This file is a Makefile for Tcl. If it has the name "Makefile.in"

3 # then it is a template for a Makefile: to generate the actual Makefile.

1 #

2 # This file is a Mak

3 # is a template for

20 timeline items occurring around 2012-05-22.

2012-05-23

04:43

[\[f7161e4708\]](#) fix merge problem on Linux (user: [jan.nijtmans](#), tags: [core-8-5-branch](#))**2012-05-22**

20:28

[\[8971a30409\]](#) **Closed-Leaf:** Use zero-delays instead of finite ones when posting fileevents, because (1) they should be zero in t... (user: [ferrieux](#), tags: [bug-3525907](#))

16:11

• Edit [\[87b2eb01a37eed1e\]](#): Change branch background color to "#0000... (user: [dgp](#)) [[details](#)]

16:05

[\[a7a2d55df6\]](#) 3528601 Fix broken --disable-threads build. (user: [dgp](#), tags: [trunk](#))

15:11

[\[95bbb434f9\]](#) Avoid calling close() on a bogus fd when an attempt to open a client socket with an unsupported addr... (user: [dgp](#), tags: [trunk](#))

12:58

[\[d13f26946a\]](#) **Leaf:** MAC_OSX_TK -> MAC_OSX_TCL (user: [jan.nijtmans](#), tags: [mistake](#))

12:44

[\[87b2eb01a3\]](#) Revert most of [\[fcc5957e59\]](#), since when we let cygwin share the win32 stub table this is no longer n... (user: [jan.nijtmans](#), tags: [mistake](#))

12:32

[\[3d15cab626\]](#) Increase the timer resolution of test io-29.33b so the timing sensitivity of the test is reduced and... (user: [dgp](#), tags: [trunk](#))

09:15

[\[a80aa8d5d3\]](#) better unicode detection: Unicode always ends with two zero-bytes (user: [jan.nijtmans](#), tags: [frq-3527238](#))

07:30

[\[455f8b5d30\]](#) Revert most of [\[ae92de6078\]](#), since when we let cygwin share the win32 stub table this is no longer n... (user: [jan.nijtmans](#), tags: [core-8-4-branch](#))**2012-05-21**

17:08

[\[fe1400c626\]](#) Use [package prefer latest](#) to force valgrinding to use a version of Thread suitable for the whole t... (user: [dgp](#), tags: [trunk](#))

16:56

[\[a13bf543cf\]](#) When using Tcl_SetObjLength() calls to grow and shrink the objPtr->bytes buffer.

Continue Working On Trunk

```
fossil update trunk  
# Add new code  
fossil commit
```




Demo Project Timeline





Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

4 most recent checkins

2011-10-18

- 13:00  [\[e92643db3a\]](#) **Leaf:** Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56  [\[a5c0c000a1\]](#) **Leaf:** Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55  [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54  [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Continue Working On New Feature

```
fossil update new-feature  
# Add new code  
fossil commit
```



Demo Project Timeline






Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

5 most recent checkins

2011-10-18

- 13:00  [\[371592bb5e\]](#) **Leaf:** Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00  [\[e92643db3a\]](#) **Leaf:** Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56  [\[a5c0c000a1\]](#) Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55  [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54  [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Merging

```
fossil update trunk  
fossil merge new-feature  
# test  
fossil commit
```



Demo Project Timeline

Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

6 most recent checkins

2011-10-18

- 13:01 [76f8acec15] **Leaf:** Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00 [371592bb5e] **Leaf:** Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00 [e92643db3a] Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56 [a5c0c000a1] Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55 [d2c808cd9a] First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54 [3b2ee4513b] initial empty check-in (user: [drh](#), tags: [trunk](#))



Demo Project Check-in [371592bb5e]

Logged in as drh

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Overview

SHA1 Hash: 371592bb5e77cb9329f48e9af0467fac0e8a5cd6 (Record ID: 10)

Date: [2011-10-18 13:00:42](#)

User: [drh](#)

Comment: Continue work on new feature

Received From: drh @ on 2011-10-18 13:00:42

Timelines: [family](#) | [ancestors](#) | [new-feature](#)

Other Links: [files](#) | [Tarball](#) | [ZIP archive](#) | [manifest](#) | [edit](#)

Click Here

Tags And Properties

- **branch=new-feature** inherited from [\[a5c0c000a1\]](#)
- **sym-new-feature** inherited from [\[a5c0c000a1\]](#)

Changes



User:

drh

Comment:

Continue work on new feature

Check-in Time:

2011-10-18 13:00:42

Background
Color:☐ Propagate color to descendants

<input checked="" type="radio"/> (none)	<input type="radio"/> #f2dcdc	<input type="radio"/> #bde5d6	<input type="radio"/> #a0a0a0	<input type="radio"/> #b0b0b0	<input type="radio"/> #c0c0c0	<input type="radio"/> #d0d0d0	<input type="radio"/> #e0e0e0
<input type="radio"/> #c0fff0	<input type="radio"/> #c0f0ff	<input type="radio"/> #d0c0ff	<input type="radio"/> #ffc0ff	<input type="radio"/> #ffc0d0	<input type="radio"/> #fff0c0	<input type="radio"/> #f0ffc0	<input type="radio"/> #c0ffc0
<input type="radio"/> #a8d3c0	<input type="radio"/> #a8c7d3	<input type="radio"/> #aaa8d3	<input type="radio"/> #cba8d3	<input type="radio"/> #d3a8bc	<input type="radio"/> #d3b5a8	<input type="radio"/> #d1d3a8	<input type="radio"/> #b1d3a8
<input type="radio"/> #8eb2a1	<input type="radio"/> #8ea7b2	<input type="radio"/> #8f8eb2	<input type="radio"/> #ab8eb2	<input type="radio"/> #b28e9e	<input type="radio"/> #b2988e	<input type="radio"/> #b0b28e	<input type="radio"/> #95b28e
<input type="radio"/> #80d6b0	<input type="radio"/> #80bbd6	<input type="radio"/> #8680d6	<input type="radio"/> #c680d6	<input type="radio"/> #d680a6	<input type="radio"/> #d69b80	<input type="radio"/> #d1d680	<input type="radio"/> #91d680

☐ custom

Tags:

☐ Add the following new tag name to this check-in:☐ Cancel special tag **branch**☐ Cancel tag **new-feature**

Branch:

☐ Make this check-in the start of a new branch named:

Leaf Closure:

☒ Mark this leaf as "closed" so that it no longer appears on the "leaves" page and is no longer labeled as a "Leaf".

Preview

Apply Changes

Cancel

Click Here



Demo Project Timeline







Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

6 most recent checkins

2011-10-18

- 13:01  [\[76f8acec15\]](#) **Leaf:** Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00  [\[371592bb5e\]](#) **Closed-Leaf:** Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00  [\[e92643db3a\]](#) Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56  [\[a5c0c000a1\]](#) Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55  [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54  [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))



Demo Project Timeline

Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

6 most recent checkins

2011-10-18

- 13:01 [76f8acec15] **Leaf:** Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00 [371592bb5e] **Leaf:** Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00 [e92643db3a] Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56 [a5c0c000a1] Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55 [d2c808cd9a] First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54 [3b2ee4513b] initial empty check-in (user: [drh](#), tags: [trunk](#))

Continue Working On New Feature

```
fossil update new-feature  
# Add new code  
fossil commit
```



Demo Project Timeline









Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

7 most recent checkins

2011-10-18

- 13:05  [\[1018c64c8f\]](#) **Leaf:** Further work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:01   [\[76f8acec15\]](#) **Leaf:** Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00  [\[371592bb5e\]](#) Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00  [\[e92643db3a\]](#) Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56  [\[a5c0c000a1\]](#) Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55  [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54  [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Merge Trunk into New Feature

```
fossil merge trunk  
# test...  
fossil commit
```



Demo Project Timeline

Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

8 most recent checkins

2011-10-18

- 13:06 [\[b6d552c57e\]](#) **Leaf:** Merge in trunk changes (user: [drh](#), tags: [new-feature](#))
- 13:05 [\[1018c64c8f\]](#) Further work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:01 [\[76f8acec15\]](#) **Leaf:** Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00 [\[371592bb5e\]](#) Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00 [\[e92643db3a\]](#) Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56 [\[a5c0c000a1\]](#) Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55 [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54 [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

Merge New Feature into Trunk

```
fossil update trunk  
fossil merge new-feature  
# test...  
fossil commit
```



Demo Project Timeline










Logged in as drh

Home Timeline Files Branches Tags Tickets Wiki Admin Logout

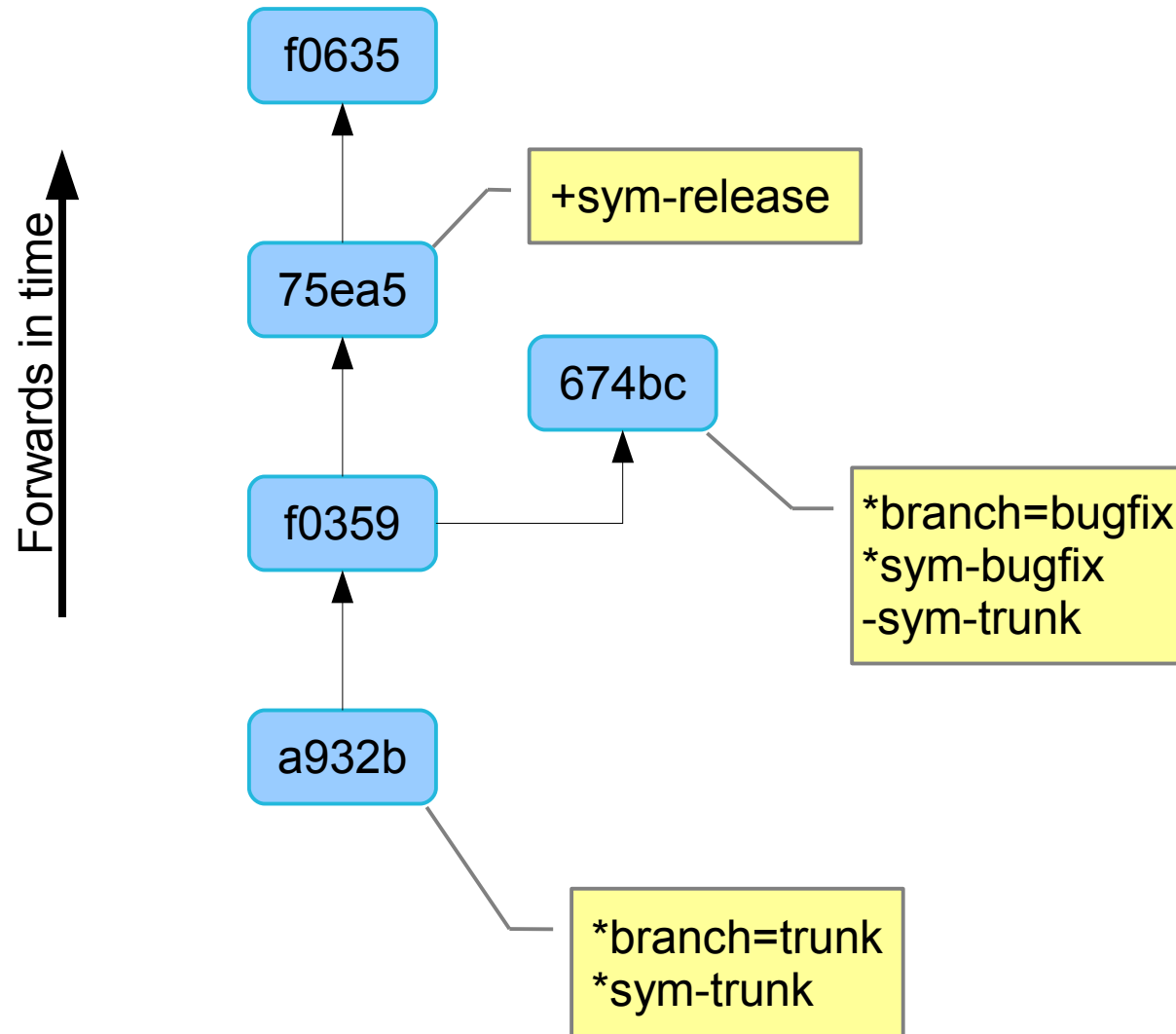
200 Entries All Types Events Only Show Files Tags Only Tickets Only Wiki Only

9 most recent checkins

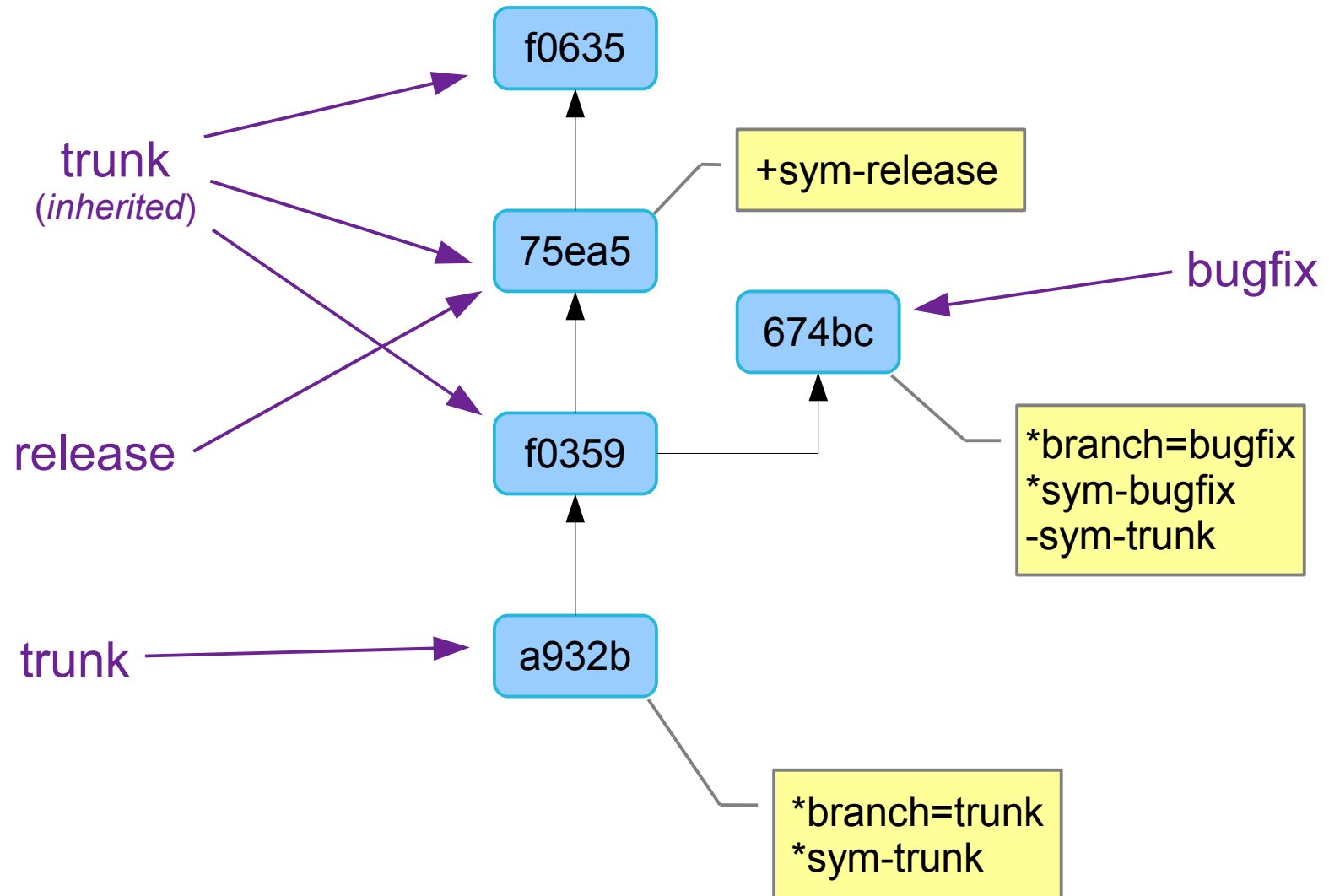
2011-10-18

- 13:07  [\[dad25704b3\]](#) **Leaf:** Merge new feature enhancements (user: [drh](#), tags: [trunk](#))
- 13:06  [\[b6d552c57e\]](#) **Leaf:** Merge in trunk changes (user: [drh](#), tags: [new-feature](#))
- 13:05  [\[1018c64c8f\]](#) Further work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:01  [\[76f8acec15\]](#) Merge new feature into trunk (user: [drh](#), tags: [trunk](#))
- 13:00  [\[371592bb5e\]](#) Continue work on new feature (user: [drh](#), tags: [new-feature](#))
- 13:00  [\[e92643db3a\]](#) Continue work on trunk (user: [drh](#), tags: [trunk](#))
- 12:56  [\[a5c0c000a1\]](#) Add more code (user: [drh](#), tags: [new-feature](#))
- 12:55  [\[d2c808cd9a\]](#) First code check-in (user: [drh](#), tags: [trunk](#))
- 12:54  [\[3b2ee4513b\]](#) initial empty check-in (user: [drh](#), tags: [trunk](#))

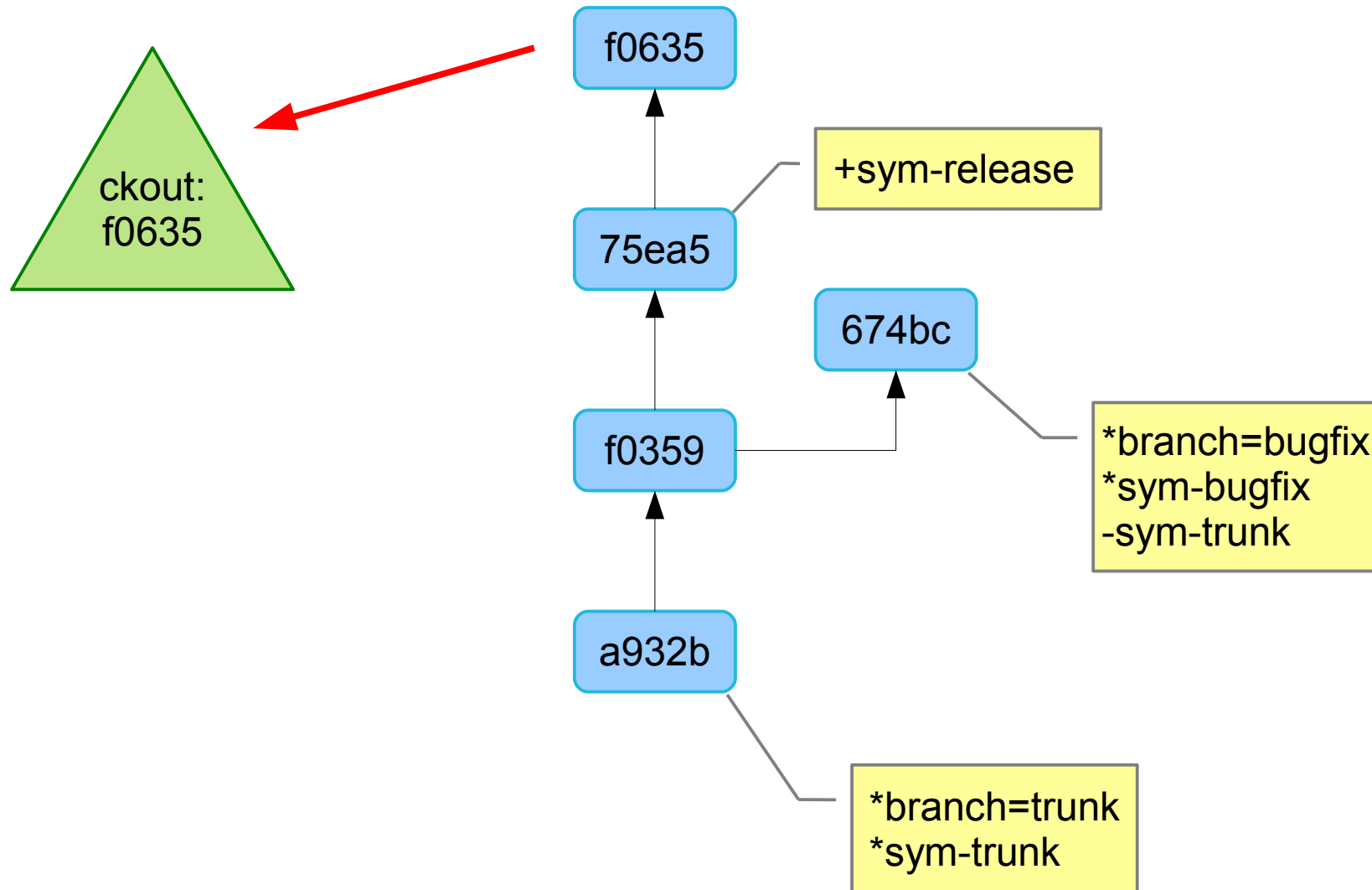
Demo Repository



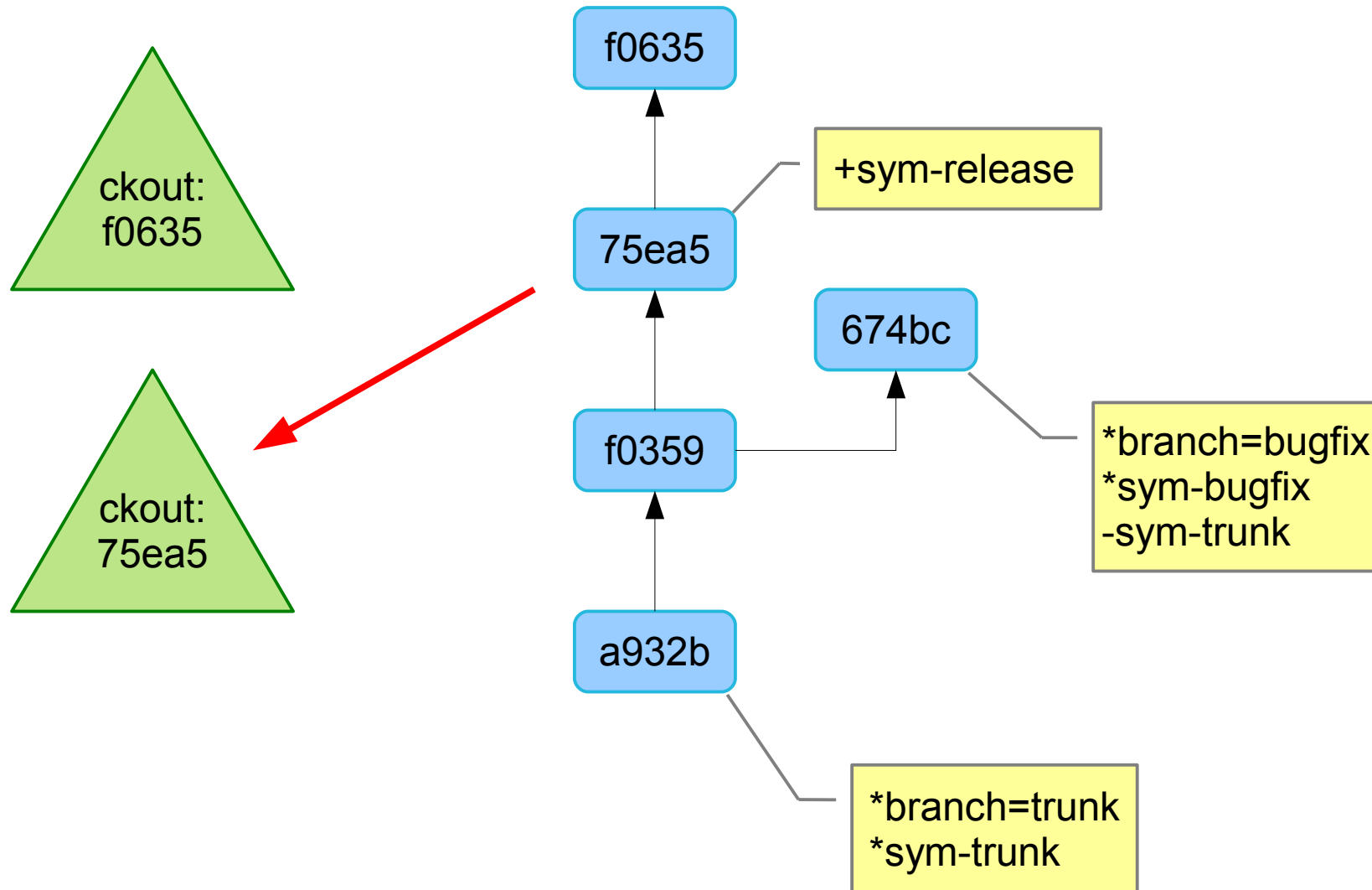
Demo Repository



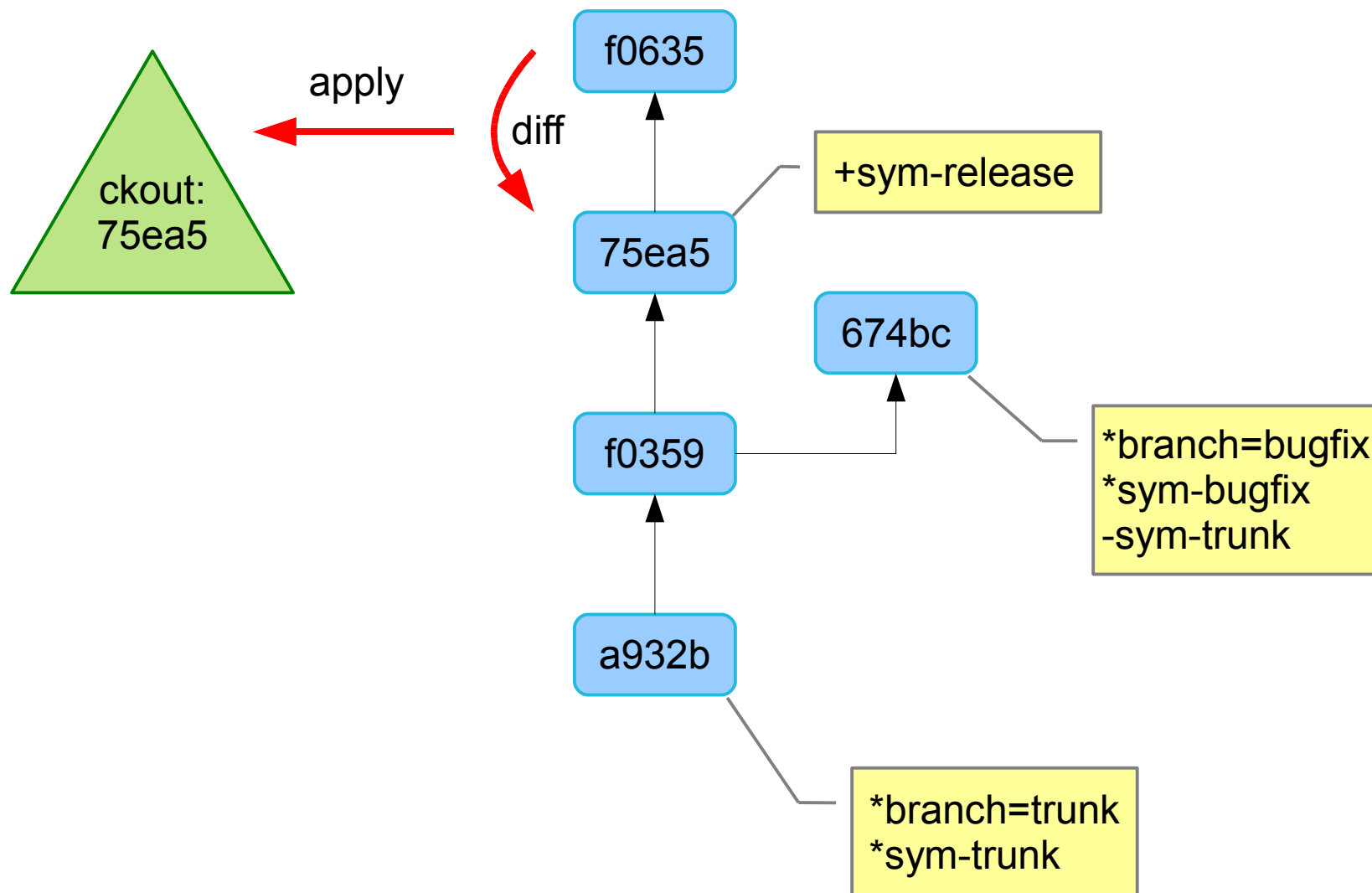
fossil open ../repo.fossil



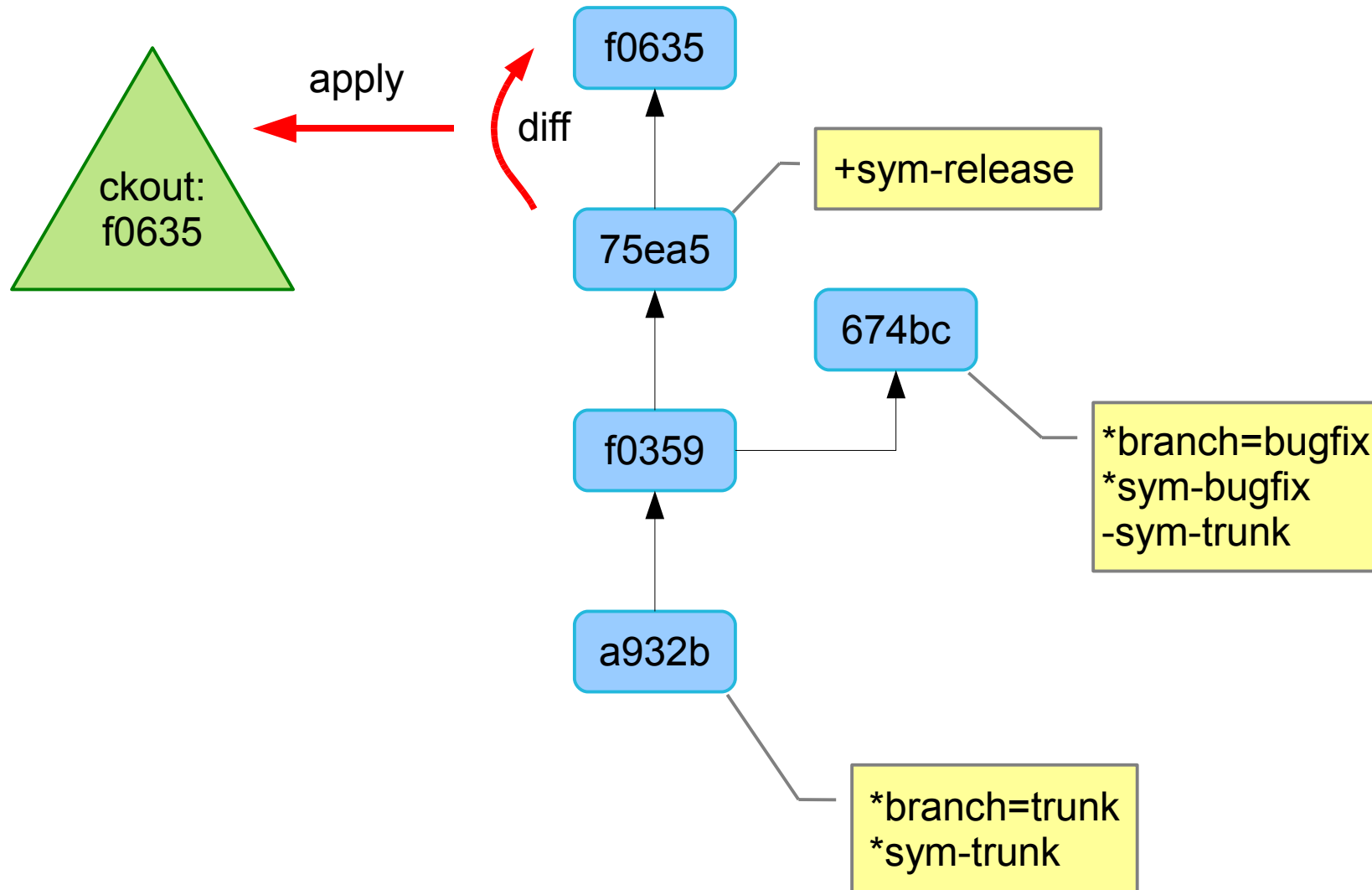
fossil open ../repo.fossil release



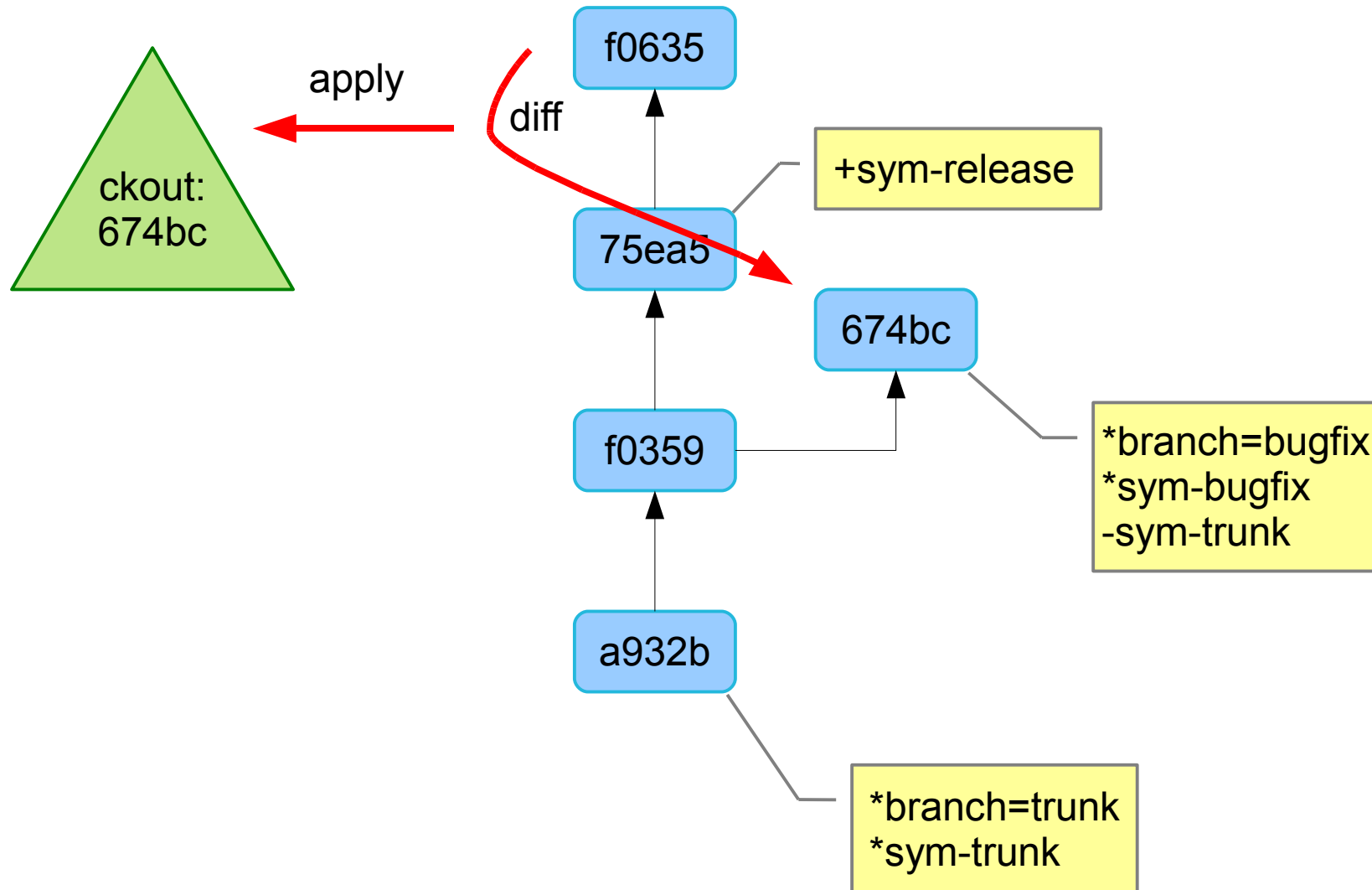
fossil update release



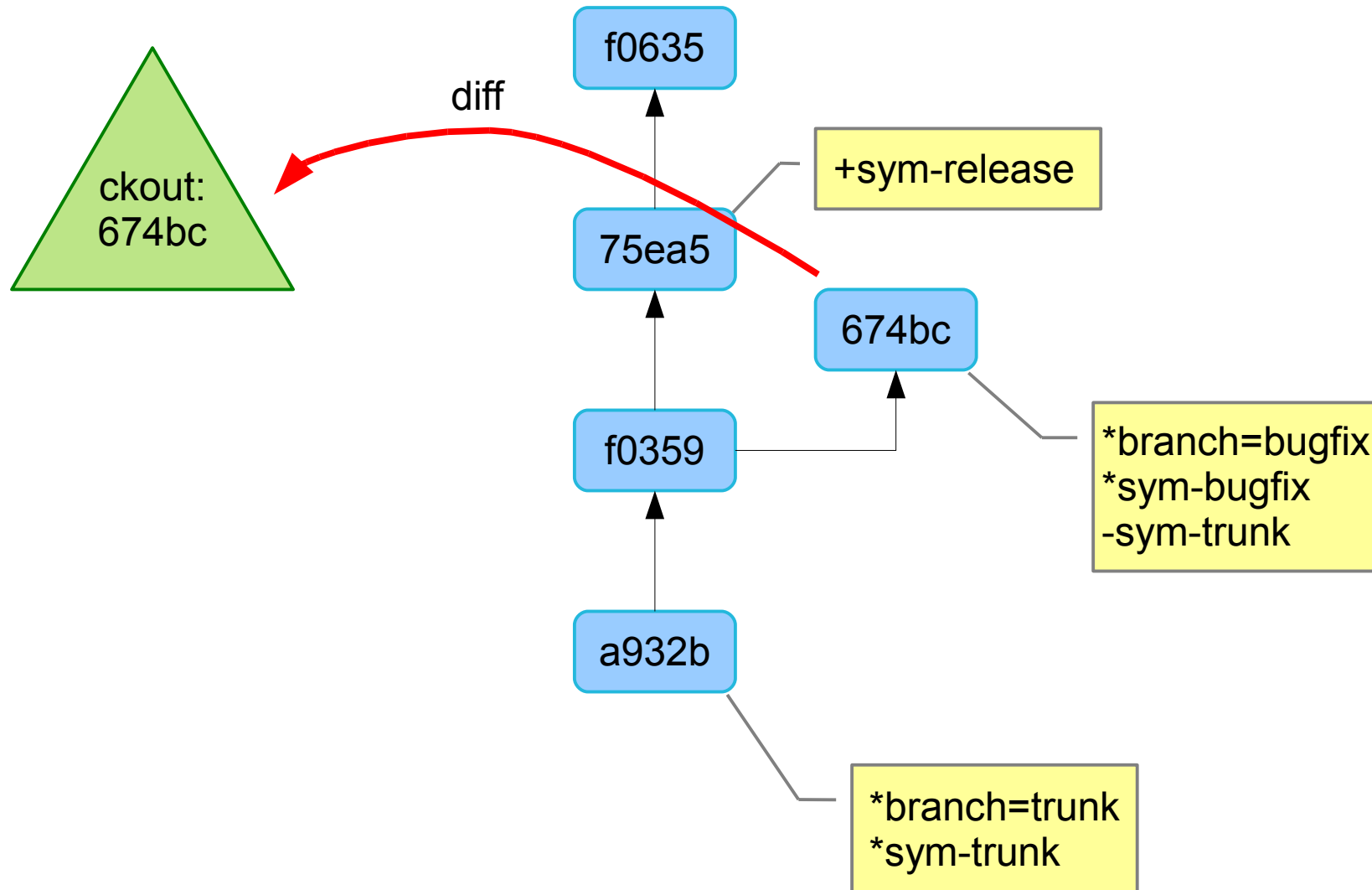
fossil update



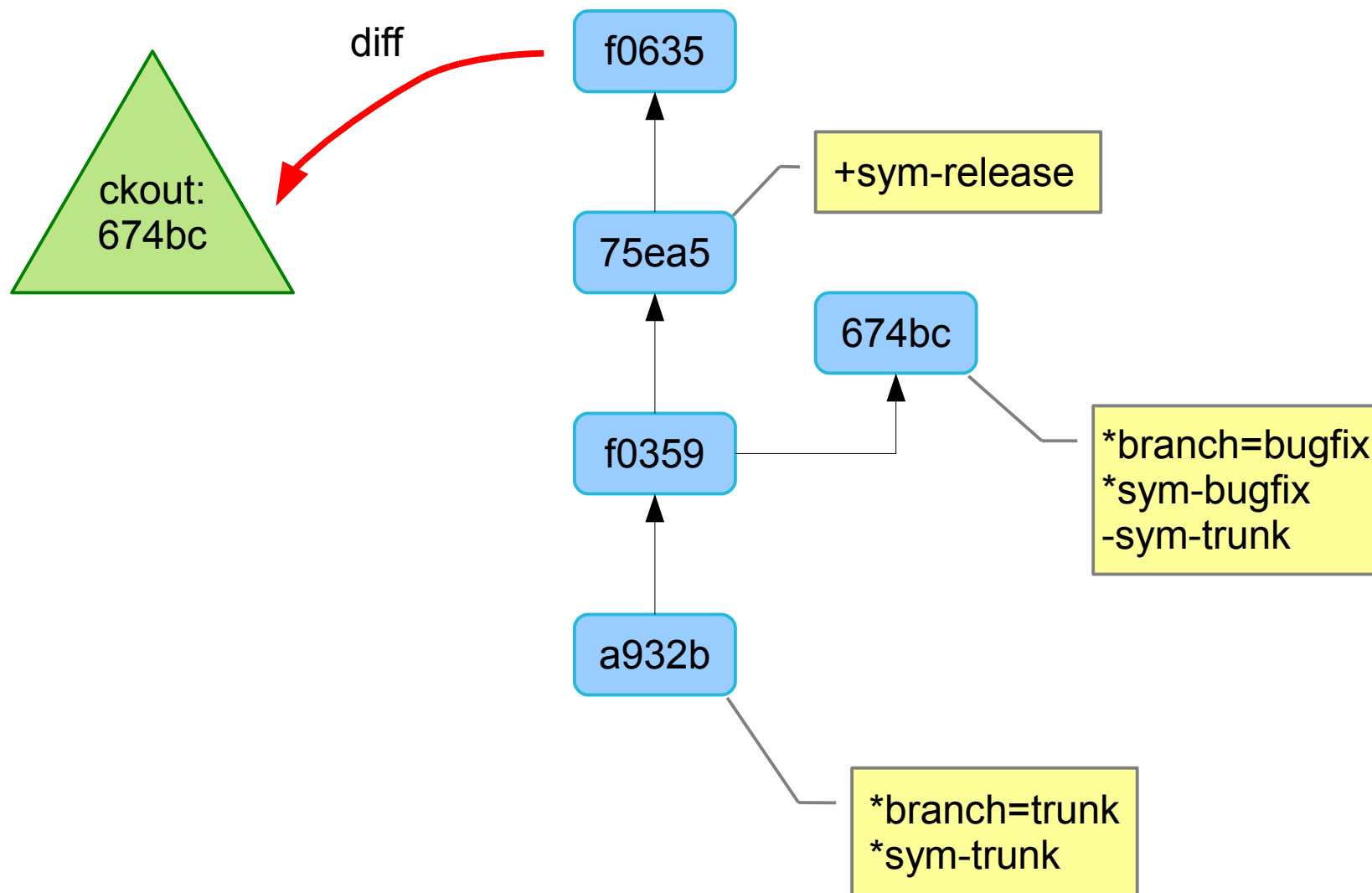
fossil update bugfix



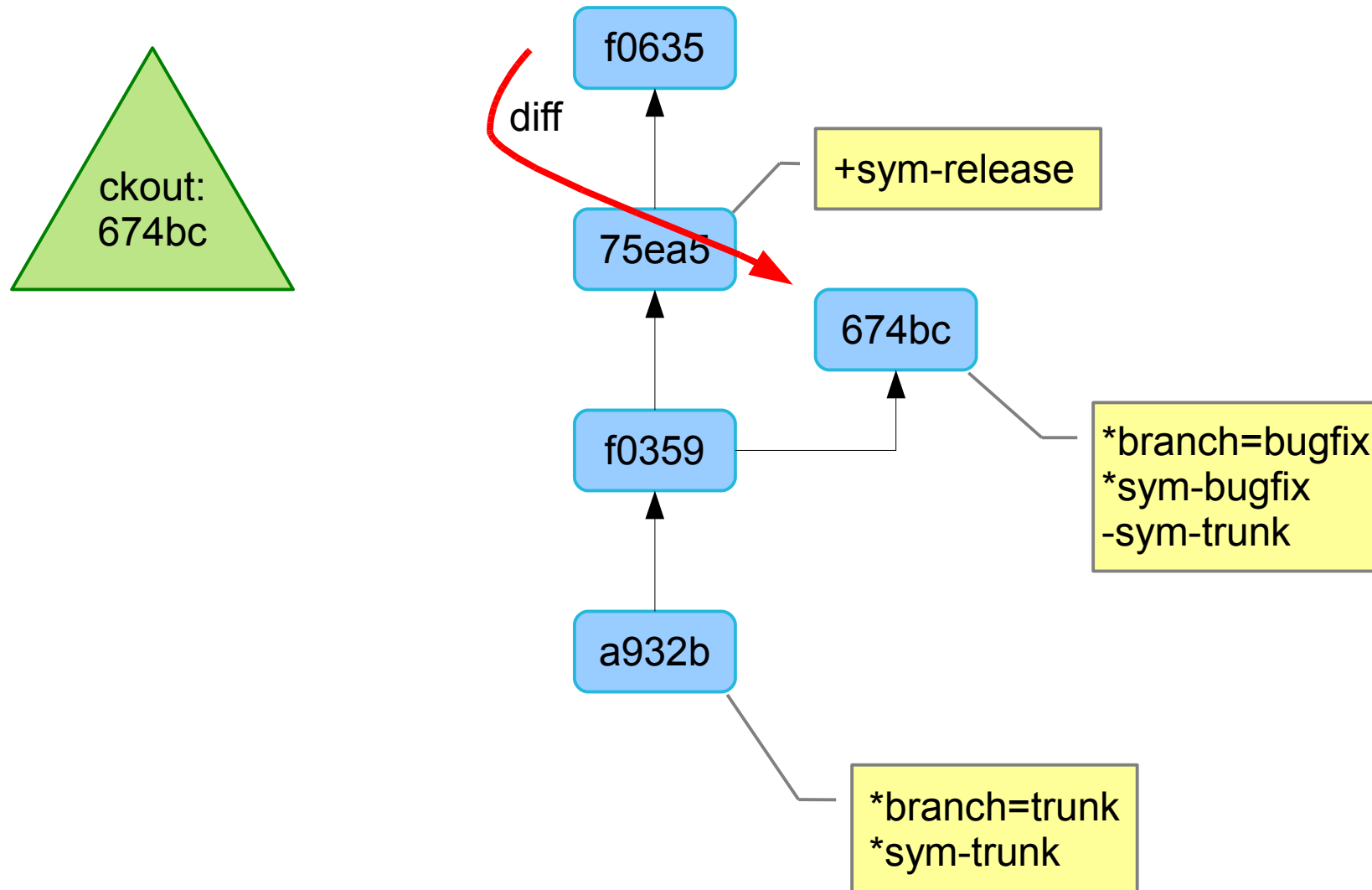
fossil diff



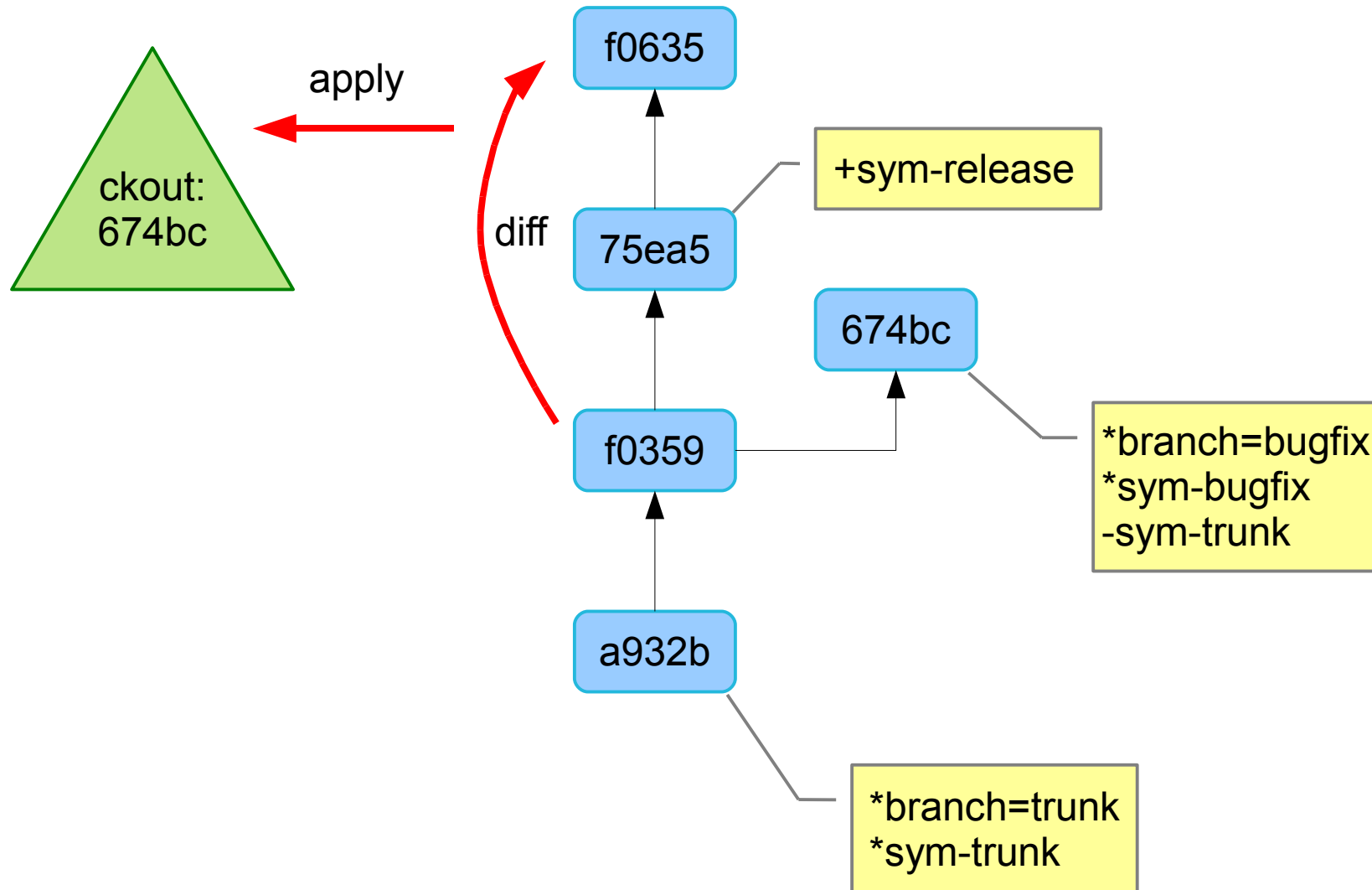
fossil diff --from trunk



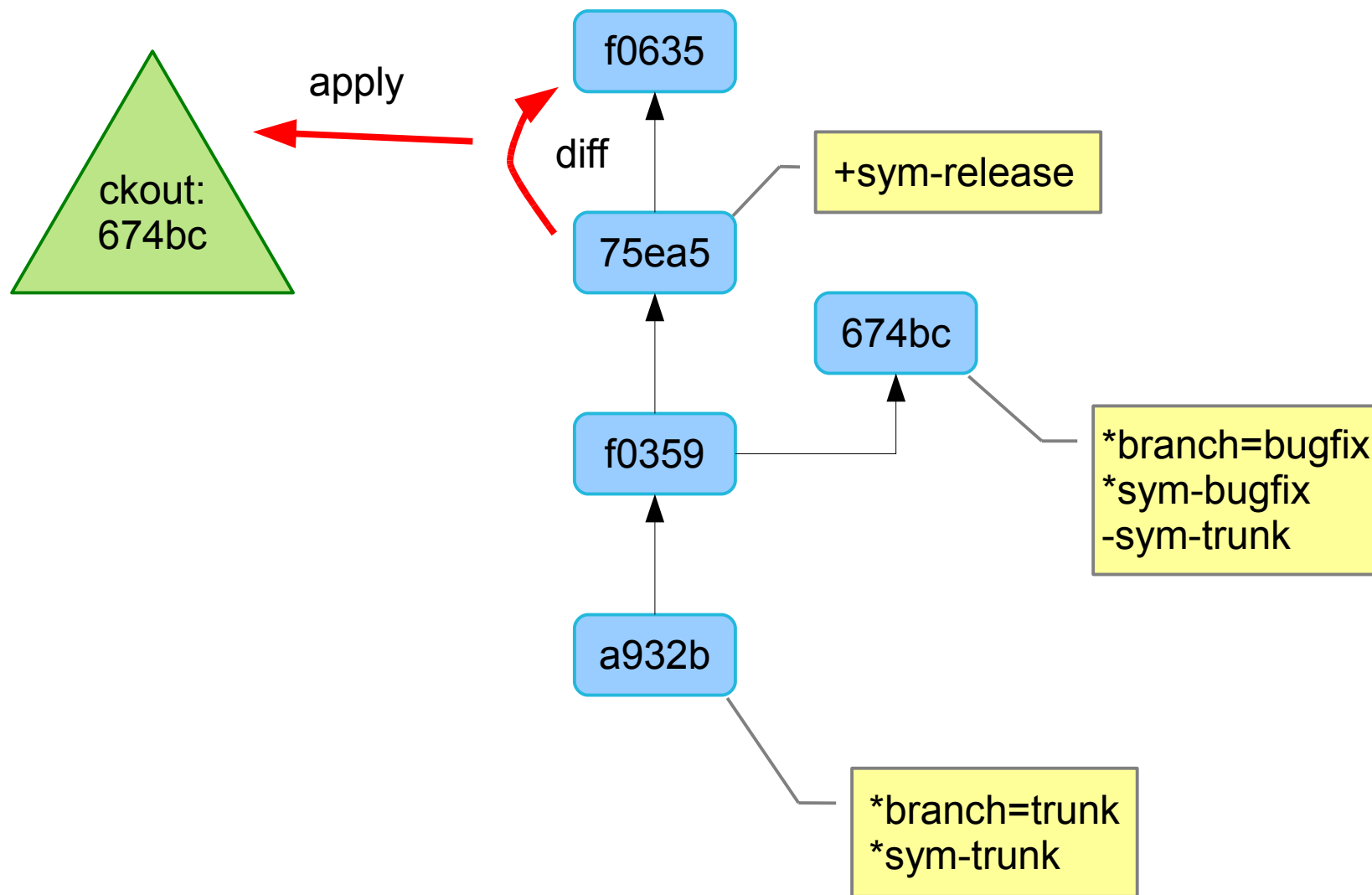
fossil diff --from trunk --to current



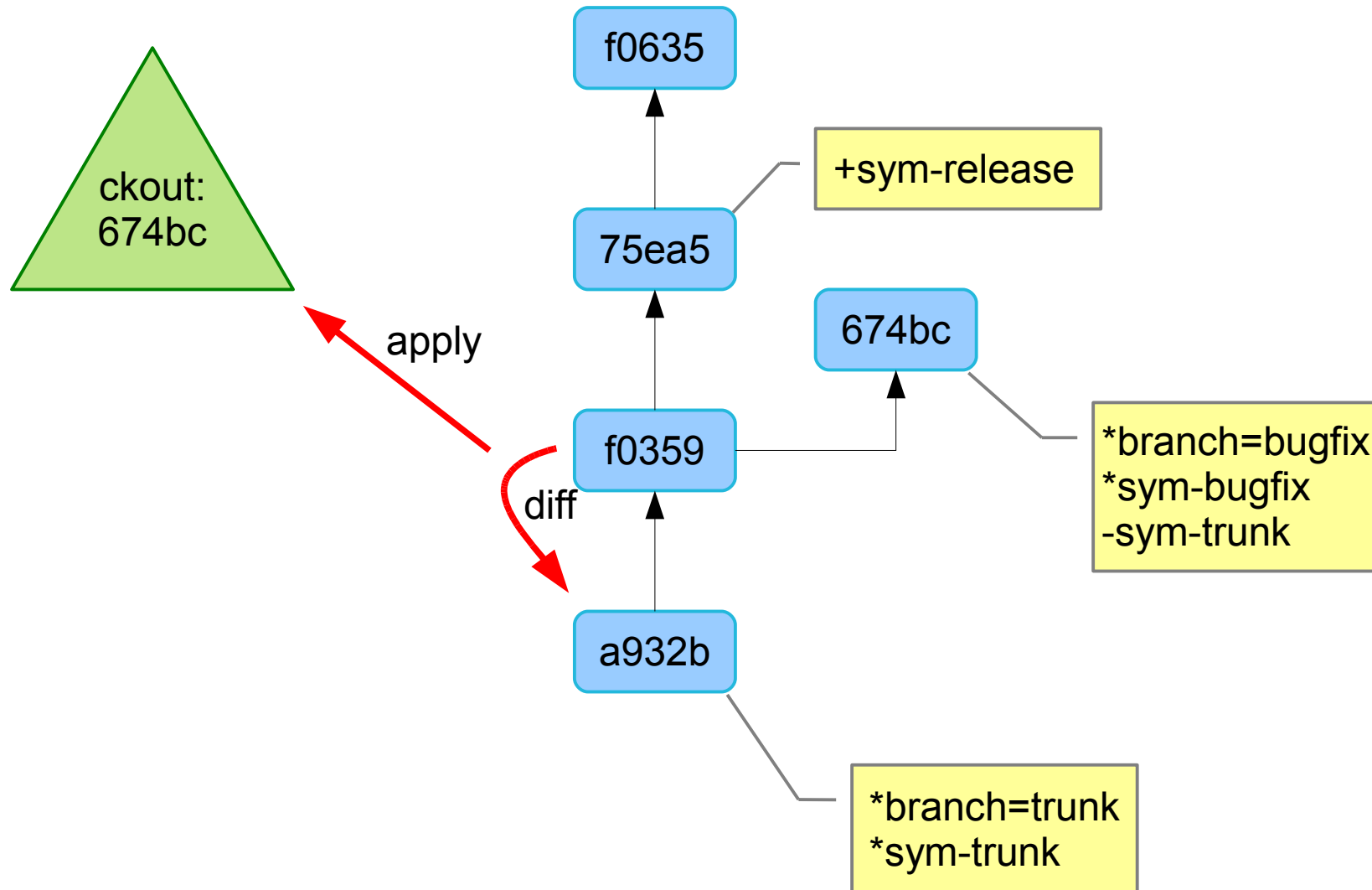
fossil merge trunk



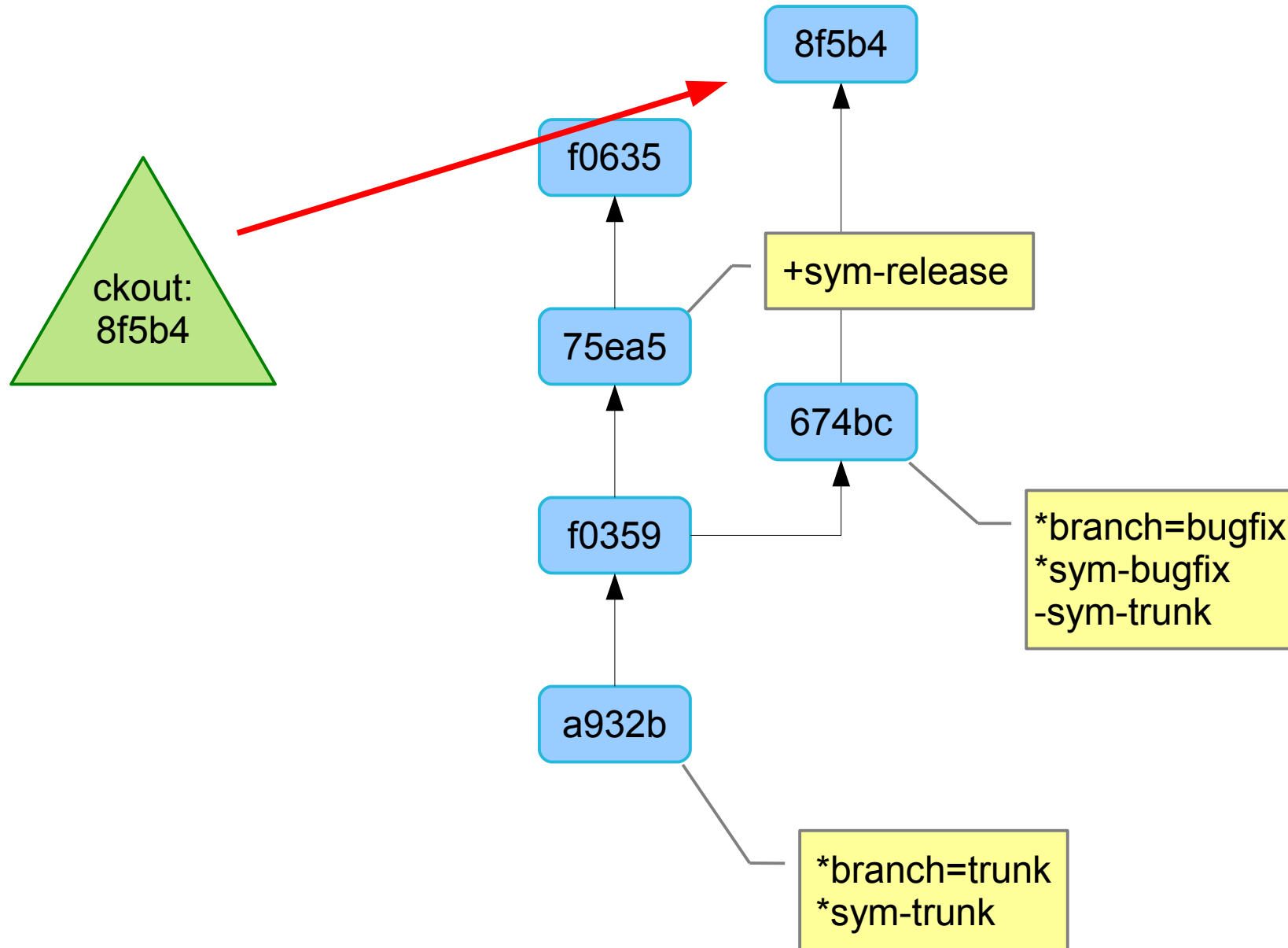
fossil merge --cherrypick f0635



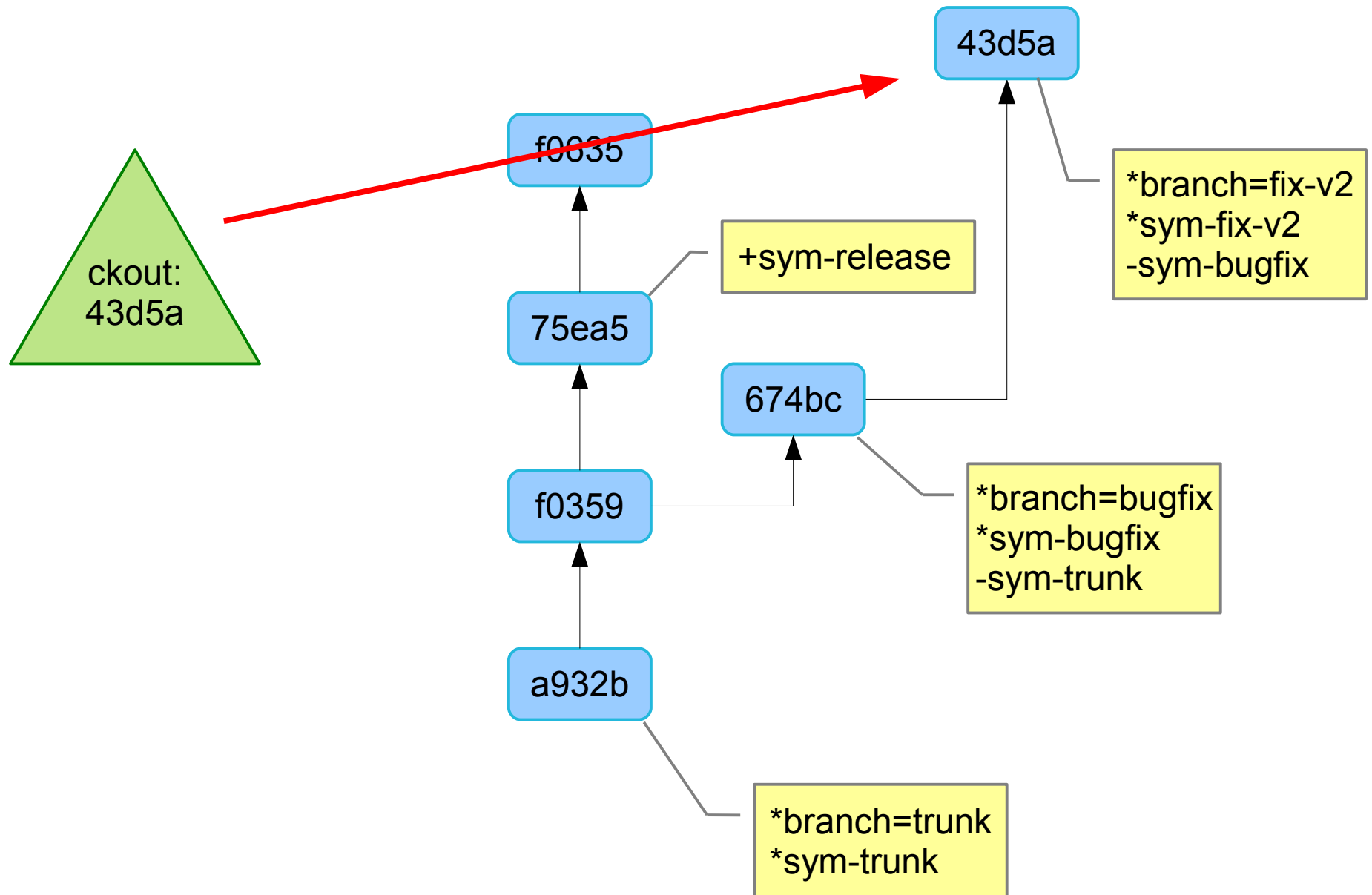
fossil merge --backout f0359



fossil commit



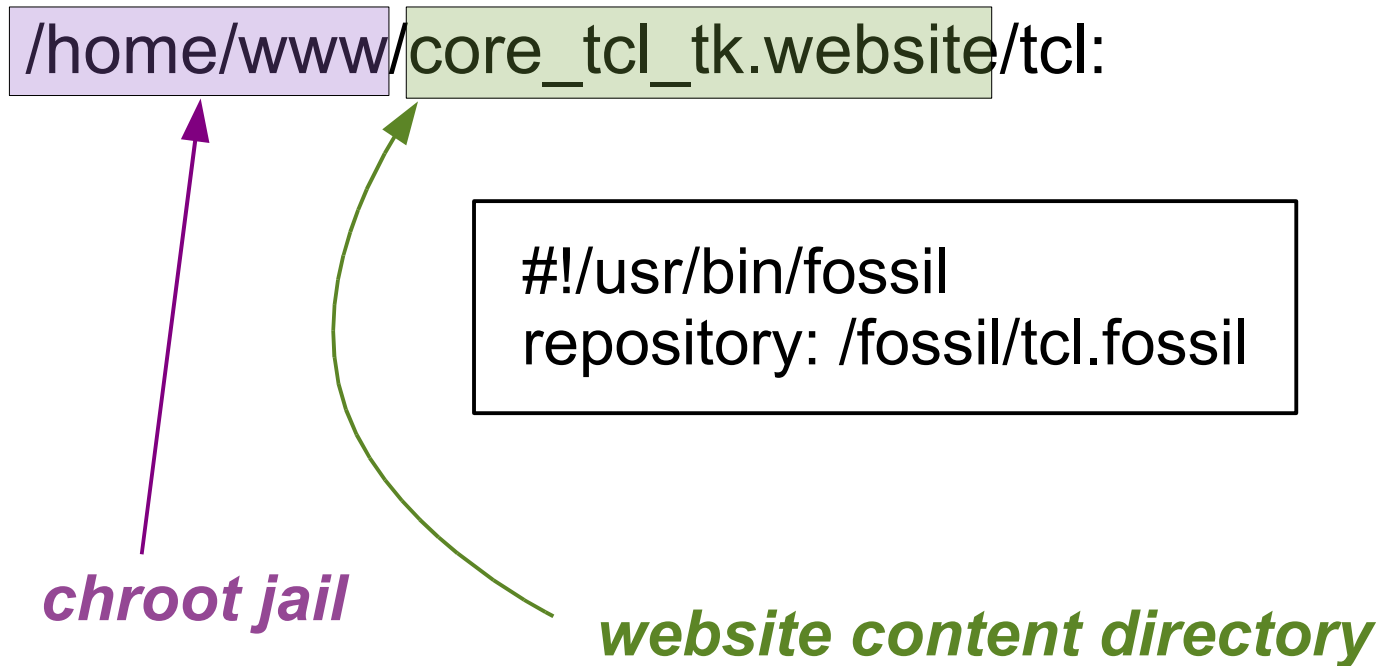
fossil commit --branch fix-v2





Setting Up A Server

http://core.tcl.tk/tcl



<http://www3.sqlite.org/cgi/src/timeline>

website content directory



/home/hwaci/public_html/www3.sqlite.org/cgi/.htaccess:

Options +ExecCGI
SetHandler cgi-script

/home/hwaci/public_html/www3.sqlite.org/cgi/src:

#!/home/hwaci/bin/fossil
repository: /home/hwaci/fossil/sqlite.fossil

/etc/xinetd.d/http-alt

```
service http-alt
```

```
{
```

```
  port = 591
```

```
  socket_type = stream
```

```
  wait = no
```

```
  user = root
```

```
  server = /home/drh/bin/fossil
```

```
  server_args = http /home/drh/www/repos/sqlite.fossil
```

```
}
```

*Automatic chroot when run
as root.*



Repository filename



fossil server repo-name

fossil winsrv -R repo-name



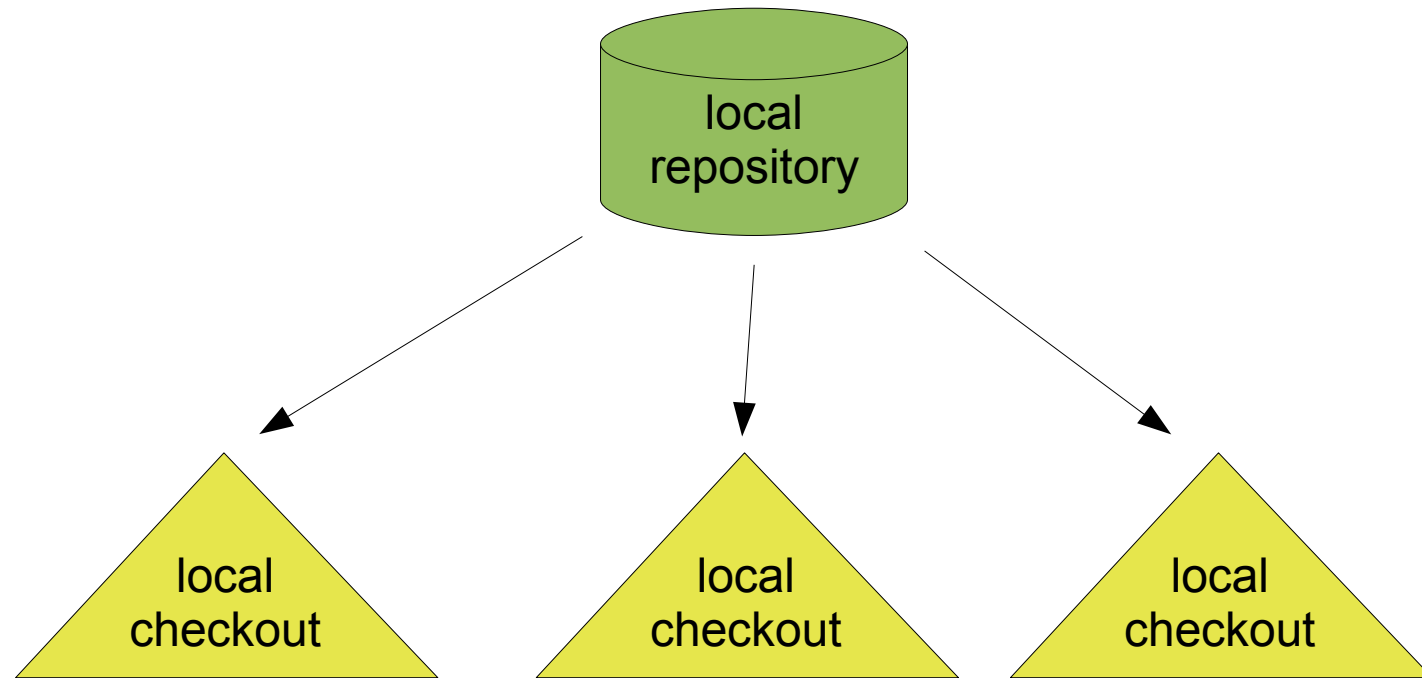
Stupid Fossil Tricks

fossil clean -f

instead of

make clean

Multiple Check-outs



- Performance comparison: trunk vs. release
- Run multiple tests simultaneously

Embedded Documentation

`http://baseurl/doc/version/filepath`

- The fossil website is implemented this way
- *version* can be any version prefix, branch name, “**tip**”, or “**ckout**”
 - “**ckout**” allows viewing website before check-in
- MIME-Type from *filepath* suffix
- The “.wiki” suffix renders using wiki rules

Example Embedded Docs

- <http://www.fossil-scm.org/fossil/doc/tip/www/index.wiki>
- <http://core.tcl.tk/tcl/doc/trunk/libtommath/changes.txt>
- <http://core.tcl.tk/tk/doc/tip/library/images/logo100.gif>
- <http://core.tcl.tk/tk/doc/2009-01-01/generic/tk.h>

Use Embedded Docs

- Each project has `www/` holding documentation
 - Set `/home` to `/doc/trunk/www/index.wiki`
- Use for:
 - Project homepage
 - Developer notes & compilation instructions
 - API documentation
 - Checklists
 - Coding standards
 - Dodekatalogue

Use Branches

- Branches are cheap
- Let Fossil pick the branch color automatically
- Trunk is always release-ready or nearly so
 - Anything that isn't 100% working goes in a branch
 - Anything that might not be released goes in a branch

Multiple Repositories

- Separate repositories for subprojects:
 - SQLite, SQLite-docs, SQL-Logic-Test, SEE, CEROD, ZIPVFS, TH3
 - Tcl, Tk, Tdbc, Threads, Tclconfig
- Use the “fossil all” command (more on this to come...)
- All repositories in or under a single directory
 - ... so that “fossil serve *DIRECTORY*” works

Multiple Repositories

```
#!/home/hwaci/bin/fossil  
repository: /home/hwaci/fossil/sqlite.fossil
```

“fx”



<http://www.sqlite.org/fx/timeline>

```
#!/home/hwaci/bin/fossil  
directory: /home/hwaci/fossil
```

“fx”



sqlite.fossil	→	http://www.sqlite.org/fx/sqlite/timeline
abc.fossil	→	http://www.sqlite.org/fx/abc/timeline
x/y/z.fossil	→	http://www.sqlite.org/fx/x/y/z/timeline

fossil -y diff | open -f

open:

```
proc browser {x} {
    exec firefox $x &
}
proc open_file {x} {
    if {$x=="-f"} {
        view_stdin
        return
    }
    if {[regexp {^http://} $x] || [regexp {^https://} $x]} {
        browser $x
    }
    switch -- [string tolower [file ext $x]] {
        .html -
        .htm {browser $x}
        .gif -
        .jpg -
        .jpeg -
        .tiff {exec display $x &}
        .odp -
        .odt -
        .ods {exec libreoffice $x &}
        default {exec e $x &}
    }
}
proc view_stdin {} {
    set today [clock format [clock seconds] -format {%Y%m%d%M%H%S}]
    set tmp /var/tmp/stdin-$today-[expr {int(rand()*100000000)}]
    set fd [open $tmp w]
    puts -nonewline $fd [read stdin]
    close $fd
    exec e -remove $tmp &
}
foreach x $argv {open_file $x}
```

fossil -y diff | v

V:

```
#!/bin/sh
# the next line restarts using wish \
exec /usr/bin/wish "$0" "$@"
wm withdraw .
set body {}
set mx 80
set nLine 0
while {[eof stdin]} {
    set line [gets stdin]
    incr nLine
    set n [string length $line]
    if {$n>$mx} {set mx $n}
    append body $line\n
}
if {$nLine>55} {set nLine 55}
if {$mx>200} {set mx 200}
text .t -yscroll {.sb set} -width $mx -height $nLine
pack .t -side left -fill both -expand 1
scrollbar .sb -command {.t yview} -orient vertical
pack .sb -side left -fill y
.t insert end $body
wm deiconify .
```


fossil diff --from release --to current | open -f

fossil diff --from trunk --to feature-branch | open -f

fossil diff --from release -y --context 15 | open -f

fossil diff --from release --to current | v

fossil diff --from trunk --to feature-branch | v

fossil diff --from release -y --context 15 | v

Prerelease Diff

<http://sqlite.org/src/vdiff?from=release&to=trunk&sbs=1>

```
fossil setting -global gdiff-cmd /usr/bin/tkdiff
```

```
...
```

```
fossil gdiff
```

File Edit View History Bookmarks Tools Help

www.fossil-scm.org/fossil/artifact/08d5ebbb28?ln=874-890

Fossil: Artifact Content

```
866     if( j>0 ){
867         @ </ul></td>
868     }
869     @ </tr></table>
870 }
871 style_footer();
872 }
873
874 /*
875 ** WEBPAGE: test-all-help
876 **
877 ** Show all help text on a single page.  Useful for proof-reading.
878 */
879 void test_all_help_page(void){
880     int i;
881     style_header("Testpage: All Help Text");
882     for(i=0; i<count(aCommand); i++){
883         if( memcmp(aCommand[i].zName, "test", 4)==0 ) continue;
884         @ <h2>%s(aCommand[i].zName):</h2>
885         @ <blockquote><pre>
886         @ %h(aCmdHelp[i])
887         @ </pre></blockquote>
888     }
889     style_footer();
890 }
891
892 /*
893 ** Set the g.zBaseURL value to the full URL for the toplevel of
894 ** the fossil tree.  Set g.zTop to g.zBaseURL without the
895 ** leading "http://" and the host and port.
896 */
897 void set_base_url(void){
898     int i;
899     const char *zHost;
```

?ln=M-N

Tarballs and ZIPs

- /tarball/*filename.tar.gz*?uuid=*TAG*
 - /zip/*filename.zip*?uuid=*TAG*
-

Use case:

```
wget http://core.tcl.tk/tcl/tarball/tcl.tar.gz?uuid=trunk
```

Other Uses For Fossil

- Private websites:
 - Wikis for individual clients
 - Team wiki
 - Company procedures wiki
- Private repositories:
 - Slide presentations
 - Legal documents
 - Invoices

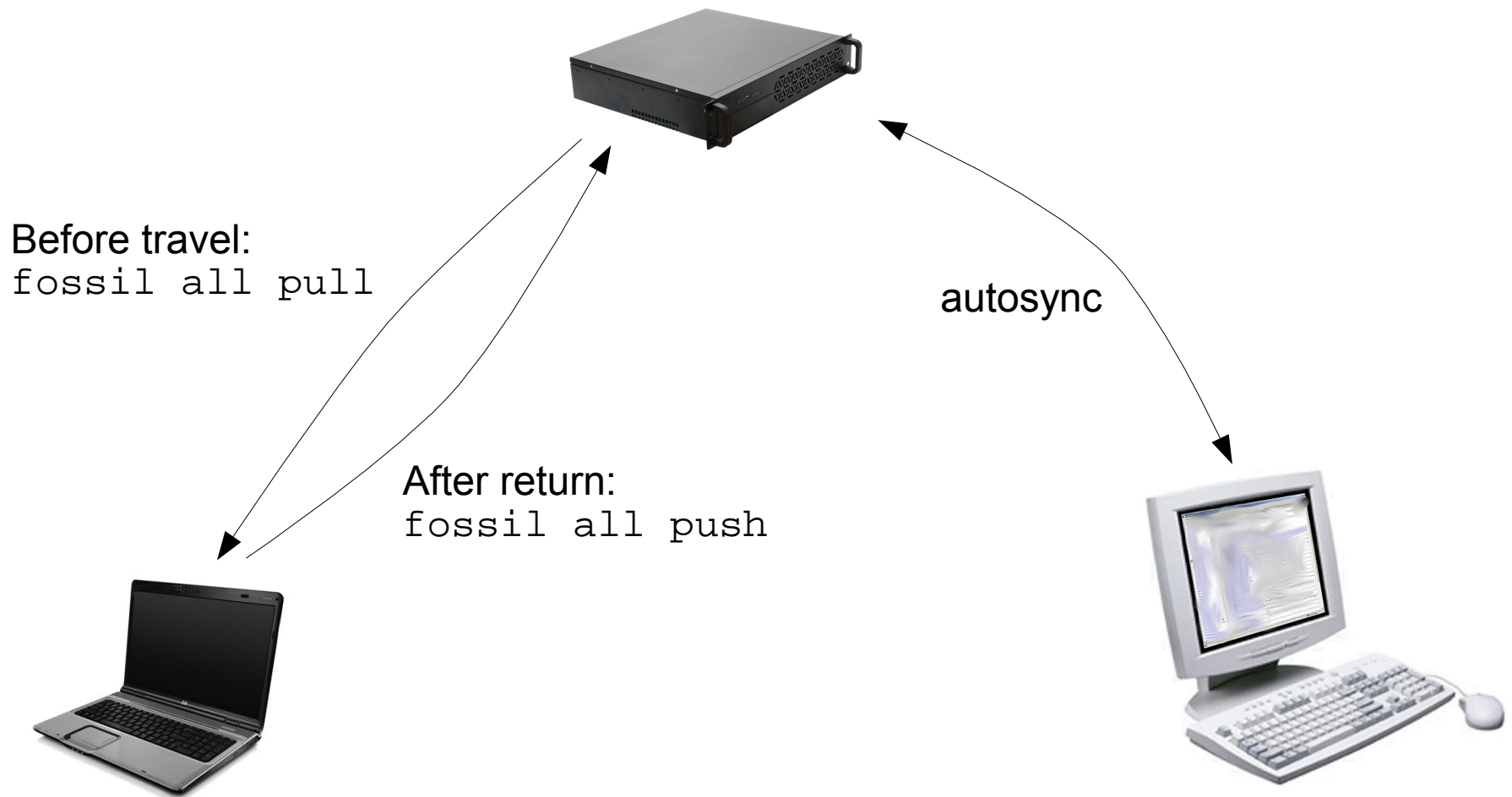
Command Lists

- fossil help
- fossil help --all
- fossil help --test
- fossil test-list-webpage
- <http://core.tcl.tk/tcl/test-all-help>

Fossil “all”

- fossil all sync *(or push or pull)*
- fossil all changes
- fossil all rebuild
- fossil all list `--ckout`
- fossil all ignore
- fossil all test-integrity

fossil all



Bisect

- fossil bisect reset
- fossil bisect option auto-next \$BOOLEAN
- fossil bisect option direct-only \$BOOLEAN
- fossil bisect bad \$VERSION
- fossil bisect good \$VERSION
- fossil bisect next
- fossil bisect vlist



The official VCS for

