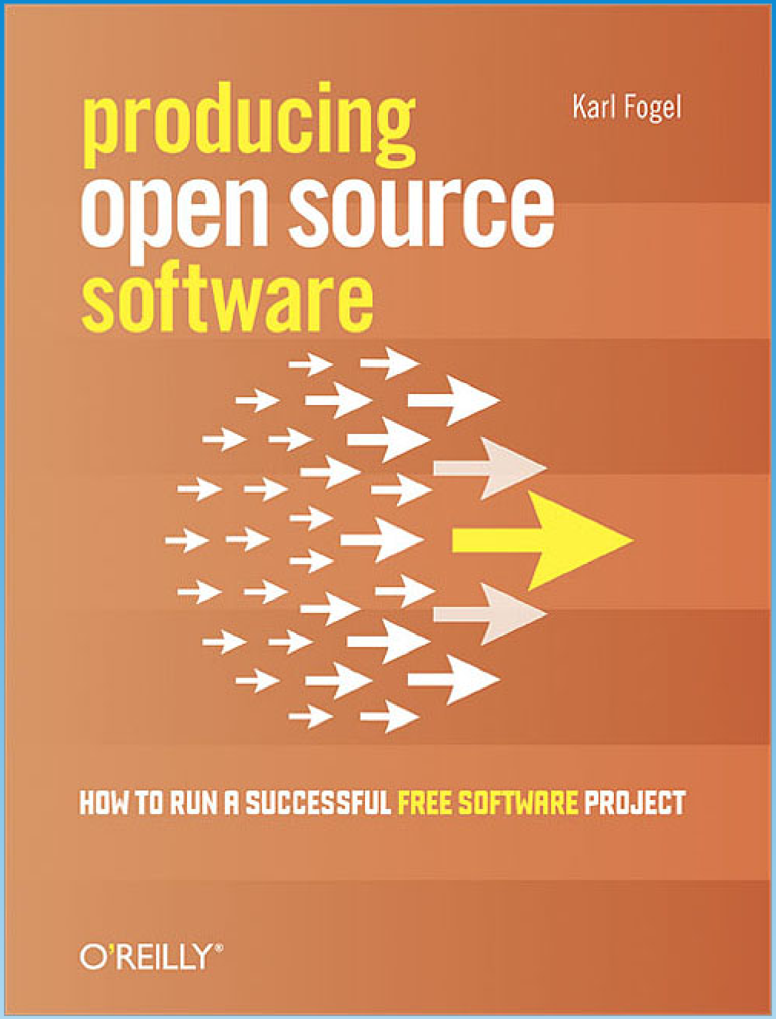
An Overview of Open Source

Karl Fogel

`kfogel@opentechstrategies.com`


producing open source software
Karl Fogel
HOW TO RUN A SUCCESSFUL FREE SOFTWARE PROJECT
O'REILLY®

“Producing Open Source Software”

producingoss.com

Open source software is software that may be modified and redistributed freely by anyone, with no restrictions on how the code may be changed, the uses to which it may be put, or the parties with whom it may be shared.

A Plethora of Acronyms

Free Software

(Wait, that's not an acronym.)

OSS

Open Source Software

F/OSS

Free / Open Source Software

FLOSS

Free / Libre / Open Source Software

History:

Stuff happens.

Varieties of Open Source Projects

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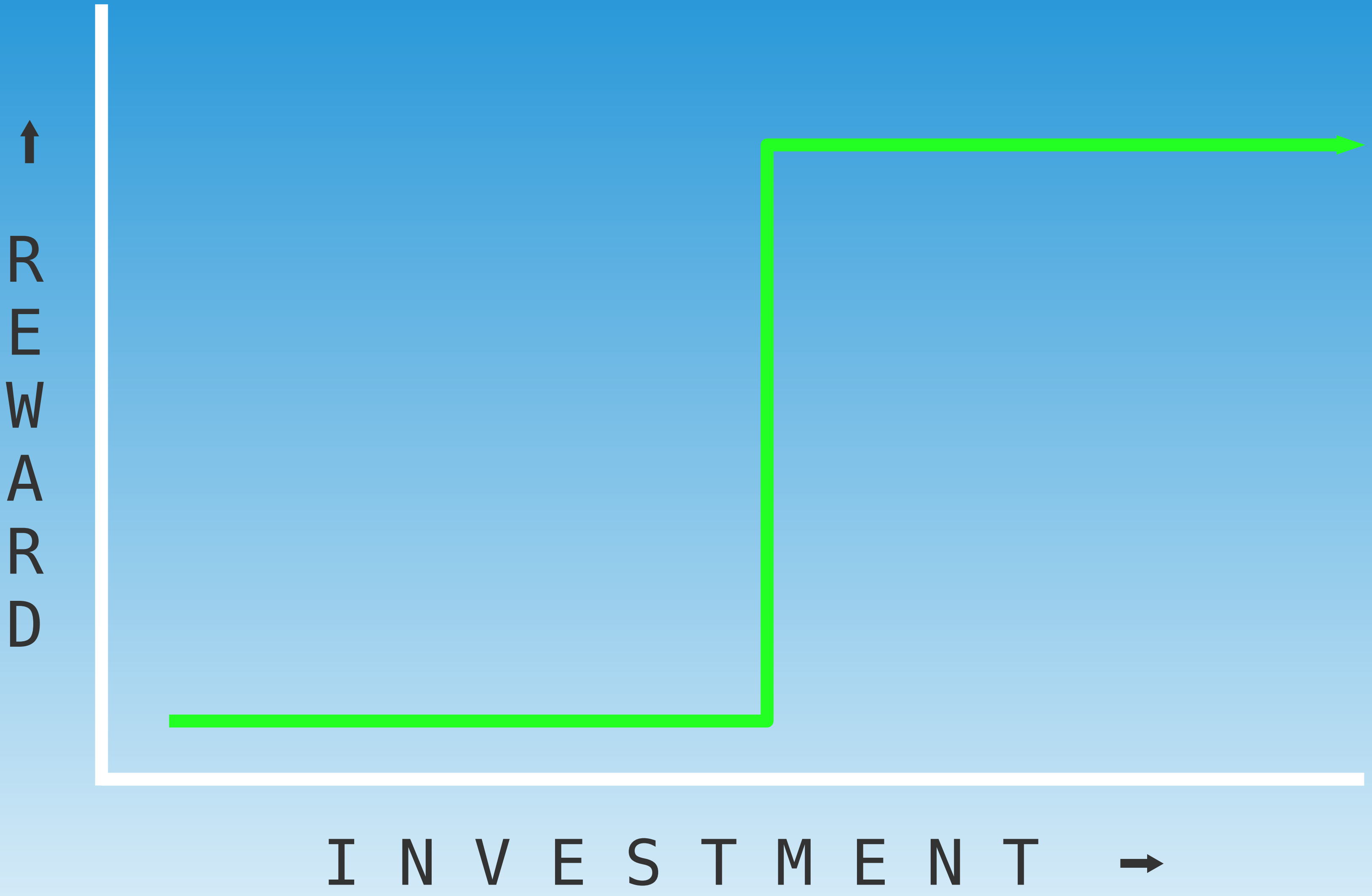
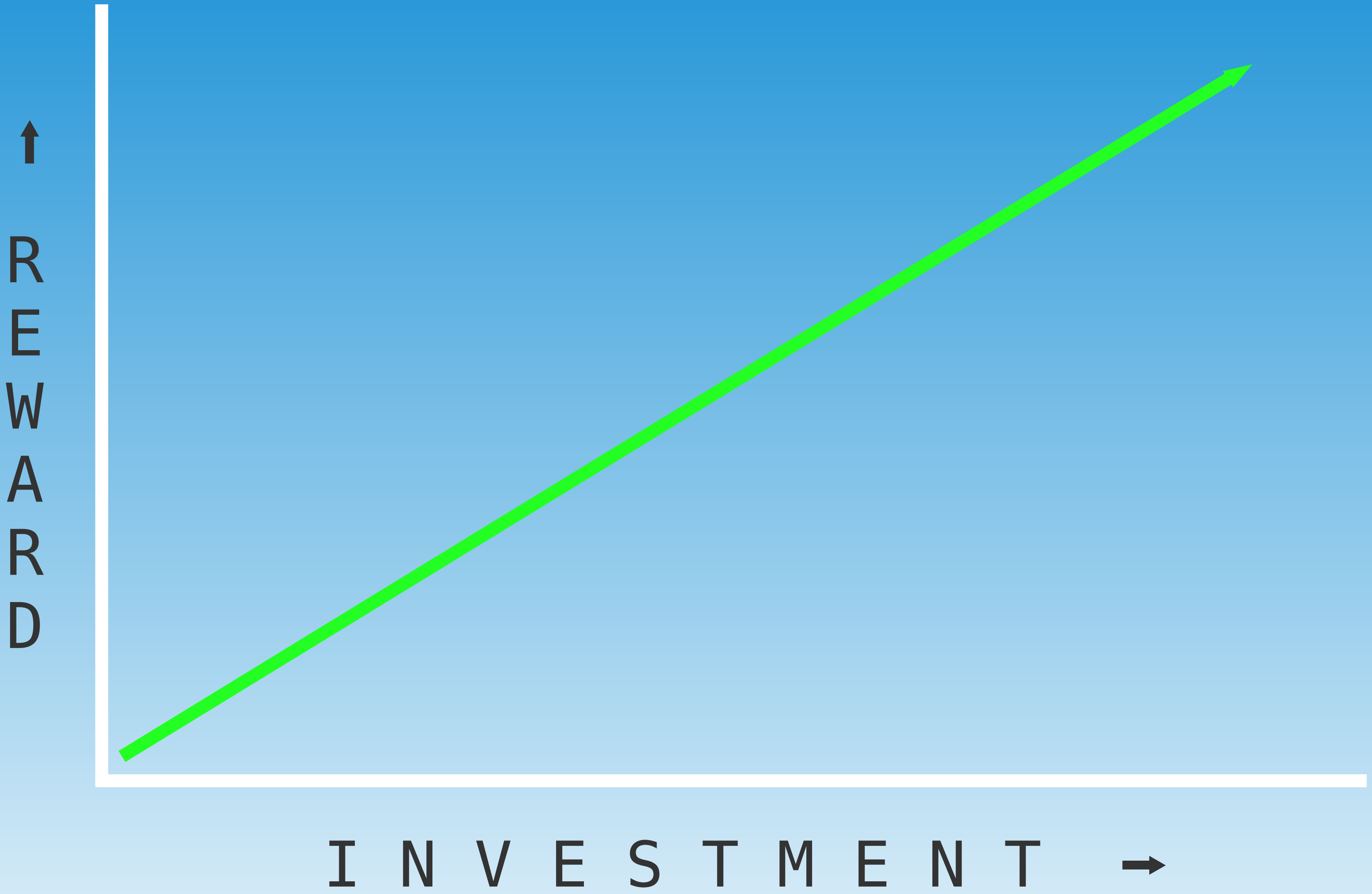
- **Territoriality and cookie-licking.**
- **Misunderstanding money.**
- **Treating unity as the goal.**
- **Open sourcing the wrong thing.**

↑ REWARD
INVESTMENT →

Step Function = High-Barrier Community



Linear Function = Low-Barrier Community



Open Tech Strategies

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"Barriers faced by newcomers to open source projects: a systematic review." (Steinmacher, Silva, Gerosa; 2014)

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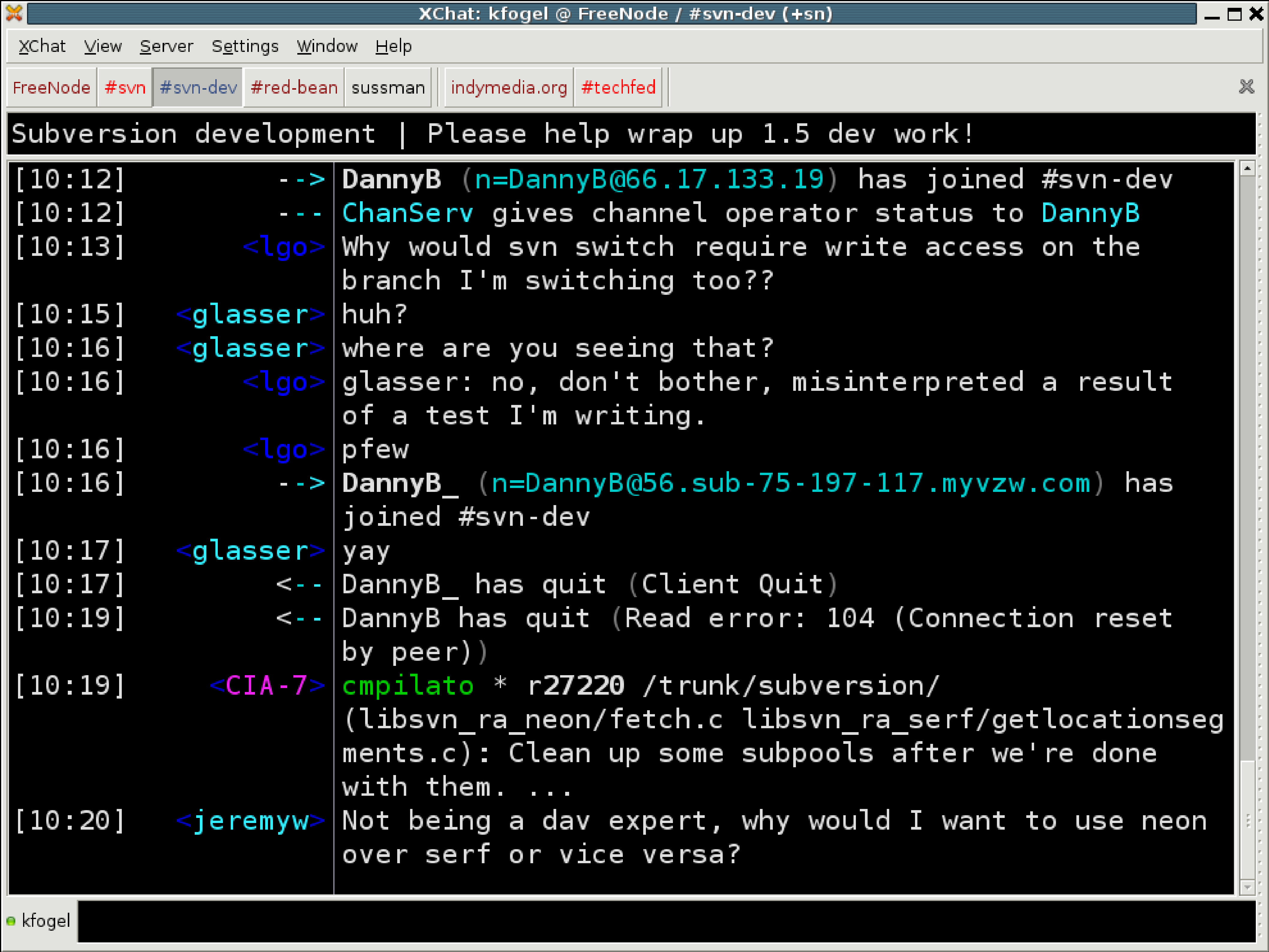
- **Gluing it all together**


XChat: kfogel @ FreeNode / #svn-dev (+sn)
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Subversion development | Please help wrap up 1.5 dev work!

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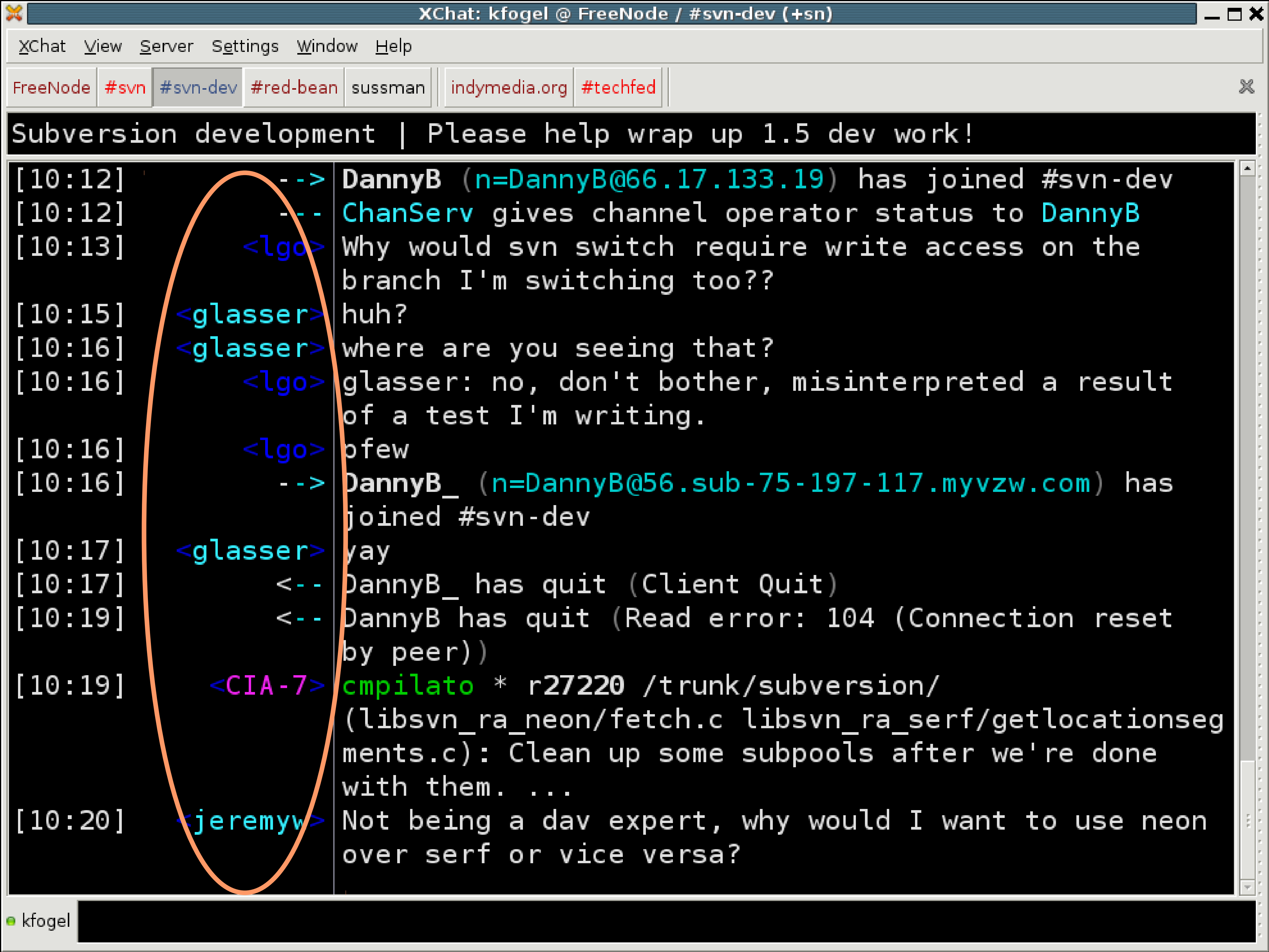
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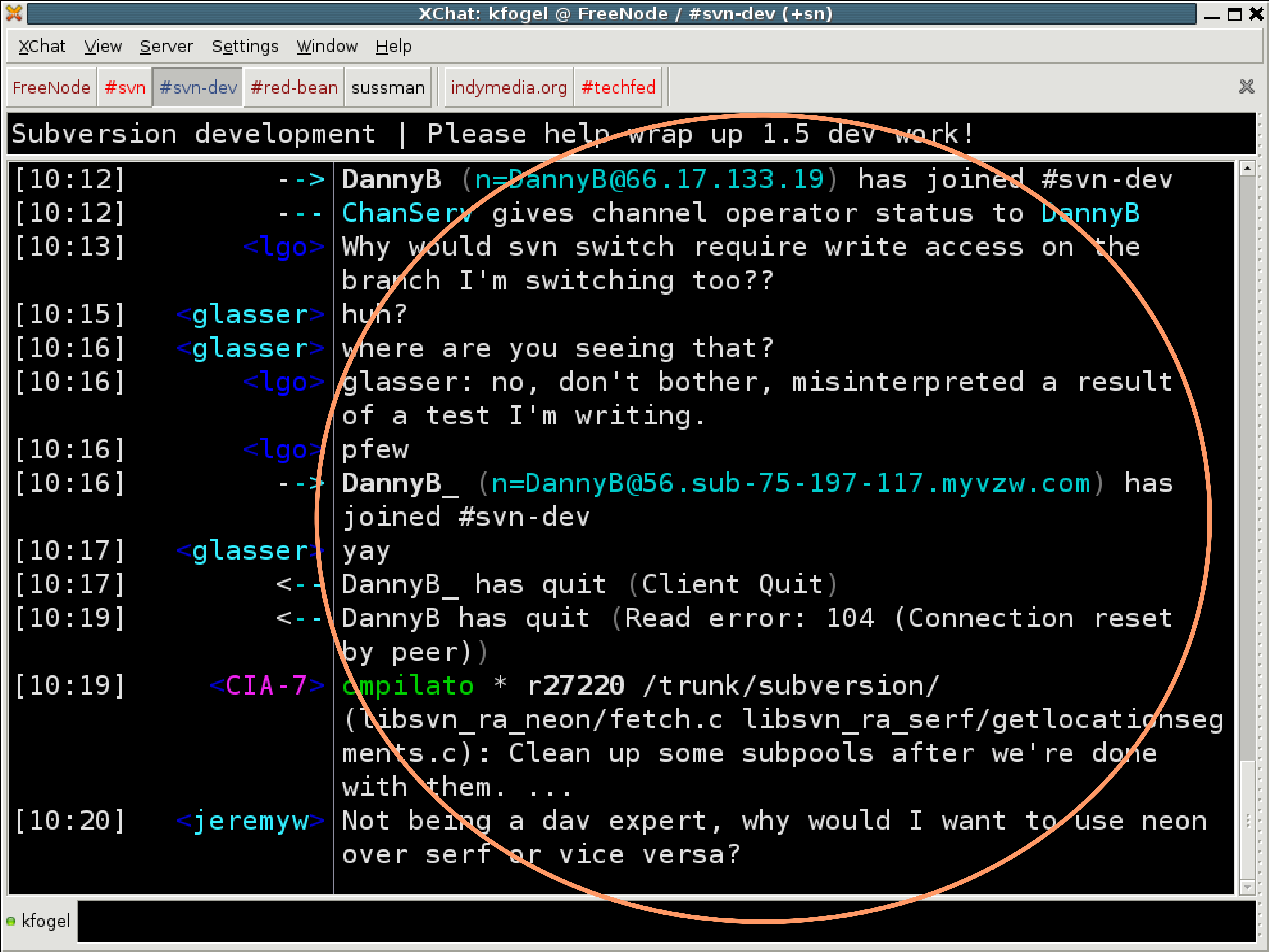
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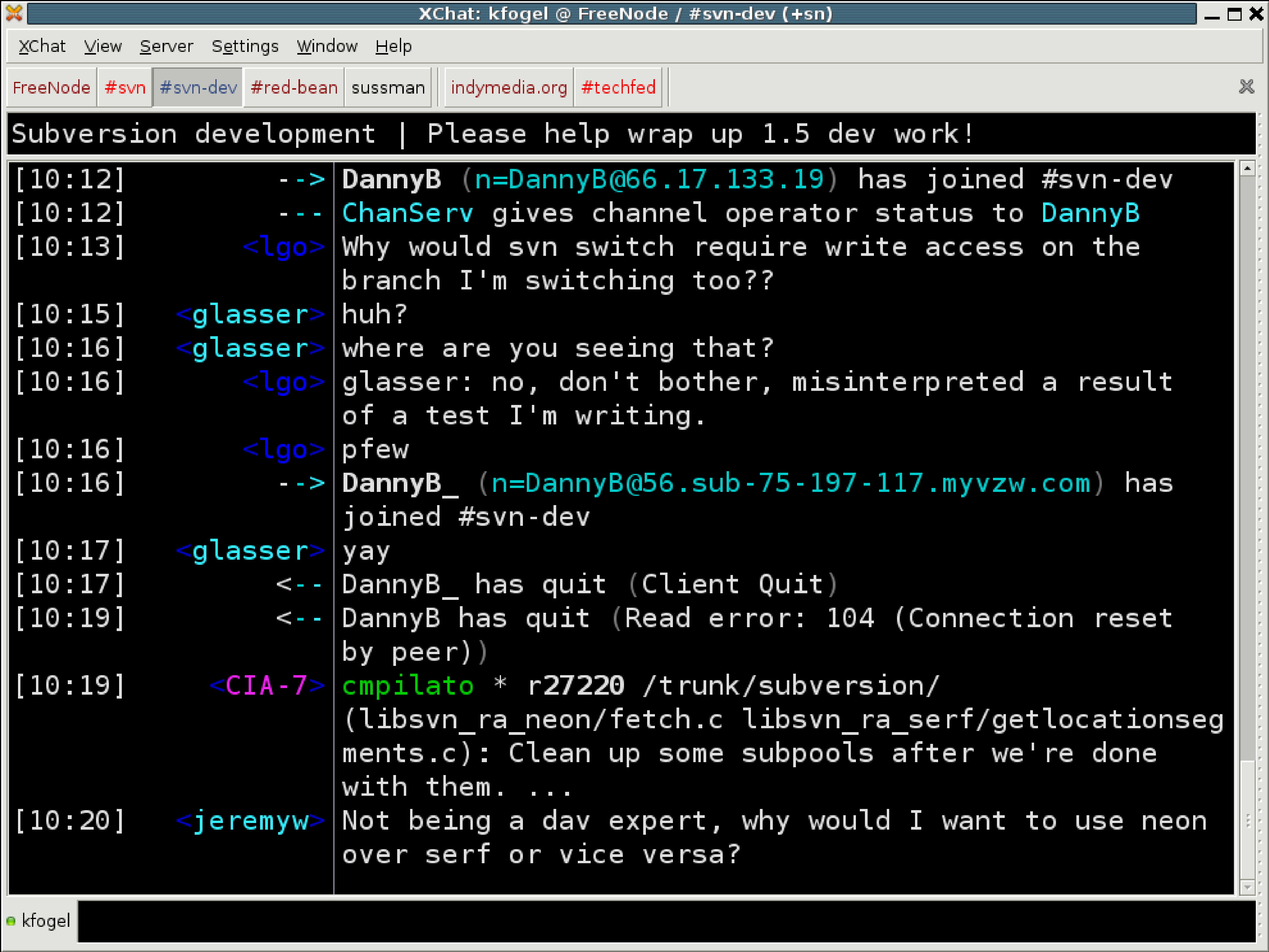
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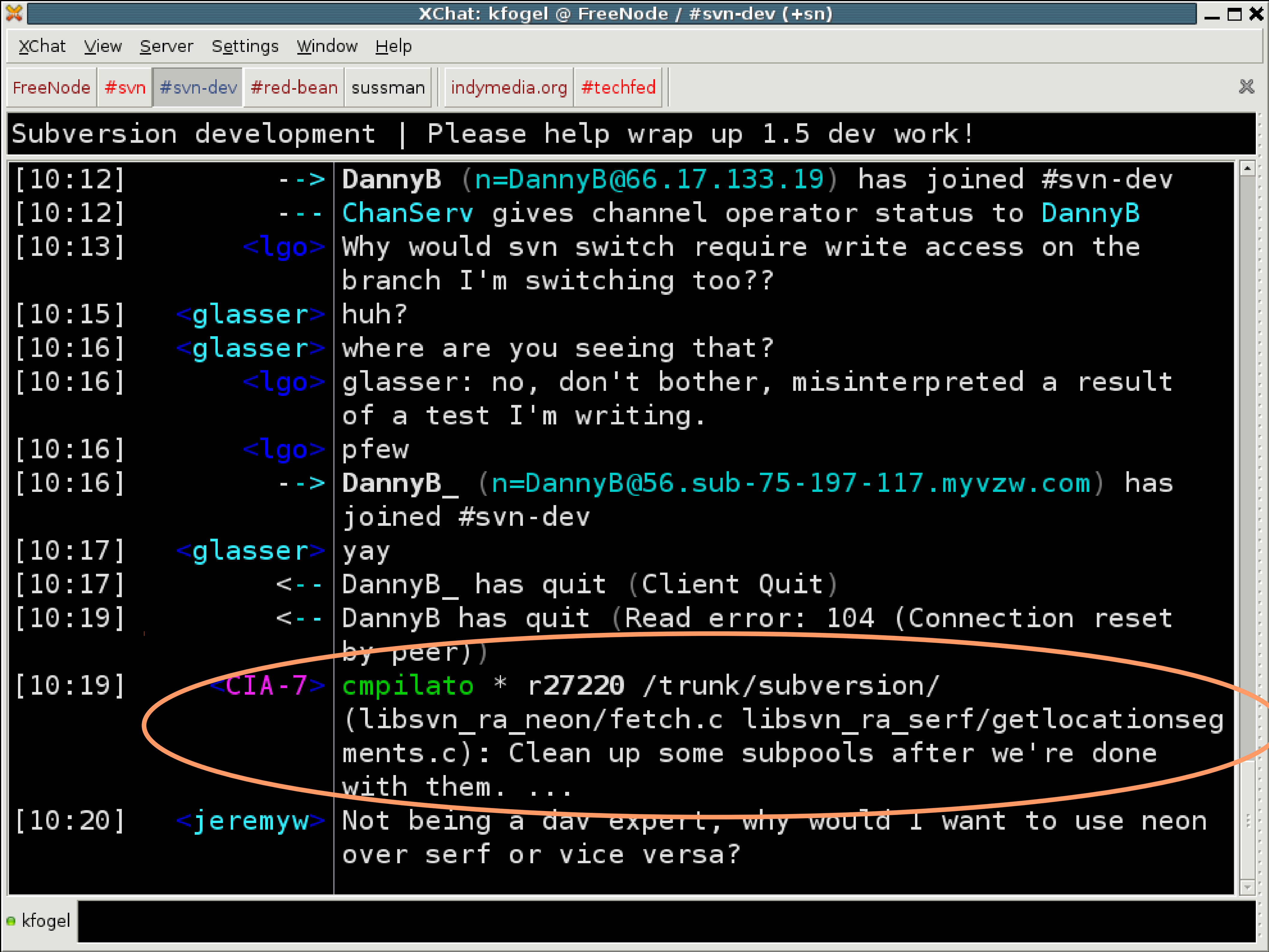
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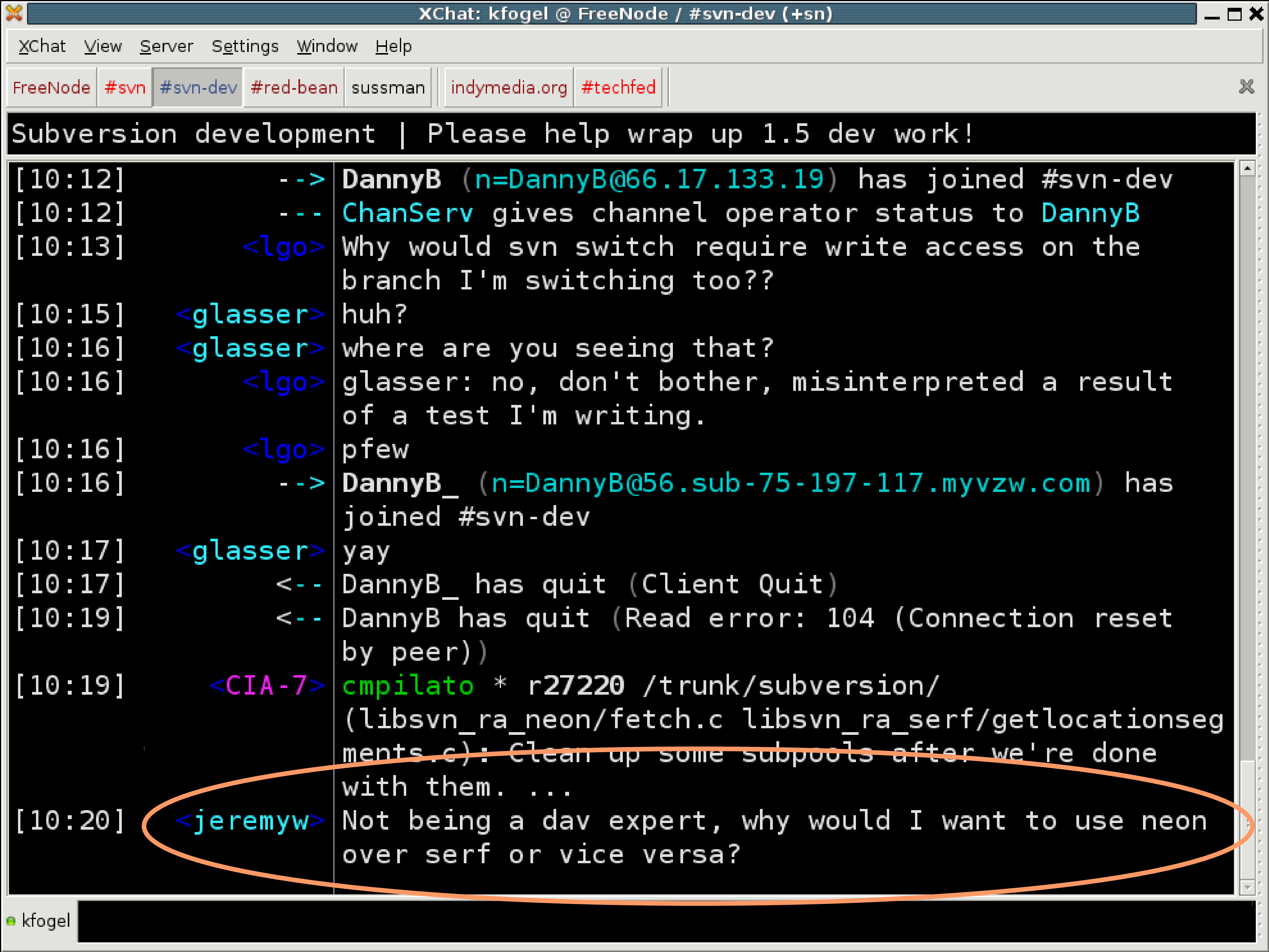
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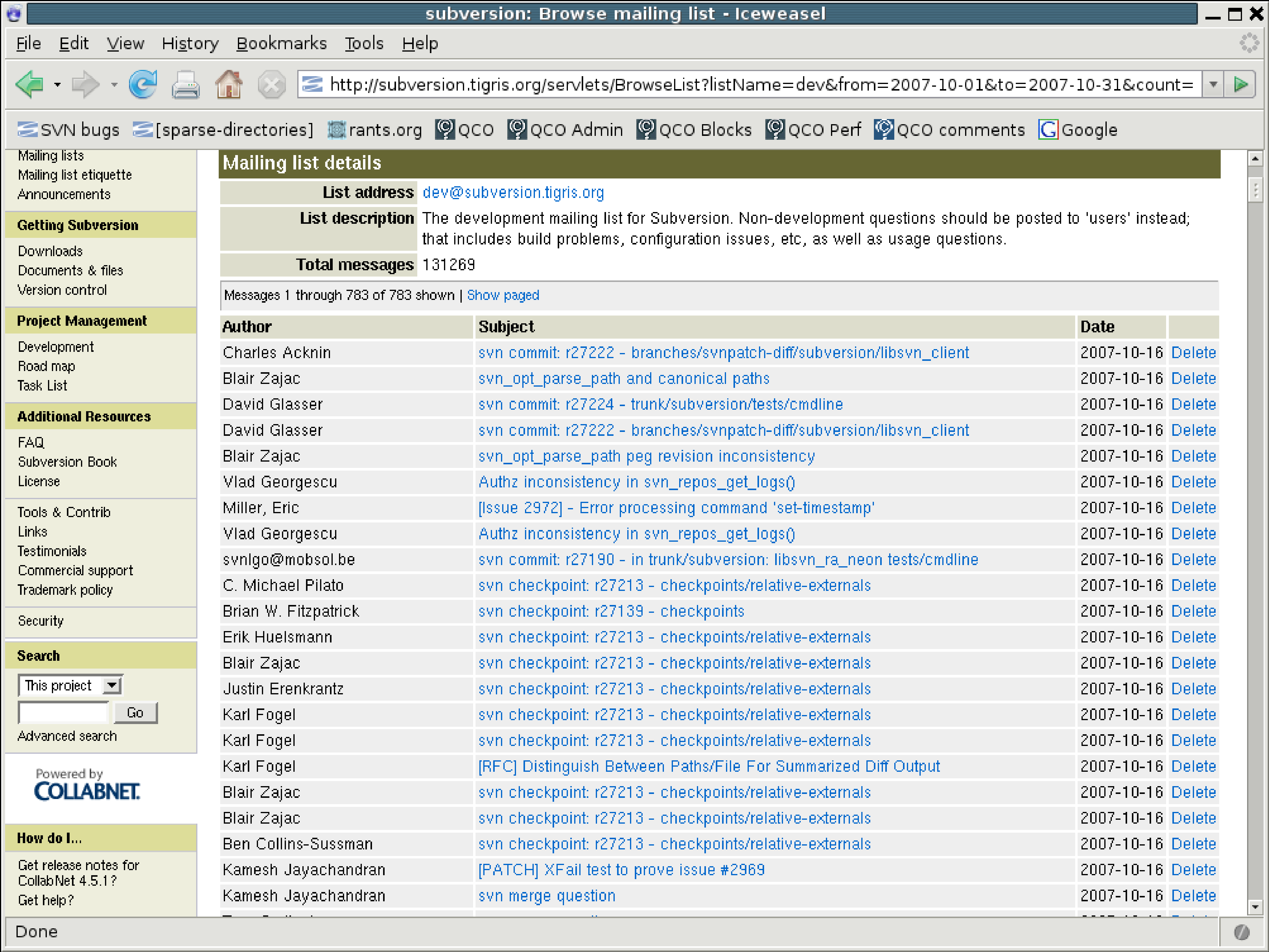
subversion: Browse mailing list - Iceweasel
File
Edit
View
History
Bookmarks
Tools
Help
http://subversion.tigris.org/servlets/BrowseList?listName=dev&from=2007-10-01&to=2007-10-31&count=
SVN bugs
[sparse-directories]
rants.org
QCO
QCO Admin
QCO Blocks
QCO Perf
QCO comments
Google
Mailing lists
Mailing list etiquette
Announcements
Getting Subversion
Downloads
Documents & files
Version control
Project Management
Development
Road map
Task List
Additional Resources
FAQ
Subversion Book
License
Tools & Contrib
Links
Testimonials
Commercial support
Trademark policy
Security
Search
This project
Go
Advanced search
Powered by
COLLABNET
How do I...
Get release notes for CollabNet 4.5.1?
Get help?
Done

Mailing list details

List address	dev@subversion.tigris.org
List description	The development mailing list for Subversion. Non-development questions should be posted to 'users' instead; that includes build problems, configuration issues, etc, as well as usage questions.
Total messages	131269

Messages 1 through 783 of 783 shown | Show paged

Author	Subject	Date	
Charles Acknin	svn commit: r27222 - branches/svnpatch-diff/subversion/libsvn_client	2007-10-16	Delete
Blair Zajac	svn_opt_parse_path and canonical paths	2007-10-16	Delete
David Glasser	svn commit: r27224 - trunk/subversion/tests/cmdline	2007-10-16	Delete
David Glasser	svn commit: r27222 - branches/svnpatch-diff/subversion/libsvn_client	2007-10-16	Delete
Blair Zajac	svn_opt_parse_path peg revision inconsistency	2007-10-16	Delete
Vlad Georgescu	Authz inconsistency in svn_repos_get_logs()	2007-10-16	Delete
Miller, Eric	[Issue 2972] - Error processing command 'set-timestamp'	2007-10-16	Delete
Vlad Georgescu	Authz inconsistency in svn_repos_get_logs()	2007-10-16	Delete
svnlgo@mobsol.be	svn commit: r27190 - in trunk/subversion: libsvn_ra_neon tests/cmdline	2007-10-16	Delete
C. Michael Pilato	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Brian W. Fitzpatrick	svn checkpoint: r27139 - checkpoints	2007-10-16	Delete
Erik Huelsmann	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Blair Zajac	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Justin Erenkrantz	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Karl Fogel	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Karl Fogel	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Karl Fogel	[RFC] Distinguish Between Paths/File For Summarized Diff Output	2007-10-16	Delete
Blair Zajac	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Blair Zajac	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Ben Collins-Sussman	svn checkpoint: r27213 - checkpoints/relative-externals	2007-10-16	Delete
Kamesh Jayachandran	[PATCH] XFail test to prove issue #2969	2007-10-16	Delete
Kamesh Jayachandran	svn merge question	2007-10-16	Delete

Oh, wait, it's 2014...

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`contrib/hooks/multimail`

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`github.com/mhagger/git-multimail`

```
------------------------------------------------------------------------
r27593 | hwright | 2007-11-05 07:10:13 -0800 (Mon, 05 Nov 2007) | 11 lines

In the command line client, don't reference a pointer to a local variable
outside of its declared scope.

Found by: Barry Scott <barry@barrys-emacs.org>
Patch by: Stefan Sperling <stsp@elego.de>

* subversion/svn/copy-cmd.c
  (svn_cl__copy): Allocate the peg revision for each copy source on
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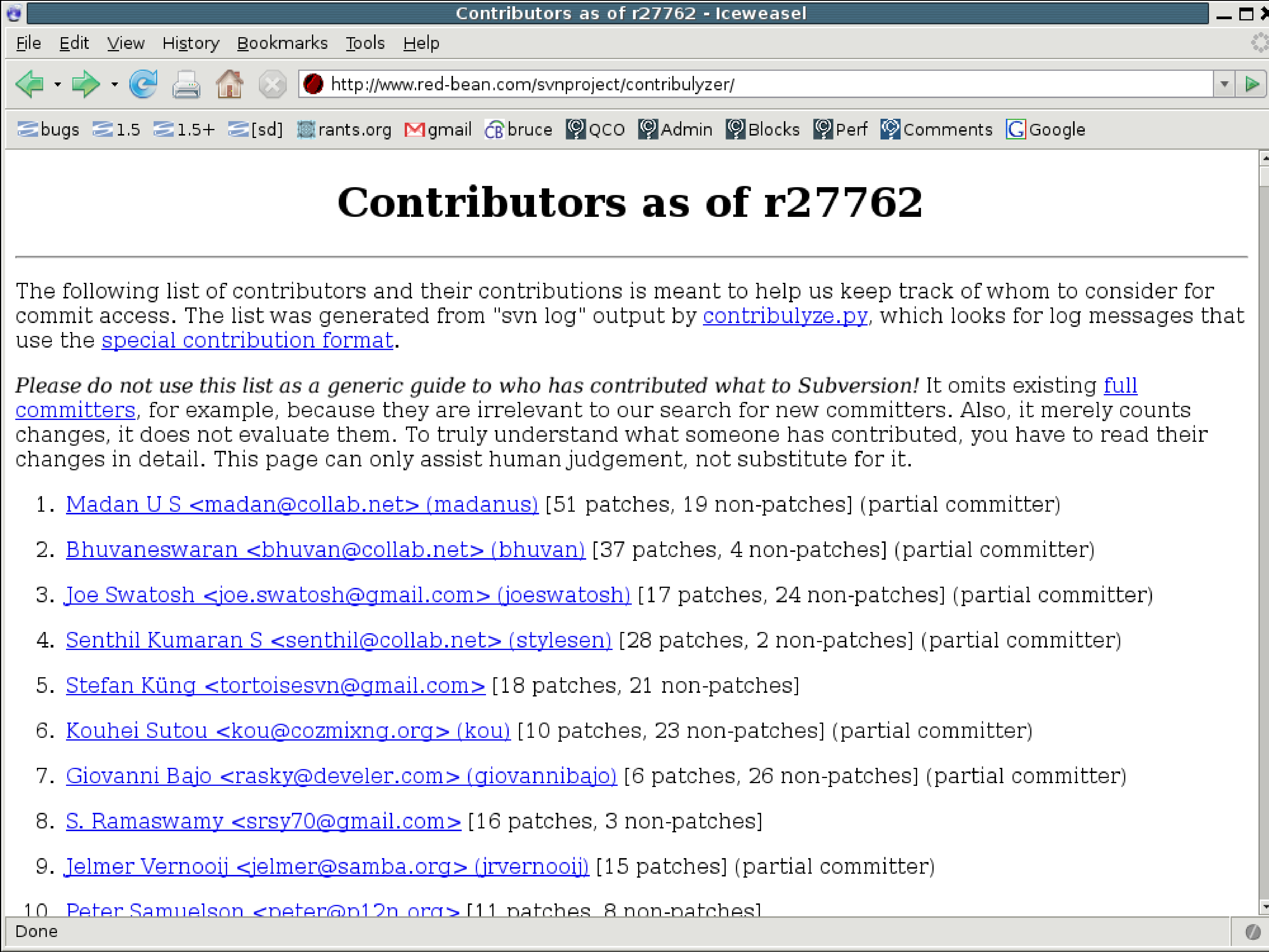
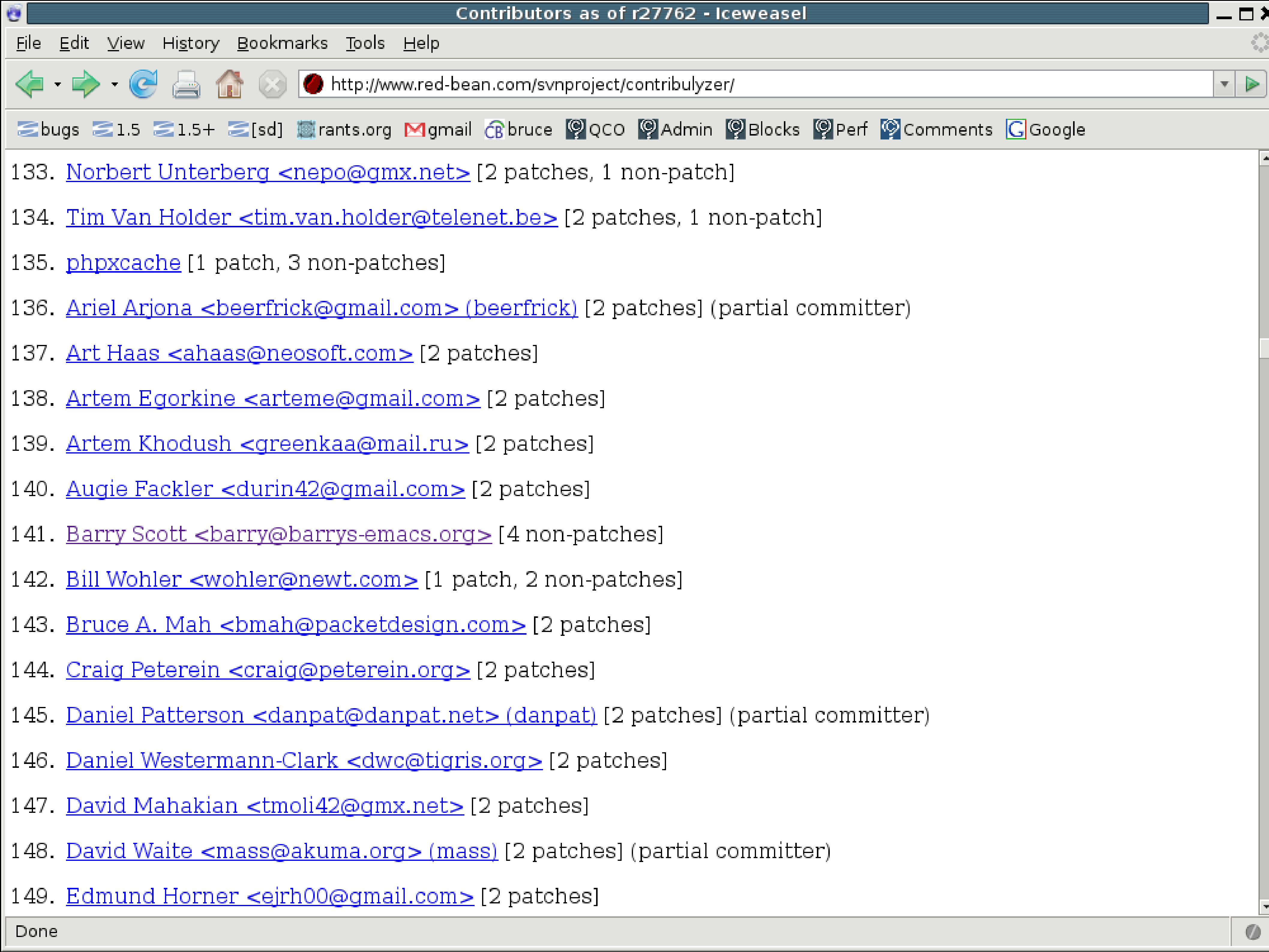

Contributors as of r27762 - Iceweasel
File Edit View History Bookmarks Tools Help
http://www.red-bean.com/svnproject/contribulyzer/
bugs 1.5 1.5+ [sd] rants.org gmail bruce QCO Admin Blocks Perf Comments Google
Done

Contributors as of r27762

The following list of contributors and their contributions is meant to help us keep track of whom to consider for commit access. The list was generated from "svn log" output by contribulyze.py, which looks for log messages that use the special contribution format.

Please do not use this list as a generic guide to who has contributed what to Subversion! It omits existing full committers, for example, because they are irrelevant to our search for new committers. Also, it merely counts changes, it does not evaluate them. To truly understand what someone has contributed, you have to read their changes in detail. This page can only assist human judgement, not substitute for it.

1. Madan U S <madan@collab.net> (madanus) [51 patches, 19 non-patches] (partial committer)
2. Bhuvaneswaran <bhuvan@collab.net> (bhuvan) [37 patches, 4 non-patches] (partial committer)
3. Joe Swatosh <joe.swatosh@gmail.com> (joeswatosh) [17 patches, 24 non-patches] (partial committer)
4. Senthil Kumaran S <senthil@collab.net> (stylesen) [28 patches, 2 non-patches] (partial committer)
5. Stefan Küng <tortoisesvn@gmail.com> [18 patches, 21 non-patches]
6. Kouhei Sutou <kou@cozmixng.org> (kou) [10 patches, 23 non-patches] (partial committer)
7. Giovanni Bajo <rasky@develer.com> (giovannibajo) [6 patches, 26 non-patches] (partial committer)
8. S. Ramaswamy <srsy70@gmail.com> [16 patches, 3 non-patches]
9. Jelmer Vernooij <jelmer@samba.org> (jrvernooij) [15 patches] (partial committer)
10. Peter Samuelson <peter@p12n.org> [11 patches, 8 non-patches]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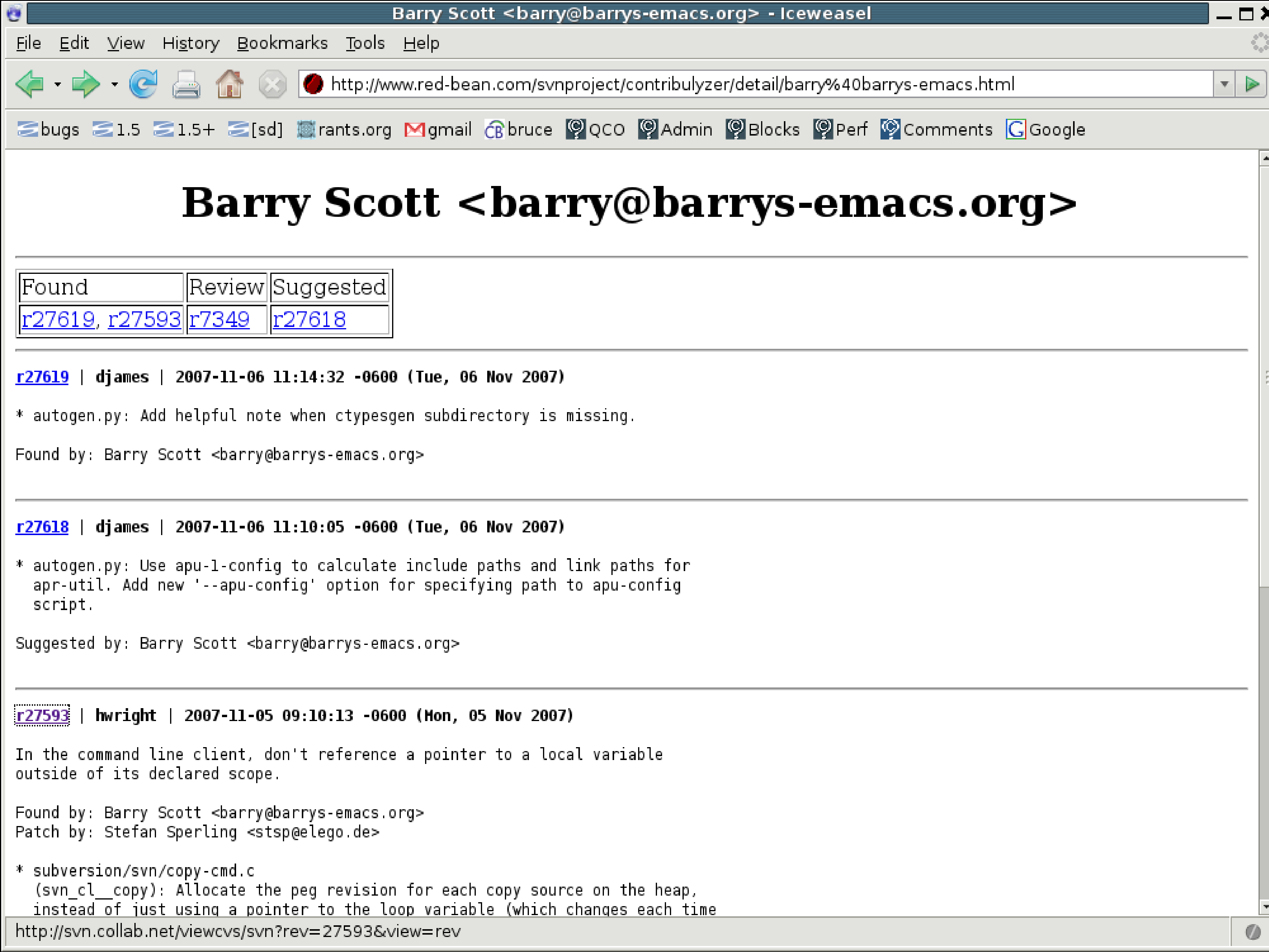
File Edit View History Bookmarks Tools Help
http://www.red-bean.com/svnproject/contribulyzer/
bugs 1.5 1.5+ [sd] rants.org gmail bruce QCO Admin Blocks Perf Comments Google
Done

133. Norbert Unterberg <nepo@gmx.net> [2 patches, 1 non-patch]
134. Tim Van Holder <tim.van.holder@telenet.be> [2 patches, 1 non-patch]
135. phpxcache [1 patch, 3 non-patches]
136. Ariel Arjona <beerfrick@gmail.com> (beerfrick) [2 patches] (partial committer)
137. Art Haas <ahaas@neosoft.com> [2 patches]
138. Artem Egorkine <arteme@gmail.com> [2 patches]
139. Artem Khodush <greenkaa@mail.ru> [2 patches]
140. Augie Fackler <durin42@gmail.com> [2 patches]
141. Barry Scott <barry@barrys-emacs.org> [4 non-patches]
142. Bill Wohler <wohler@newt.com> [1 patch, 2 non-patches]
143. Bruce A. Mah <bmah@packetdesign.com> [2 patches]
144. Craig Peterein <craig@peterein.org> [2 patches]
145. Daniel Patterson <danpat@danpat.net> (danpat) [2 patches] (partial committer)
146. Daniel Westermann-Clark <dwc@tigris.org> [2 patches]
147. David Mahakian <tmoli42@gmx.net> [2 patches]
148. David Waite <mass@akuma.org> (mass) [2 patches] (partial committer)
149. Edmund Horner <ejrh00@gmail.com> [2 patches]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File Edit View History Bookmarks Tools Help
http://www.red-bean.com/svnproject/contribulyzer/detail/barry%40barrys-emacs.html
bugs 1.5 1.5+ [sd] rants.org gmail bruce QCO Admin Blocks Perf Comments Google
http://svn.collab.net/viewcvs/svn?rev=27593&view=rev

Barry Scott <barry@barrys-emacs.org>

Found	Review	Suggested
r27619, r27593	r7349	r27618

r27619 | djames | 2007-11-06 11:14:32 -0600 (Tue, 06 Nov 2007)

```
* autogen.py: Add helpful note when ctypesgen subdirectory is missing.

Found by: Barry Scott <barry@barrys-emacs.org>
```

---

r27618 | djames | 2007-11-06 11:10:05 -0600 (Tue, 06 Nov 2007)

```
* autogen.py: Use apu-1-config to calculate include paths and link paths for
  apr-util. Add new '--apu-config' option for specifying path to apu-config
  script.

Suggested by: Barry Scott <barry@barrys-emacs.org>
```

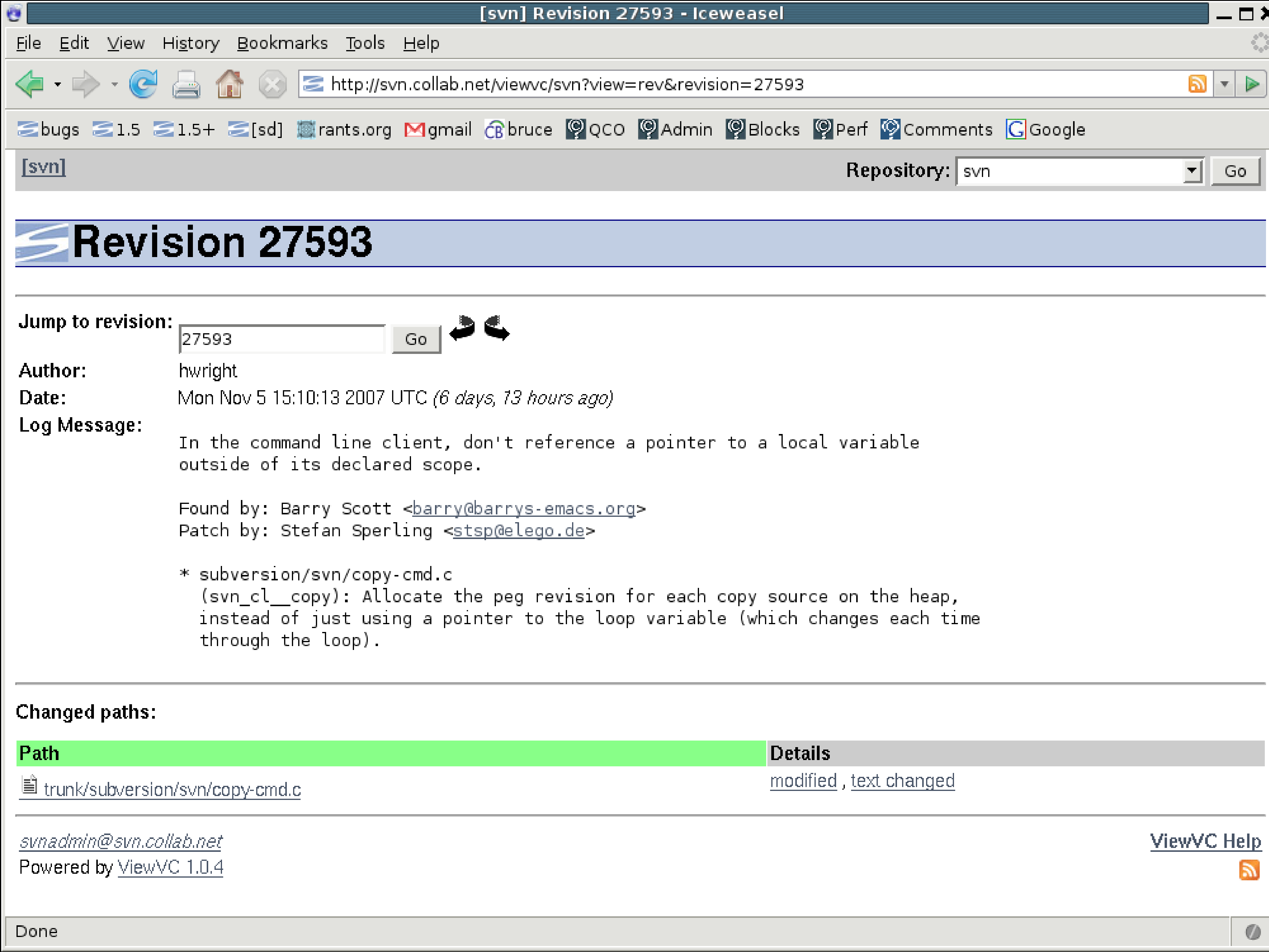
---

r27593 | hwright | 2007-11-05 09:10:13 -0600 (Mon, 05 Nov 2007)

```
In the command line client, don't reference a pointer to a local variable
outside of its declared scope.

Found by: Barry Scott <barry@barrys-emacs.org>
Patch by: Stefan Sperling <stsp@elego.de>

* subversion/svn/copy-cmd.c
  (svn_cl__copy): Allocate the peg revision for each copy source on the heap,
  instead of just using a pointer to the loop variable (which changes each time
```


[svn] Revision 27593 - Iceweasel
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http://svn.collab.net/viewvc/svn?view=rev&revision=27593
bugs 1.5 1.5+ [sd] rants.org gmail bruce QCO Admin Blocks Perf Comments Google
[svn]
Repository: svn
Go
Go
Done

Revision 27593

Jump to revision: 27593

Author: hwright

Date: Mon Nov 5 15:10:13 2007 UTC *(6 days, 13 hours ago)*

Log Message:

```
In the command line client, don't reference a pointer to a local variable
outside of its declared scope.

Found by: Barry Scott <barry@barrys-emacs.org>
Patch by: Stefan Sperling <stsp@elego.de>

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  instead of just using a pointer to the loop variable (which changes each time
  through the loop).
```

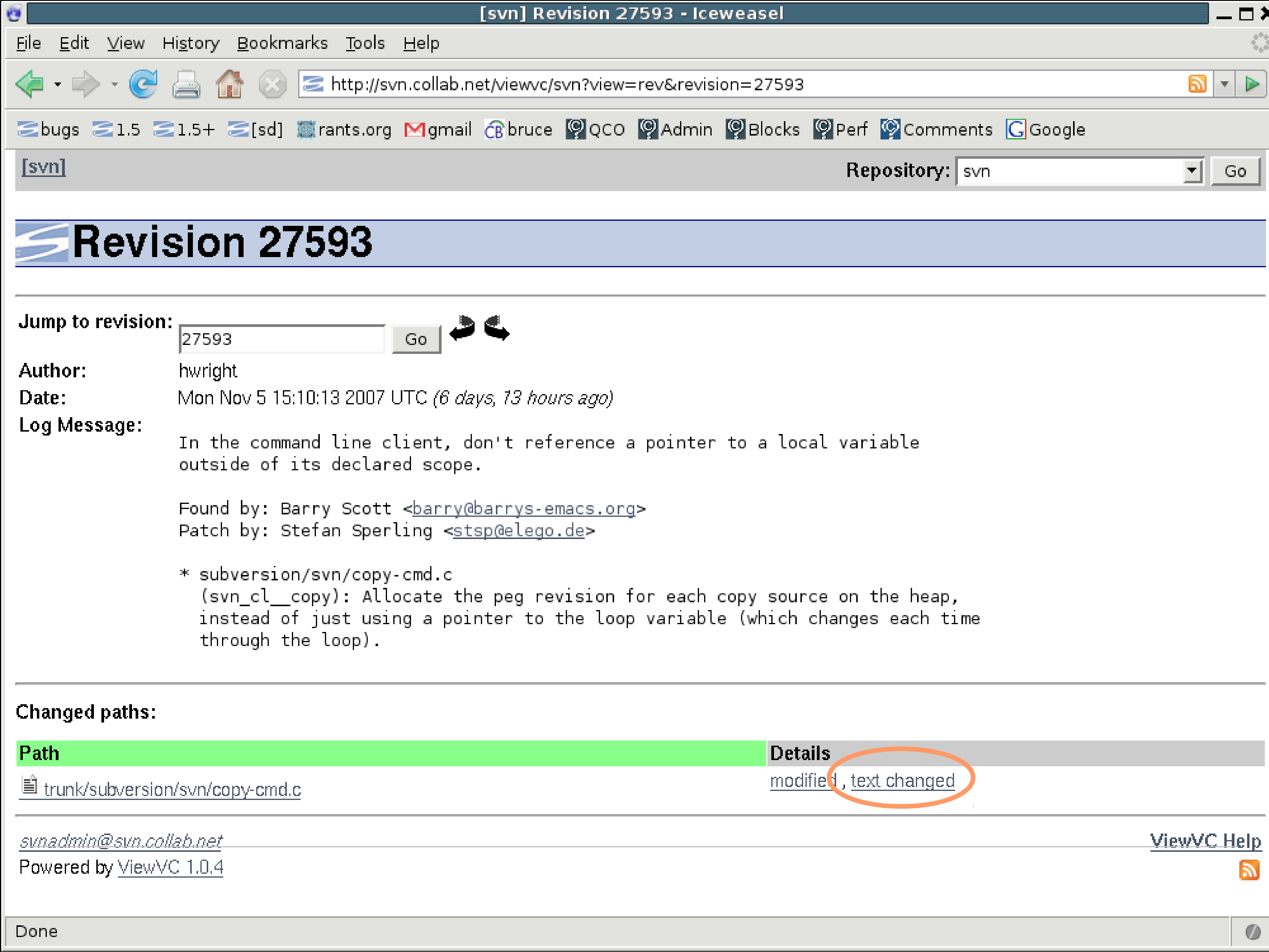
Changed paths:

Path	Details
trunk/subversion/svn/copy-cmd.c	modified , text changed

svnadmin@svn.collab.net

Powered by ViewVC 1.0.4

ViewVC Help


[svn] Revision 27593 - Iceweasel
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http://svn.collab.net/viewvc/svn?view=rev&revision=27593
bugs 1.5 1.5+ [sd] rants.org gmail bruce QCO Admin Blocks Perf Comments Google
[svn]
Repository: svn Go
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Revision 27593

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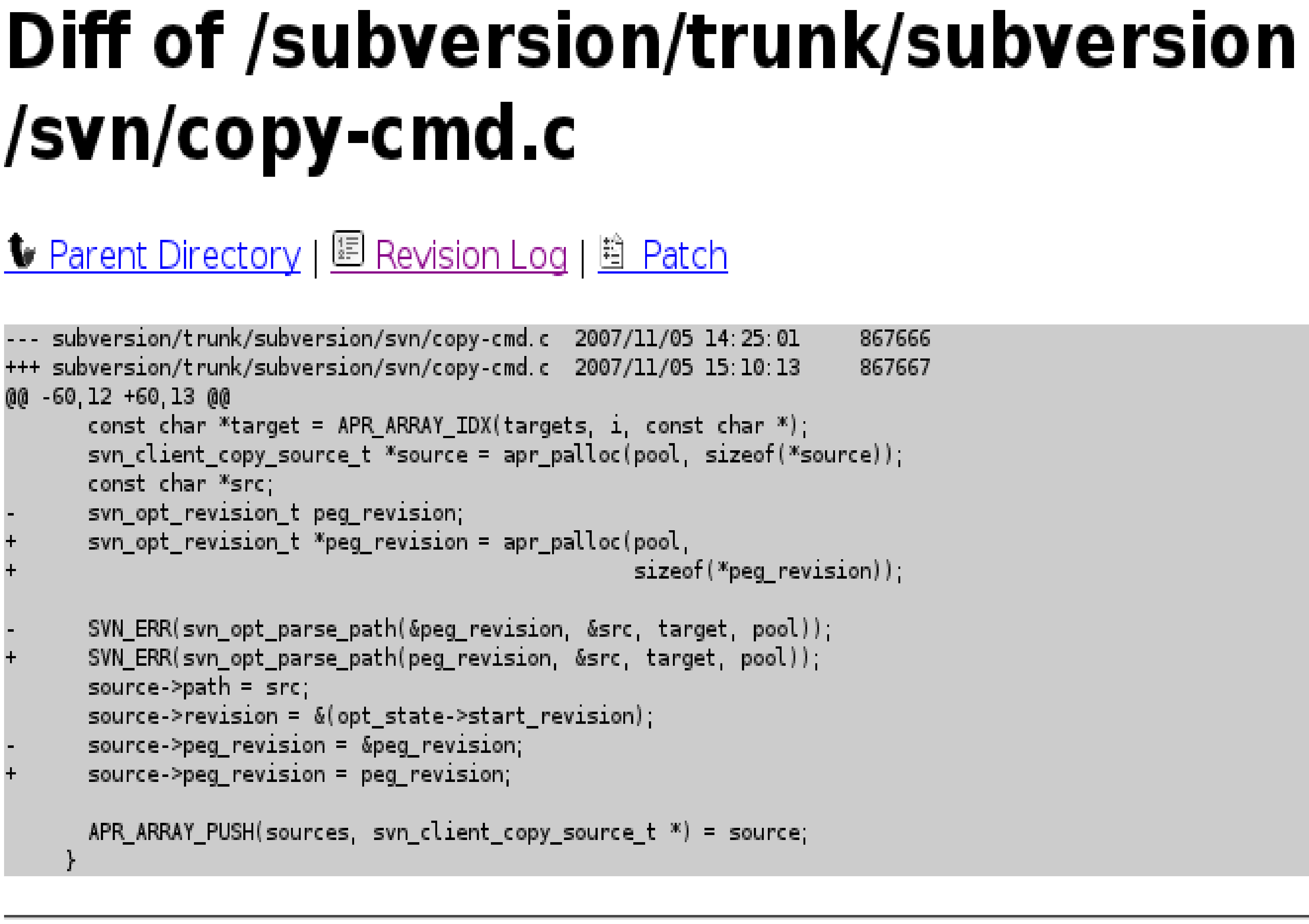
svnadmin@svn.collab.net ViewVC Help

Powered by ViewVC 1.0.4



Diff of /subversion/trunk/subversion/svn/copy-cmd.c

```
--- subversion/trunk/subversion/svn/copy-cmd.c  2007/11/05 14:25:01     867666
+++ subversion/trunk/subversion/svn/copy-cmd.c  2007/11/05 15:10:13     867667
@@ -60,12 +60,13 @@
       const char *target = APR_ARRAY_IDX(targets, i, const char *);
       svn_client_copy_source_t *source = apr_palloc(pool, sizeof(*source));
       const char *src;
-      svn_opt_revision_t peg_revision;
+      svn_opt_revision_t *peg_revision = apr_palloc(pool,
+                                                    sizeof(*peg_revision));

-      SVN_ERR(svn_opt_parse_path(&peg_revision, &src, target, pool));
+      SVN_ERR(svn_opt_parse_path(peg_revision, &src, target, pool));
       source->path = src;
       source->revision = &(opt_state->start_revision);
-      source->peg_revision = &peg_revision;
+      source->peg_revision = peg_revision;

       APR_ARRAY_PUSH(sources, svn_client_copy_source_t *) = source;
     }
```

Set Culture Early

Set Culture Early

- **Review, respond – visible results quickly**

Set Culture Early

- **Review, respond – visible results quickly**
- **Consensus (voting should be rare)**

Set Culture Early

- **Review, respond – visible results quickly**
- **Consensus (voting should be rare)**
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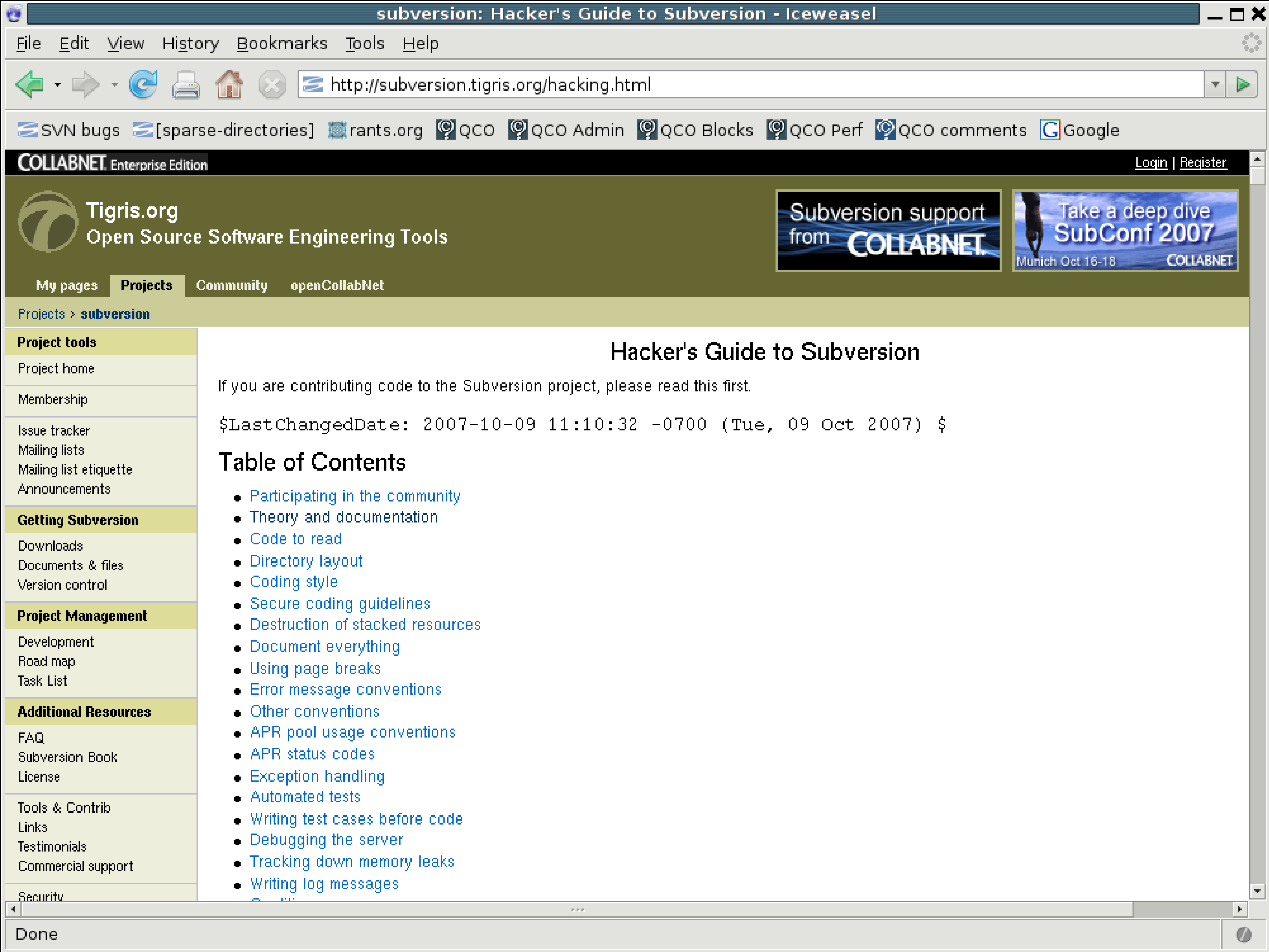
Set Culture Early

- Review, respond – visible results quickly
- Consensus (voting should be rare)
- Stable references
- Tone

Set Culture Early

- Review, respond – visible results quickly
- Consensus (voting should be rare)
- Stable references
- Tone
- Document the culture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Road map
Task List
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FAQ
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Testimonials
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Hacker's Guide to Subversion

If you are contributing code to the Subversion project, please read this first.

`$LastChangedDate: 2007-10-09 11:10:32 -0700 (Tue, 09 Oct 2007) $`

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- Participating in the community
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- APR pool usage conventions
- APR status codes
- Exception handling
- Automated tests
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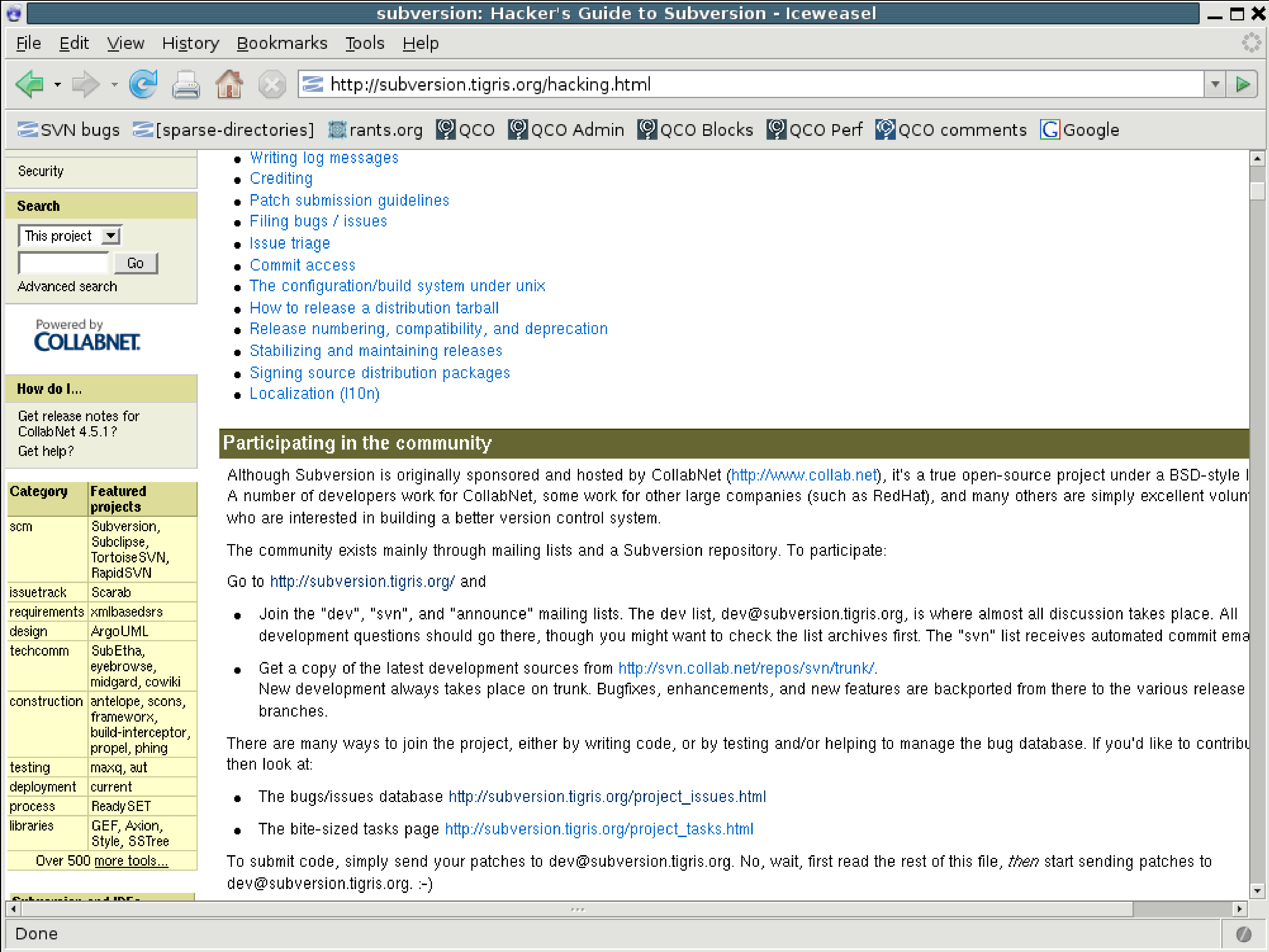
- Writing log messages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How do I...
Get release notes for CollabNet 4.5.1?
Get help?
Done

Category	Featured projects
scm	Subversion, Subclipse, TortoiseSVN, RapidSVN
issuetrack	Scarab
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deployment	current
process	ReadySET
libraries	GEF, Axion, Style, SSTree
Over 500 more tools...	

- Writing log messages
- Crediting
- Patch submission guidelines
- Filing bugs / issues
- Issue triage
- Commit access
- The configuration/build system under unix
- How to release a distribution tarball
- Release numbering, compatibility, and deprecation
- Stabilizing and maintaining releases
- Signing source distribution packages
- Localization (l10n)

Participating in the community

Although Subversion is originally sponsored and hosted by CollabNet (http://www.collab.net), it's a true open-source project under a BSD-style l
A number of developers work for CollabNet, some work for other large companies (such as RedHat), and many others are simply excellent volun
who are interested in building a better version control system.

The community exists mainly through mailing lists and a Subversion repository. To participate:

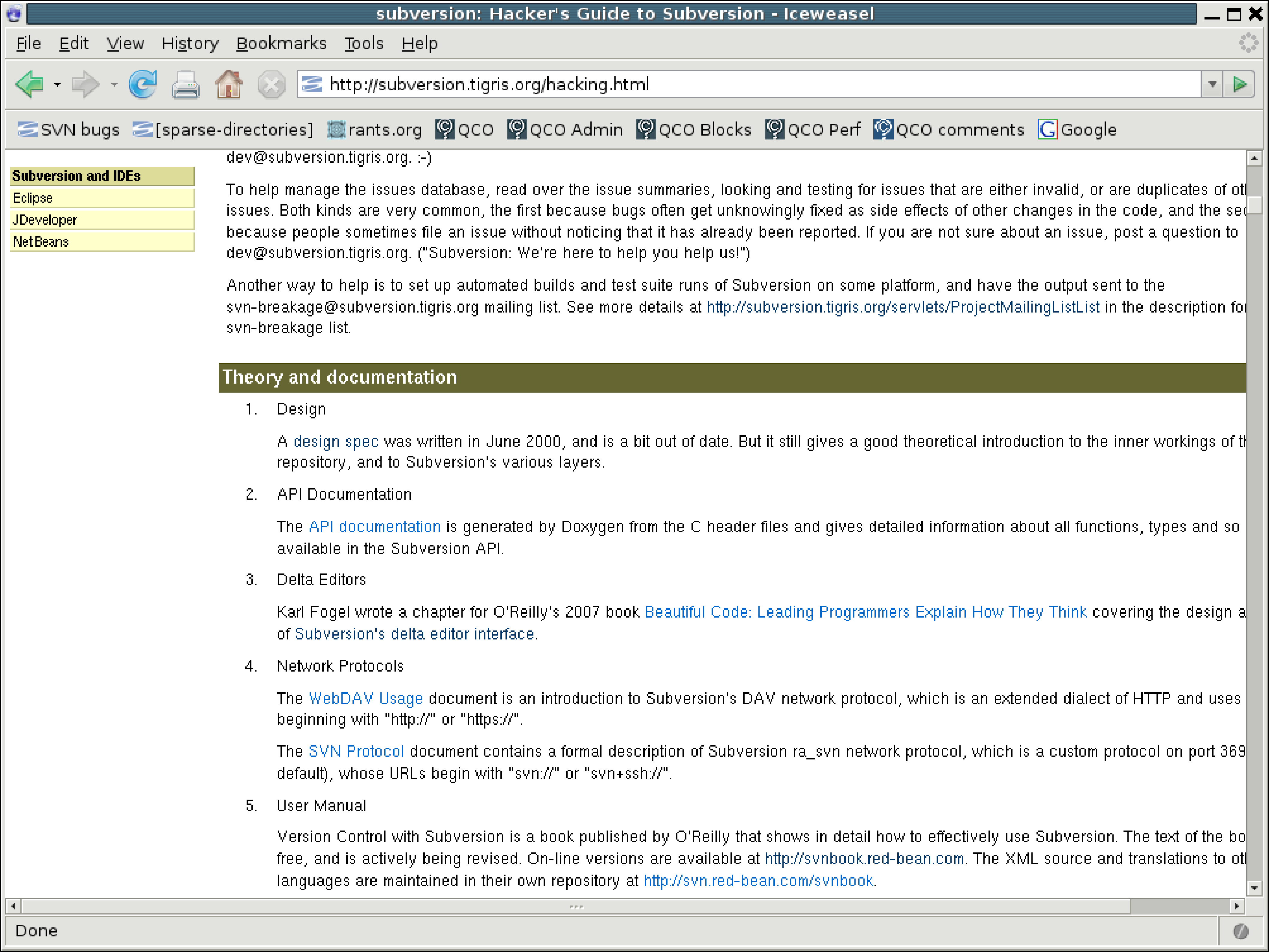
Go to http://subversion.tigris.org/ and

- Join the "dev", "svn", and "announce" mailing lists. The dev list, dev@subversion.tigris.org, is where almost all discussion takes place. All development questions should go there, though you might want to check the list archives first. The "svn" list receives automated commit ema
- Get a copy of the latest development sources from http://svn.collab.net/repos/svn/trunk/.
  New development always takes place on trunk. Bugfixes, enhancements, and new features are backported from there to the various release branches.

There are many ways to join the project, either by writing code, or by testing and/or helping to manage the bug database. If you'd like to contribu
then look at:

- The bugs/issues database http://subversion.tigris.org/project_issues.html
- The bite-sized tasks page http://subversion.tigris.org/project_tasks.html

To submit code, simply send your patches to dev@subversion.tigris.org. No, wait, first read the rest of this file, *then* start sending patches to dev@subversion.tigris.org. :-)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QCO Blocks
QCO Perf
QCO comments
Google
Subversion and IDEs
Eclipse
JDeveloper
NetBeans
Done

dev@subversion.tigris.org. :-)

To help manage the issues database, read over the issue summaries, looking and testing for issues that are either invalid, or are duplicates of ot issues. Both kinds are very common, the first because bugs often get unknowingly fixed as side effects of other changes in the code, and the se because people sometimes file an issue without noticing that it has already been reported. If you are not sure about an issue, post a question to dev@subversion.tigris.org. ("Subversion: We're here to help you help us!")

Another way to help is to set up automated builds and test suite runs of Subversion on some platform, and have the output sent to the svn-breakage@subversion.tigris.org mailing list. See more details at http://subversion.tigris.org/servlets/ProjectMailingListList in the description fo svn-breakage list.

Theory and documentation

1. Design

   A design spec was written in June 2000, and is a bit out of date. But it still gives a good theoretical introduction to the inner workings of t repository, and to Subversion's various layers.

2. API Documentation

   The API documentation is generated by Doxygen from the C header files and gives detailed information about all functions, types and so available in the Subversion API.

3. Delta Editors

   Karl Fogel wrote a chapter for O'Reilly's 2007 book Beautiful Code: Leading Programmers Explain How They Think covering the design a of Subversion's delta editor interface.

4. Network Protocols

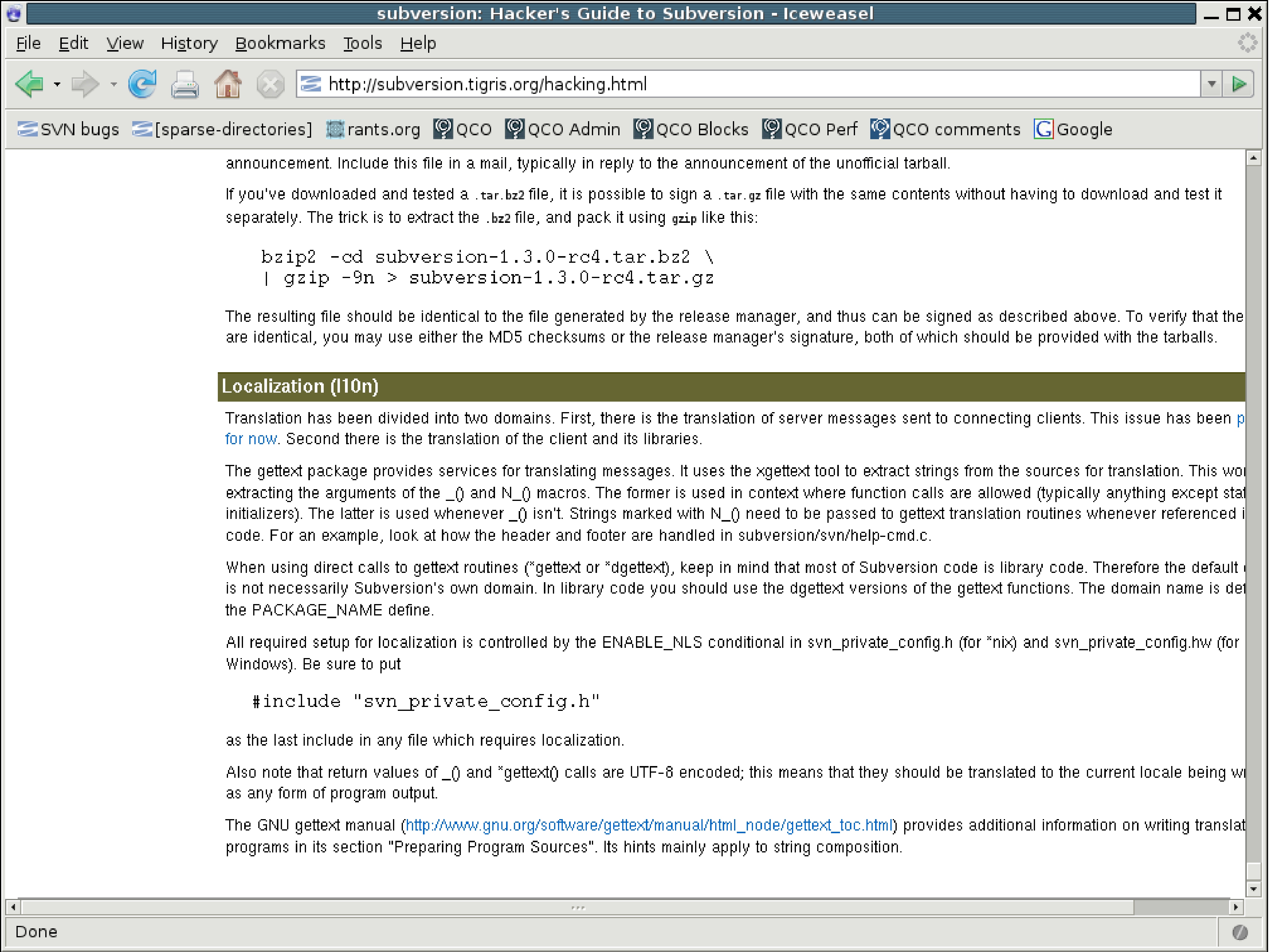
   The WebDAV Usage document is an introduction to Subversion's DAV network protocol, which is an extended dialect of HTTP and uses beginning with "http://" or "https://".

   The SVN Protocol document contains a formal description of Subversion ra_svn network protocol, which is a custom protocol on port 369 default), whose URLs begin with "svn://" or "svn+ssh://".

5. User Manual

   Version Control with Subversion is a book published by O'Reilly that shows in detail how to effectively use Subversion. The text of the bo free, and is actively being revised. On-line versions are available at http://svnbook.red-bean.com. The XML source and translations to ot languages are maintained in their own repository at http://svn.red-bean.com/svnbook.

`...skip 43 pages...`



announcement. Include this file in a mail, typically in reply to the announcement of the unofficial tarball.

If you've downloaded and tested a `.tar.bz2` file, it is possible to sign a `.tar.gz` file with the same contents without having to download and test it separately. The trick is to extract the `.bz2` file, and pack it using `gzip` like this:

```
bzip2 -cd subversion-1.3.0-rc4.tar.bz2 \
| gzip -9n > subversion-1.3.0-rc4.tar.gz
```

The resulting file should be identical to the file generated by the release manager, and thus can be signed as described above. To verify that the are identical, you may use either the MD5 checksums or the release manager's signature, both of which should be provided with the tarballs.

Localization (l10n)

Translation has been divided into two domains. First, there is the translation of server messages sent to connecting clients. This issue has been p for now. Second there is the translation of the client and its libraries.

The gettext package provides services for translating messages. It uses the xgettext tool to extract strings from the sources for translation. This wo extracting the arguments of the _() and N_() macros. The former is used in context where function calls are allowed (typically anything except sta initializers). The latter is used whenever _() isn't. Strings marked with N_() need to be passed to gettext translation routines whenever referenced i code. For an example, look at how the header and footer are handled in subversion/svn/help-cmd.c.

When using direct calls to gettext routines (*gettext or *dgettext), keep in mind that most of Subversion code is library code. Therefore the default is not necessarily Subversion's own domain. In library code you should use the dgettext versions of the gettext functions. The domain name is de the PACKAGE_NAME define.

All required setup for localization is controlled by the ENABLE_NLS conditional in svn_private_config.h (for *nix) and svn_private_config.hw (for Windows). Be sure to put

```
#include "svn_private_config.h"
```

as the last include in any file which requires localization.

Also note that return values of _() and *gettext() calls are UTF-8 encoded; this means that they should be translated to the current locale being w as any form of program output.

The GNU gettext manual (http://www.gnu.org/software/gettext/manual/html_node/gettext_toc.html) provides additional information on writing translat programs in its section "Preparing Program Sources". Its hints mainly apply to string composition.

Set Culture Early

- Review, respond – visible results quickly
- Consensus (voting should be rare)
- Stable references
- Tone
- Document the culture

Set Culture Early

- Review, respond – visible results quickly
- Consensus (voting should be rare)
- Stable references
- Tone
- Document the culture
- Empower others to set the culture

Delegate Management

Delegate Management

- **How to get favors**

Delegate Management

- **How to get favors**
- **Release Manager**

Delegate Management

- **How to get favors**
- **Release Manager**
- **Bug Buddy**

Delegate Management

- **How to get favors**
- **Release Manager**
- **Bug Buddy**
- **New Developer Mentor**

Delegate Management

- How to get favors
- Release Manager
- Bug Buddy
- New Developer Mentor
- Patch Manager

Delegate Management

- How to get favors
- Release Manager
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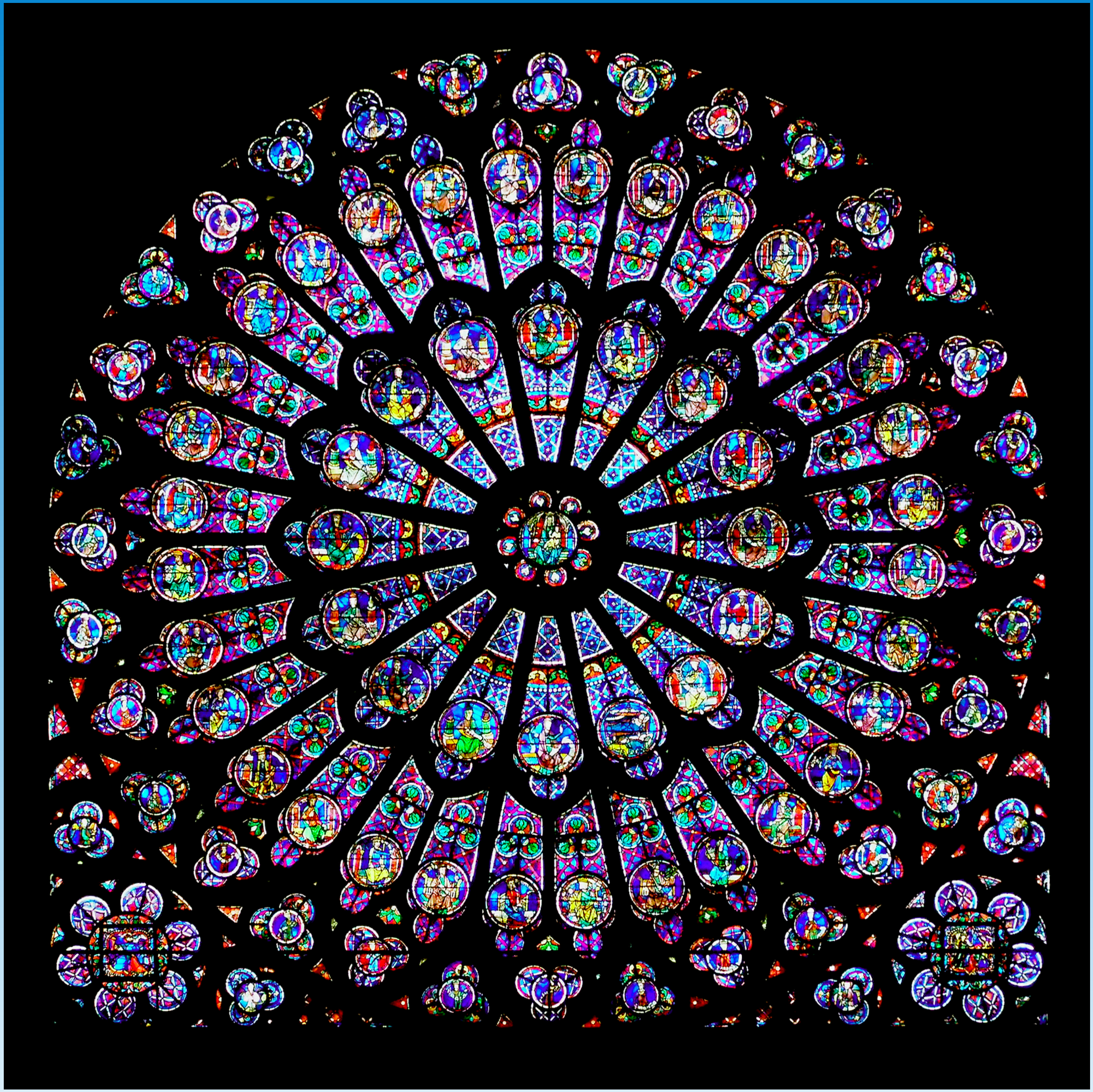
- New Developer Mentor
- Patch Manager
- Doc Editor



Communications

Communications

- **Promptness beats quality**

Communications

- **Promptness beats quality**
- **Writer-responsible**

Communications

- Promptness beats quality
- Writer-responsible
- Recognizing bikesheds

mauve.bikeshed.com

`green.bikeshed.com`

red.bikeshed.com

`teal.bikeshed.com`

`yellow.bikeshed.com`

`palegoldenrod.bikeshed.com`

mauve.bikeshed.com

Communications

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Communications

- **Promptness beats quality**
- **Writer-responsible**
- **Recognizing bikesheds**
- **Noisy Minority**

In-Person Events

In-Person Events

- **Hackathons: Goals & Motivations**

In-Person Events

- **Hackathons: Goals & Motivations**
- **Training events**

In-Person Events

- **Hackathons: Goals & Motivations**
- **Training events**
- **Project-centric conference**

In-Person Events

- **Hackathons: Goals & Motivations**
- **Training events**
- **Project-centric conference**
- **Project BOF at a related conference**

Forks

Forks

- **Code Fork vs Social Fork**

Forks

- Code Fork vs Social Fork
- Never bash

Forks

- Code Fork vs Social Fork
- Never bash
- Trademarks and Forks

Marketing

Marketing

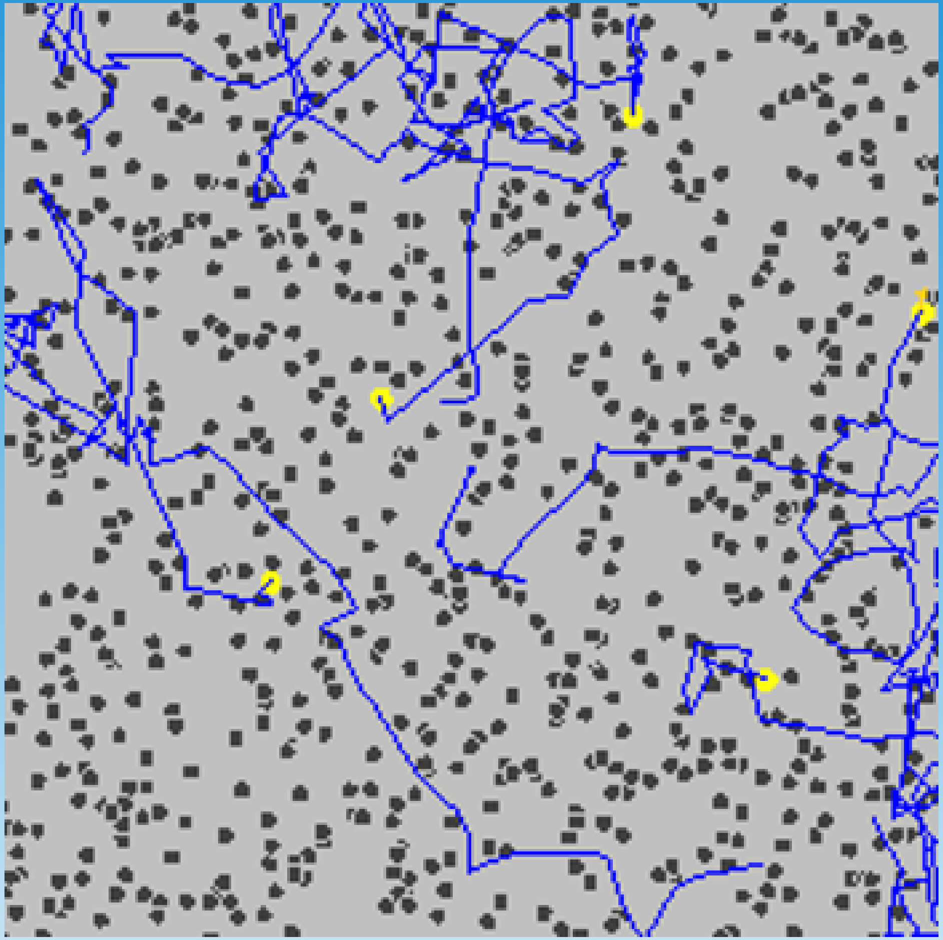
- **Who is the audience?**

Marketing

- **Who is the audience?**
- **Devs must maintain credibility**

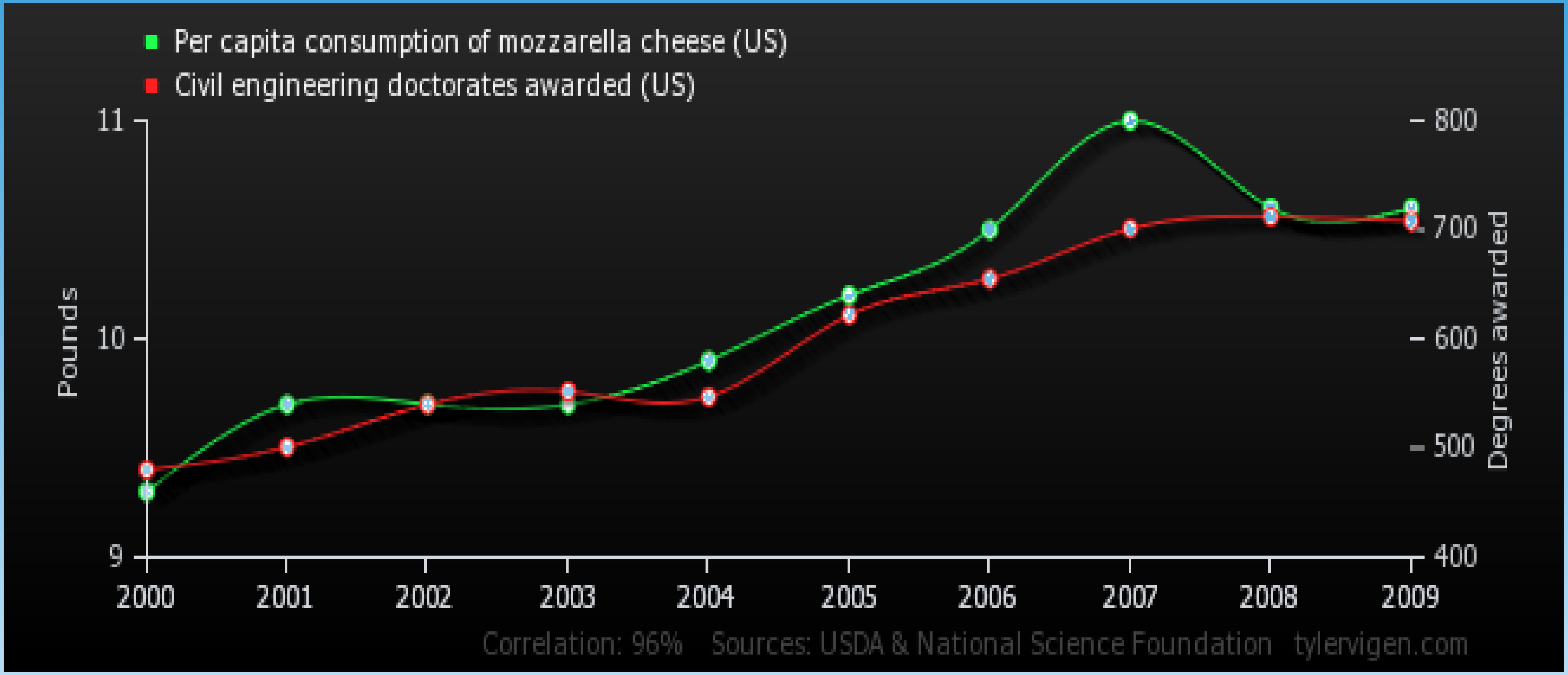
Marketing

- **Who is the audience?**
- **Devs must maintain credibility**
- **Remember the audit trail**



Is It Working?

Is It Working?



Correlation: 96% Sources: USDA & National Science Foundation tylervigen.com

Is It Working?

Is It Working?

- **Committer diversity**

Is It Working?

- **Committer diversity**
- **Organizational diversity**

Is It Working?

- **Committer diversity**
- **Organizational diversity**
- **3Rd-party commercial support**

Is It Working?

- **Committer diversity**
- **Organizational diversity**
- **3Rd-party commercial support**
- **Bug tracker activity (multidimensional)**

Is It Working?

- Committer diversity
- Organizational diversity
- 3Rd-party commercial support
- Bug tracker activity (multidimensional)
- Search hit alerts (competitors' too)

Is It Working?

- Committer diversity
- Organizational diversity
- 3Rd-party commercial support
- Bug tracker activity (multidimensional)
- Search hit alerts (competitors' too)
- Mentions in others' presentations

Is It Working?

`flosscommunitymetrics.org`

(see also `flossmetrics.org`)

`Bitergia.com`

(e.g., `dashboard.eclipse.org`)

`metricsgrimoire.github.io`

`vizgrimoire.github.io`

References

- `TheOpenSourceWay.org`
- **Steinmacher, Silva, Gerosa (2014):** ***“Barriers faced by newcomers to open source projects: a systematic review”***
- `OpenTechStrategies.com/resources`
- `ProducingOSS.com`
- `OpenSource.org/faq`
- `mil-oss.org`

“Audit trail” means “No regrets”.

Recovery is better than protection.

Principles of Participation

- Participants are people, not organizations
- Make it *rewarding* to do things right
- Make it *easy* to do things right
- Make decisions in public
- Document the culture
- Don't work – amplify other people's work
- No obstacles: act now, audit later

One-time contributors → repeat contributors

Your Developer Community Awaits

HAVE A
PEACE
DAY

An Overview of Open Source

Karl Fogel

kfogel@opentechstrategies.com

Open Tech Strategies

?