



Git 'R Done

An intro to Git Source Control Management

Based on slides by Ryan Felton of SD Ruby

Buzz



- ✦ Rails Core has moved to GitHub and Lighthouse
- ✦ Rubyforge supports it
- ✦ Piston supports it



What makes Git special?

Git was designed from the ground up as a distributed version control system. Being a distributed version control system means that multiple redundant repositories and branching are first class concepts of the tool.

Installation

- ✦ Mac OS X
 - ✦ git-osx-installer
- ✦ Ubuntu Linux
 - ✦ `sudo apt-get install git git-core git-svn`
- ✦ Windows
 - ✦ Cygwin
- ✦ Else
 - ✦ Install from source

The Basics



VS



SVN Benefits

- ✦ Single Repository
- ✦ Access Control
- ✦ Shorter Revision Numbers
- ✦ We know how to use it

Git Benefits

- ✦ Distributed Nature
- ✦ Branch Handling
- ✦ Performance (Speed)
- ✦ Repository Size
- ✦ Powerful (at the cost of simplicity)

SVN Branches

- svn copy <http://www.rubyonrails.org/svn/trunk> <http://www.rubyonrails.org/svn/branches/myfix>
- svn checkout <http://www.rubyonrails.org/svn/branches/myfix>
- (CHANGES)
- svn merge <http://www.rubyonrails.org/svn/branches/myfix>
- svn checkout <http://www.rubyonrails.org/svn/trunk>
- svn commit -m “merged myfix branch to trunk”

Git Branches (Local)

- ✦ `git branch myfix`
- ✦ `git co myfix`
- ✦ `git co master`
- ✦ `git merge myfix`
- ✦ `git push`

What do you do when...?

- 1) You are half way done with a new feature and an urgent bug comes up. You need to fix the bug and commit it immediately.
- 2) You just did submitted a commit and realize that you forgot to...

GO!

1) You are half way done with a new feature and an urgent bug comes up. You need to fix the bug and commit it immediately.

a) If the bug is in a file unaffected by your changes...

- ▶ Write the fix and commit just that file

b) If the bug is in a file you are currently working on (small)...

- ▶ Stash your changes, make the change, commit, unstash

c) If the bug is large and will take some time to fix...

- ▶ Create a new branch for your feature, leave your sweet new code in the branch, return to master branch and fix bug.

2) You just did submitted a commit and realize that you forgot to...

a) You could hit undo and redo the commit

1. `git reset --soft HEAD^`

2. `edit`

3. `git commit -a -c ORIG_HEAD`

b) Or you could just add onto the last commit

1. `git commit --amend`

git revert != svn revert

SVN Revert

- ✦ Destroys uncommitted local changes
- ✦ Restores to the latest commit

Git Revert

- ✦ Local changes will still be present
- ✦ Reverts the last COMMIT (destructive)

Solution

`git reset --hard = svn revert .`

Migrating from SVN?

git-svn

- ✦ git-svn allows you to use git on your local machine (even offline) and push your commits to your subversion repository
- ✦ Perform normal git commits and branches
- ✦ git svn rebase to “pull” latest updates
- ✦ git svn dcommit to “push” your local commits

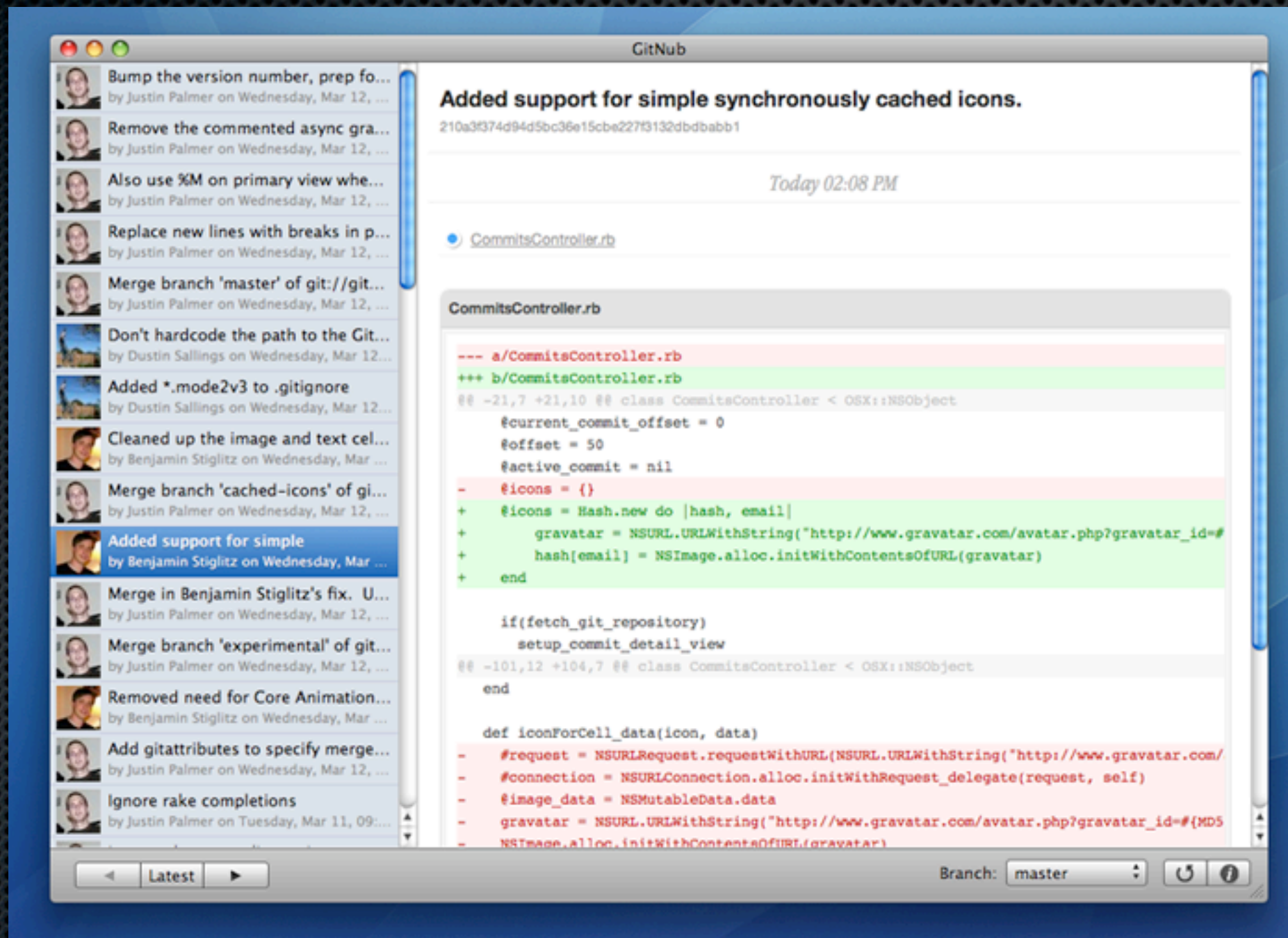
gitify

```
1  #!/usr/bin/env ruby -wKU
2  # Based on http://drnicwilliams.com/2007/11/22/going-offline-without-your-favourite-subversion-repository/
3
4  # get svn info location
5  if ARGV.empty?
6    svnurl = `svn info | grep "^URL:"`.gsub('URL: ', '').chomp
7
8    # project = basename
9    project = "../#{File.basename(Dir.pwd)}.git"
10 else if ARGV[0] =~ %r{^svn(\+ssh)?://} || ARGV[0] =~ %r{^http://}
11   svnurl = ARGV[0]
12
13   if ARGV[1].nil?
14     project = svnurl.split("/").last
15
16     project = svnurl.split("/")[-2] if project == "trunk"
17   else
18     project = ARGV[1]
19   end
20 else
21   puts "#{ARGV[0]} does not appear to point to a SVN Repo"
22   exit
23 end
24
25 puts cmd = "git svn clone #{svnurl} #{project}"
26
27 `#{cmd}`
```


<http://pastie.caboo.se/148312>


Resources

GUI: GitNub




Hosting: GitHub

 git repository hosting

 **feltpippin** [account](#) | [profile](#) | [guides](#) | [log out](#)
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[Source Browser](#) [Commits](#) [Wiki](#) [Network \(2\)](#) [Watchers \(9\)](#)

[master](#) [all branches](#) [all tags](#)

matta / acts_as_taggable_on_steroids [pull request](#) [fork](#) [unwatch](#) [download](#)  **this repo is viewable by everyone**


Description: This plugin is based on acts_as_taggable by DHH but includes extras


Homepage: http://svn.viney.net.nz/things/rails/plugins/acts_as_taggable_on_steroids/README

Public Clone URL: git://github.com/matta/acts_as_taggable_on_steroids.git

Your Clone URL: git@github.com:matta/acts_as_taggable_on_steroids.git







Push URL: git@github.com:matta/acts_as_taggable_on_steroids.git

 renamed period to dot

 **feltpippin** (author)
3 days ago

commit	28314f402803456ce3c303aa02d4a768d9e1e55b
tree	99943299c502ec4d4e540b9721cb97dc1c13d433
parent	62d571404793749fbadf4bfa859e75f777ded9be

acts_as_taggable_on_steroids /

name	last modified	message	history
 CHANGELOG	21 days ago	Fixed :conditions in tag_counts to accept array... [Clinton R. Nixon]	
 MIT-LICENSE	about 1 year ago	git-svn-id: http://svn.viney.net.nz/things/rails/plugins/acts_as_taggable_on_steroids/trunk [jonathan]	
 README	27 days ago	added support for multiple delimiters using a r... [matta]	
 Rakefile	about 1 year ago	git-svn-id: http://svn.viney.net.nz/things/rails/plugins/acts_as_taggable_on_steroids/trunk [jonathan]	
 generators/	9 months ago	git-svn-id: http://svn.viney.net.nz/things/rails/plugins/acts_as_taggable_on_steroids/trunk [jonathan]	
 init.rb	8 months ago	git-svn-id: http://svn.viney.net.nz/things/rails/plugins/acts_as_taggable_on_steroids/trunk [jonathan]	

Distributed Revision Control Systems

- ✧ Git
- ✧ Mercurial
- ✧ Bazaar

Questions?

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