



:mocRa

Contributing to OSS - The 8 Steps for Fixing Other People's Code

Dr Nic, @drnic, drnicwilliams.com

Mocra, mocra.com

Meta

self = <http://oss8steps.herokuapp.com>

twitter = #oss8steps

pre-reqs = git, rubygems

OSS = "Open Source Software"

Aim for today

Learn the 8 steps

Fix a project

Create and receive fixes

Best tools for everything

Who am I?

Since RailsConf 2006

100+ tiny-to-small-to-medium OSS projects

50+ contributions to other OSS

github.com/drnic

What do I make?

Tools

TextMate bundles

Little things

1st drafts of things

Help or recreate?

Help an existing project?

Or rewrite it

Help someone else?

Nice to have your name as author

Less responsibility as contributor

Visibility of contribution via blogs,
announcements

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Recreate existing project?

Capybara recreation of Webrat

Merb recreation of Rails

Brand/community confusion

But fix fundamental flaws

OSS project team?

Are contributors a "team"?

Opportunity to express individuality

You add/fix/document what you want

Aim: Get Shit Done

We code to get things done

OSS is a tool box

OSS is a spare parts box

Others make it for you

Should I help?

"No"...

Lots of benefits to "Yes!"

Why help with OSS?

Productive graffiti

Fun to help others make things

Determine project direction

Practise your profession

Before Git and Github

SVN and patch files

Mailing lists

Accepted or not

2008+ - the rise of Git

Distributed

Make commits on an airplane

GitHub - easy hosting

Bananajour - local hosting

This tutorial is NOT...

Advanced Git

Being a Core Rails member

This tutorial IS...

Basics of helping on OSS

Zero-cost OSS contributions

Helping other's help your projects

Overview

The 8 Steps

Using github

Using bananajour

Philosophy

Meet new people

Introduce yourself

UNTIL you find someone from...

different country,

same country

2007: The 8 Steps to OSS

Get annoyed by a defect or missing feature

Finding the source

Checkout the source

Snoop around

Make changes

Refresh the code from the repository

2010: The 8 Steps to OSS

Get annoyed by a defect or missing feature

Find the source. Anyone else fixed it?

Checkout the source

Snoop around

Make changes

Fork repository

I. Get annoyed by a defect or missing feature

Personal Power - Tony Robbins

Circle of Concern vs Circle of Influence - 7
Habits of Highly Effective People

Serenity
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2. Find the source.

Searching Github In Chrome

Managing search in Chrome

2a. Find the source.

2b. Anyone else fixed it?

2b. Anyone else fixed it?

3. Checkout the source

4. Snoop around

```
$ git clone http://github.com/schacon/showoff.git
Initialized empty Git repository in /Users/drnic/D
...
Resolving deltas: 100% (587/587), done.
```

```
$ cd showoff
$ rake -T
rake clean                # Remove any tempo
rake gem                  # Build gem into d
rake gem:install          # Build and instal
rake gem:publish          # Push the gem to
rake package              # Build gem and ta
$ ls
```


4. Snoop around; Try #2

```
$ git clone http://github.com/wycats/thor.git
$ cd thor
$ rake -T
No Rakefile found (looking for: rakefile, Rakefile)
$ sudo gem install thor
$ thor list
default
-----
thor :build           # Build gem
thor :install         # Install gem using sudo
thor :spec            # Run specs
...
$ thor :spec
```

5. Make changes

Add coverage tests

Add break tests

Add documentation

Cleanup/refactor

5a. Make changes via git

```
$ git status
# On branch master
# ...
```

```
#    modified:    README.rdoc
#    modified:    README.txt
```

```
$ git commit -a -m "links to TextMate bundle support"
[master 52a7198] links to TextMate bundle support
2 files changed, 12 insertions(+), 1 deletions(-)
```


6. Fork repository

6. Fork repository

7. Push changes

```
$ git remote rename origin schacon
$ git remote add origin git@github.com:drnic/showo
$ git push origin master
Counting objects: 7, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 578 bytes, done.
Total 4 (delta 3), reused 0 (delta 0)
To git@github.com:drnic/showoff.git
   2fdb671..5f07ba5  master -> master
```


8. Announce changes

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8 Steps Summary

Get annoyed by a defect or missing feature

Find the source. Anyone else fixed it?

Checkout the source

Snoop around

Make changes

Fork repository

Exercise: Fix documentation

Common poor docco: "How to contribute"

Pick a project

Add to its README: "How to contribute"

Remember: what needs installing? running tests?

Meet new people

Introduce yourself

UNTIL you find someone with...

different OS, and

same OS

GitHub Gem

```
$ gem install github
$ git config --global --add github.user drnic
$ git config --global --add github.token TOKEN

# Aliased command:
$ github -h
$ gh -h

$ gh open defunkt/github-gem
```


Clone and Fix

Get the repo

Make changes

Fork repo

Push changes

Find and clone

```
$ gh clone --search "hello world"
Select a repository to clone:
1.  drnic/oss-8steps-app      # "hello world" demo a
? 1
Initialized empty Git repository in
  /Users/drnic/gems/oss-8steps-app/.git/

$ cd oss-8steps-app
$ git config remote.origin.url
git://github.com/drnica/oss-8steps-app.git
```

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home/index.html.haml

```
# Add yourself
```

```
%li
```

```
  Dr Nic -
```

```
  %a{ :href => 'http://github.com/drnic' } gi
```

```
  \-
```

```
  %a{ :href => 'http://twitter.com/drnic' } @
```

```
  \-
```

```
  %a{ :href => 'http://drnicwilliams.com' } c
```


Commit changes

```
$ git commit -a -m "Added YOU to contribs"
```

```
$ git push origin master  
ERROR!!
```

Fork and push

```
$ gh fork  
$ git config remote.origin.url  
git@github.com:YOU/oss-8steps-app.git  
  
$ git push origin master  
$ gh network web
```

Network graph

Notify others

```
$ gh home  
then "Pull Request" etc.
```

New project

```
$ mkdir oss-8steps-app  
$ cd oss-8steps-app  
$ touch README.md  
$ git init  
$ git add .  
$ git commit -m "Initial commit"
```

Push to GitHub

```
$ gh create-from-local  
$ git config remote.origin.url  
git@github.com:drnic/oss-8steps-app.git  
  
$ git push origin master
```


Becoming a committer

Owner grants you commit rights

You update your `origin` url: `git://` to `git@`

You can delete your fork

No prizes for "Most Forks"

Merge someone's patches

The best part of Open Source?

Some good patches

Some bad patches

Notification via email

Examining patches

```
$ gh network -h
```

```
You have to provide a command :
```

- | | |
|---------|----------------------------------|
| list | - shows the projects in your net |
| fetch | - adds all projects in your net |
| commits | - lists all commits in your net |

```
$ gh network fetch
```

```
$ gitx
```


Gitx Example

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Show all branches

Merge entire fork

```
$ gh pull --merge bjeanes
```

```
$ gh pull bjeanes
```

```
$ git merge bjeanes/master
```


Merge commits fork

```
$ gh pull bjeanes  
$ git cherry-pick --signoff <commit-ish>
```

Example signoff

Merging Commits By Other Author

Example signoff

```
$ git cherry-pick --signoff 88a3b68
```

```
Finished one cherry-pick.
```

```
[master b507afd] This commit was made by Fake Dr N
```

```
Author: Fake Dr Nic <drnicwilliams@gmail.com>
```

```
2 files changed, 2 insertions(+), 2 deletions(-)
```

```
delete mode 100644 app/views/home/index.html.erb
```

```
create mode 100644 app/views/home/index.html.haml
```




Sign-off-by

```
$ git log
commit b507afd077d6a6f3a56f617dc944e1a7e6df8956
Author: Fake Dr Nic <drnicwilliams@gmail.com>
Date:    Sun Jun 6 07:35:30 2010 -0400
```

This commit was made by Fake Dr Nic

Signed-off-by: Dr Nic Williams <drnicwilliams@

Receiving Patches

The best part of Open Source?

Some good patches

Some bad patches

Notification via email

Examining Patches

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```

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git@github.com:drnic/oss-8steps-app.git  
  
$ git push origin master
```


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UNTIL you find someone who has...

5 open source projects

< 5 open source projects

Philosophy

Write failing tests

Tests

Writing tests is hard

Worth the effort

Outside-in

Process

Run project tests after clone

Install dev dependencies

Process example

```
$ gem install thegem --development  
$ rake -T  
$ rake test OR rake spec OR rake cucumber OR rake  
... fix issue ...  
$ rake  
$ git commit -a -m "Nasty bug heroically fixed"
```

Cucumber for Rubygems?

```
$ gem install newgem  
$ cd /my/gem  
$ rubigen rubygems install_cucumber  
$ cat features/step_definitions/common_steps.rb  
$ rake features
```

Summary

Fix projects properly

Share your fixes

Easy to do