

# How to make patches

and influence projects

“Committers get all the attention on a project, but there is a huge amount that non-committers can do even without that elusive commit karma. In this session we cover various strategies that can be applied to make a difference to an open source project, either to bring a dormant project back to life or to prove yourself the ideal committer.”

“The future belongs to crowds”  
Don DeLillo, Mao II

(Aaron Lynch, Thought Contagion)

This is really all about contributing to crowds.

# Why Contribute?

- To stop maintaining your own version
- Get opinions on your changes
- Increase your experience
- To become a member of the crowd
- It feels good :)

# The Contribution Conversation

- Discovery
- Reporting
- Discussion
- Commit

# Discovery

You've:

- got a question
- found a new bug
- created an improvement
- wished for a feature
- browsed the issue tracker

# a.k.a The Itch

- An itch is your internal customer.
- Creates high enjoyment for contributors, you have a high speed feedback between requirement and effect.

# Faking the itch

- Think beyond yourself - what does your family need, or your team at work. It is easy to pick up a shared itch, and more fun to subsequently work on.
- Alternatively, identify something you like that has a tiny bug, or a simple improvement that would help. Be selfish.
- Find bugs.

# Finding Bugs (easy)

- Test the build system.
- Consider a quality checking tool - but only pick the high value items. Most of it is noise.
- Investigate the code coverage.

# Finding Bugs (hard)

- Load test the program - donate this code.
- Write an extension, and identify the design pains you find.
- Dig into the sticky bugs that are littering the project's issue tracker.

# Verify the bug

- Ask on IRC
- Look at user@ archives
- Search the issue tracker

# Bug reporting anti-pattern #1

- Only reporting a bug to the mailing list
- Mail goes stale in a week, the issue tracker lasts for years.
- Use the issue tracker for the bug and the mailing list to raise awareness.

# Bug reporting anti-pattern #2

- Linking the bug to a forum entry.
- Issues should be atomic.
- If a long forum thread already exists, then summarize in the issue.

# Bug reporting anti-pattern #3

- Logs/stack traces that go on for miles.
- Not even for StackOverflowErrors.
- Attach a file to the issue instead.

# Complete the sentence

- Larry Wall, creator of P\_\_\_\_\_

# Complete the sentence

- Larry Wall, creator of Patch

# Creating a patch

- Bugfixing is surgery, not remodelling.
- What is it a patch of, and where?
- Create your patch in the root of the project
- Two patches - one for the proof and one for the fix

# Creating a patch

- `'svn diff > BUG-ID.patch'`
- Revert the patch, then:
- `'patch -p0 < BUG-ID.patch'`
- Repeat your testing.

# Being persistent

- Don't let your issue get forgotten.
- Pester lightly.
  - You're making sure you've not been forgotten, not trying to dictate priority

# Dealing with silence

- Open source projects are developed as a series of controlled bursts of energy.
- Silence can just indicate a project is in between bursts.
- Or the project could be dead.

# Rejuvenating the conversation

- Whether rejuvenating or kicking off a new burst of development, the solution is the same.
- Open source is conversation.
- Get people involved.
- Activity begets activity.

# Enter the conversation

- Begin by building up a collection of patches.
  - Gains you respect.
  - Gets the ball rolling.
  - Activity begets activity.

# Propose a release cycle

- Use the Wiki to build a release plan
  - Break the list of issues into sizeable chunks (7 of 7s)
  - For each, have title, link and your comment or suggested action

# Repeat

- Methodically work through the list
- Leave some easy issues, seek both help and consensus on the hard issues

# Help get a release out

- Even if you're not a committer, make sure to give your opinion on whether the release is ready or not.
- Test the release, QA the website.
- Check the download:
  - The md5, the pgp and make sure the source actually builds.

# When to give up?

- If you are steadily applying the above, with a professional and patient attitude, then you should get a response from the community.
- If you don't, it means the project is stagnant (either because it's dead, or intentionally has no desire to move).

# What to do then?

- Fork the project.
- Either privately or publicly.
- Make sure you comply with the license and the trademark.

# Other ways to contribute

- Blog about your use of the project.
- Write tips on the project.
- Suggest improvements to the website.
- Fill in Javadoc (dull)
- Turn your blog tips into a tutorial as you gain in confidence.

# Organize others

- Take user bugs to the issue tracker
- Act as a middleman between user@ and dev@
- Use private emails as a way to gently nudge for activity.

# Legal

- Contributing gives value, gives Intellectual Property. Whose IP are you contributing?
- Be aware of the legalities involved. What is the license you are contributing under?
- Is there a CLA? Or a code grant of some kind?
- What does your employer contract say?

# Conversation summary

- Mailing list is the best way to be heard
- Issue tracker is the best way to not be forgotten
- IRC is the best way to get an answer quickly
- Making things happen is a balance of these mediums

# Rejuvenation summary

- Activity begets activity.
- Patience - communities have high inertia, you have to be the tortoise not the hare.

# Contribution summary

- Bugfixes are surgery.
- Be politely persistent.
- Bug reporting is a market for people's time, a bad bug report won't get fixed. Create good reports.

# To Read

- <http://www.catb.org/~esr/faqs/smart-questions.html>
- <http://www.apache.org/dev/contributors.html>

Thank you for listening.

# For the latest slides:

<http://www.yandell.org/henri/H2MPIP.pdf>