How to make patches

and influence projects

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Leading the Wave of Open Source

"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."

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"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

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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.

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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.

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Bug reporting anti-pattern #3

- Logs/stack traces that go on for miles.

- Not even for StackOverflowErrors.

- Attach a file to the issue instead.

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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.

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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?

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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.

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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

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