Spotting Nascent Open Source Projects

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Open Source Technology Group
Overview

• What is SourceForge.net?
• Project success criteria
• Case studies: Successful projects
• What does a successful project do?
• Case studies: Up-and-comers
What is SourceForge.net?

“The whole is more than the sum of its parts.”
Aristotle
SourceForge.net is...

...the most substantial OSS repository, founded in 1999 and operated by OSTG.
...a provider of tools and technology.
...a marketplace for OSS development and consumption.
SourceForge is big... really big

SF.net website (in 11/2006):

- 26 million unique visitors
- 140 million page views
- 250,000 searches per day
- 1.48 million registered users
- 138,000 registered projects
SourceForge is big... really big

SF.net hosted projects (in 11/2006):

- 347 million page views (9.09 TB)
- 64 million files downloaded (533.7 TB)
Always growing

Registered Users

- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007

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Always growing

Registered Projects

- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007

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Geographic Breakdown

- United States: 39.79%
- Germany: 17.89%
- Spain: 8.01%
- France: 6.26%
- United Kingdom: 5.81%
- Brazil: 5.72%
- Poland: 4.03%
- Canada: 3.68%
- Italy: 3.07%
- Japan: 3.02%
- Other: 2.78%

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Project success criteria

“Seventy percent of success in life is showing up.”
Woody Allen
Success

Projects have succeeded when:
  • The main objective has been achieved
  • Users are happy with the solution

Other signs:
  • Derivatives or forks are created
  • The solution has wide distribution
Case Studies: Successful Projects

“If we knew what we were doing, it wouldn't be research.”
Albert Einstein
Introducing PDFCreator

PDFCreator

• Started in July of 2002

• Purpose:
  • Allow creation of PDFs via the print mechanism in Windows

• Audience:
  • Windows users who want to create PDFs, but don’t need the full features of Acrobat.

• Technology / Standards:
  • Visual Basic, GhostScript, PDF
PDFCreator:

- Developers: 2
- Commits: 146 (past 9 months)
- Releases: 9 total
- Average times...
  - to close a bug: 9 days
  - to close a patch: 15 days
  - to close a feature request: 11 days
PDFCreator: Observations

PDFCreator:

- They picked a good problem to solve
- Few other OSS solutions
- Solved using a standard mechanism (printing)
- Developers seem responsive in forums and lists
Introducing: Gaim

Gaim

- Started in November of 1998
- Purpose:
  - To allow users to communicate using multiple instant messaging protocols
- Audience:
  - Desktop users
- Technologies / Standards
  - C, GTK
Gaim

- Developers: 24 (~12 core)
- Commits: 1998 (past 9 months)
- Releases: 107 total
- Average times...
  - to close a bug: 29 days
  - to close a patch: 16 days
  - to close a feature request: 21 days
Gaim

• They picked a good problem to solve
  • Many people use more than one IM protocol, many dislike the provided programs (or running more than one of them)
• Very regular releases
• Large community of contributors
• Plugin architecture
• Multiple supported platforms
Introducing: phpMyAdmin

phpMyAdmin

- Started in 1998
- Purpose:
  - Web-based management of MySQL servers
- Audience:
  - Database administrators, developers using MySQL, system administrators, ISPs, education
- Technologies / Standards:
  - MySQL, PHP
phpMyAdmin

- Developers: 8
- Commits: 383 (past 9 months)
- Releases: 130
- Average times...
  - to close a bug: 47 days
  - to close a patch: 70 days
  - to close a feature request: 49 days
phpMyAdmin

- Easy to install
  - Minimal requirements
  - Simple process
  - Authenticates with MySQL

- Founders of current incarnation took over from the original project founder

- Has inclusion in Linux distributions
Introducing: Gallery

Gallery

• Started in July of 2002
• Purpose:
  • Web-based photo management
• Audience:
  • People who want to share pictures
• Technologies / Standards:
  • PHP, MySQL/PostgreSQL, Smarty, DAV
  • NetPBM, ImageMagick, GD
Gallery

- Developers: 22
- Commits: 2163 (past 9 months)
- Releases: 101 total
- Average times...
  - to close a bug: 30 days
  - to close a patch: 11 days
  - to close a feature request: 51 days
Gallery

- Lots of integration plugins
  - Mediawiki / Serendipity
  - Joomla / Nuke
  - iPhoto / Windows XP
- Developed using unit tests
- People can run from SCM
- Pluggable modules and themes
- Lots of ways to participate
What does a successful project do?

“Success is simply a matter of luck. Ask any failure.”
Earl Nightingale
Serves a good purpose

• Solves a new problem

• Solves an existing problem better

Is motivated by self-interest

• ...”got skin in the game”

Has a clear, basic objective
“Problem” matrix

<table>
<thead>
<tr>
<th>Audience</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Gallery</td>
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<tr>
<td>Firefox</td>
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<td>Gaim</td>
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<td>PDFCreator</td>
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<tr>
<td>phpMyAdmin</td>
<td>-</td>
</tr>
<tr>
<td>Ross’s project that nobody uses</td>
<td>-</td>
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</tbody>
</table>
Success Factors: Design

Leverages:

- Existing standards
- Common technology

Is extensible by design

- There is a “jagged binding surface” for contributors
Success Factors: Process

Follows up with outside contributors
  - Closes out bugs, accepts patches, and implements features quickly

Uses good, easily accessible tools
  - SCM, bug tracking, wiki, mailing list

Involves at least two developers
  - Can cope with defect/patch workload

Releases early and often
Success Factors: Community

Attracts outsiders to contribute

- Are the leaders willing to cede control?
- Are there plenty of things to work on?

Establishes groupies to monitor lists

Gets enough evaluators to ensure meaningful feedback

Accepts criticism graciously

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Case Studies: Up-and-Comers

“A sobering thought: what if, at this very moment, I am living up to my full potential?”

Jane Wagner
How did I dig these up?

Quantitative filters:

• Registered on SourceForge.net between 03/2006 and 11/2006 (19108)
• Achieved an 80-100% activity level (5611)
• Made more than one file release (2469)
• Consists of more than two members (291)
Qualitative analysis:

- The purpose must be clearly defined and audience size and impact must be sufficient
- The design should leverage currently accepted technologies
- Administrators must be responsive and helpful
- There should be ample opportunity to participate
Seagull

- Started in March of 2006
- Purpose:
  - Command-line multiprotocol traffic generator
- Audience:
  - Quality assurance, network, and software engineers wanting to load-test
- Technologies / Standards
  - Diameter, TCAP, XCAP, HTTP, Radius
Seagull

- Developers: 7
- Commits: 200 (past 9 months)
- Releases: 4 total
Seagull: Consumption

Release

- May 2006
- Jun 2006
- Jul 2006
- Aug 2006
- Sep 2006
- Oct 2006
- Nov 2006
- Dec 2006
- Jan 2007

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Seagull

• Built primarily for telecommunications, but can be easily adapted for new purposes.
• Developers can contribute new protocols or scenarios
• Supported by HP
Introducing: NetDirector

NetDirector

• Started in March of 2006

• Purpose:
  • Web-based systems management tool

• Audience:
  • System administrators needing to manage large numbers of systems or virtual machines

• Technologies / Standards
  • Java, Tomcat, PostgreSQL
NetDirector

- Developers: 5
- Releases: 4 total
- Average times...
  - to close a bug: 34 days
  - to close a feature request: 27 days
NetDirector

- They’ve picked a good problem:
  - Virtualization is a trend, causing a potential increase in the number of systems that have to be maintained
  - Remote maintenance is more efficient
- Contributors can make plugins to manage services
Introducing: StatSVN

StatSVN

- Started in March of 2006
- Purpose:
  - Subversion activity analyzer
- Audience:
  - Developers and leaders who want to understand what’s happening with their code
- Technologies / Standards:
  - StatCVS, Java, Maven, Subversion
StatSVN

- Developers: 3
- Commits: 127 (past 4 months)
- Releases: 5 total
- Average times...
  - to close a bug: 29 days
  - to close a feature request: 11 days
  - to close a patch: 2 days
StatSVN

• They have chosen a good problem:
  • Subversion is gaining acceptance
  • Everybody wants to know how much work is being done!

• The implementation is good
  • Maintains local cache so it can be re-run
  • Reports are attractive and useful
ODF Converter

• Started in June of 2006

• Purpose:
  • Allow Microsoft Word users to collaborate using the OpenDocument format

• Audience:
  • Word users who work with non-Word users.

• Technologies / Standards:
  • C#, ODF, XSL
ODF Converter

- Developers: 22
- Commits: 1610 (past 8 months)
- Releases: 8 total
- Average times...
  - to close a bug: 16 days
  - to close a feature request: 6 days
ODF Converter

- Problem is good:
  - OpenDocument is gaining acceptance
  - Other word processing packages are becoming more mature
  - Document sharing across different software packages is painful
- Some industry support - contributors include Microsoft and Novell
Talk to us!

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