Open Source Development Tools: Coping with Fear, Uncertainty, and Doubt

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Topics

- ⭐ Licensing
- ⭐ Pros and cons of Open Source
- ⭐ Tips on using Open Source tools
- ⭐ Types of tools
- ⭐ References

Licensing

"Don't install any open source until our lawyers tell us what to do!"

- Remember that most tools you use will only be used internally, so different licensing rules apply

Commercial licenses

- Big dogs
- Underdogs
- Shareware

Alternative licenses

- Open source
    - Public domain
    - Copyleft
    - Permissive
- Freeware
- Homebrew

Pros of Open Source

- Can get started learning, evaluating, and using a tool immediately

- Source code available for bug fixing or adding new features

- Improvements can be shared

- Alternate sources of commercial support may be available

- Free

Cons of Open Source

- Features may change frequently, new releases may not be compatible

- Documentation may be incomplete or wrong

- Commercial support may not be available

- Might not have a strong user community to help with issues

- Cost of internal support might exceed the cost of a commercial tool

Tips

- Learn what resources to expect on projects hosted on SourceForge (be aware that some projects use alternative resources, too)

- See if there's a bug database, and if people are using it

- Look for mailing lists and/or web forums

More Tips

- Contact the maintainer(s) directly if there isn't a good mailing list

- Figure out where the documentation is hidden

- Find CVS archives if available

- Use Google to find additional information about the tool

Types of tools

- Operating systems, e.g.: Linux, FreeBSD
- Compilers, e.g.: GCC
- Build tools, e.g.: make, gmake, ant.
- Scripting languages, e.g.: Perl, Python, Ruby, tcl, awk, and Rexx
- Editors, e.g.: vi, Emacs
- Version control tools, e.g.: CVS, Arch, Aegis, Subversion
- Bug tracking tools, e.g.: Bugzilla, Mantis

More types of tools

- Symbolic debuggers, e.g.: GDB
- Run-time analysis tools, e.g.: Valgrind, mpatrol, dmalloc
- Flight recorders/screen capture tools, e.g.: Captura, MWSnap, xwd
- Static analysis tools, e.g.: Jlint, sclc, Dependency Walker, LinkChecker
- Test harnesses, e.g. JUnit, QMtest, TET, TCM
- Test coverage analyzers, e.g.: gcov, Javacoverage, ATAC
- Test interface drivers, e.g.: jemmy, syscalltrack, HtmlUnit

Yet more tool types

- Keyword and data-driven test parsers, e.g.: SAFS
- Test data generators, e.g.: ALLPAIRS, jenny, DGL
- Load test tools, e.g.: OpenSTA, The Grinder, TestMaker
- Performance tools, e.g.: ApacheBench, JUnitPerf, iozone
- Stress test tools, e.g.: stress_driver, crashme, torture, dbgrinder
- Integrated development environments, e.g.: Eclipse

References

- "The Free Software Definition" - http://www.gnu.org/philosophy/free-sw.html
- "OSI Approved Licenses" - http://opensource.org/licenses/
- "Various Licenses and Comments about Them" – a good taxonomy – http://www.gnu.org/licenses/license-list.html
- "The Open Source Definition" - http://opensource.org/docs/definition.php

References

- *Open Testware Reviews* – includes surveys and reviews of scripting languages, test harnesses, test design tools, load test tools, etc. - http://tejasconsulting.com/open-testware/
- Roundtable on Homebrew Test Automation – http://www.stickyminds.com/s.asp?F=S7275_ROUND_55
- Blog entries from Bret Pettichord - "Homebrew Test Automation and Extreme Programming" - http://www.io.com/~wazmo/blog/archives/2004_02.html#000064 and "Interest in Open-Source Test Tools Grows" - http://www.io.com/~wazmo/blog/archives/2004_03.html#000074

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References

- "Let's Hear It for the Underdogs", http://tejasconsulting.com/stqe/underdogs.pdf

- Additional information on http://tejasconsulting.com/ and http://tejasconsulting.com/ancient-writings.html, including "What Flavor is Your Freeware?", several articles on free test tools, and reviews of *The Cathedral & the Bazaar* and *Open Sources.*

Thanks for listening!

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