Open Source:
Making A Business Case

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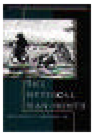
Agenda

- Why Open Source?
- What About Bill?
- Understanding the Issues
- Making the Decision

Required Reading

- The Cathedral and the Bazaar
  - Eric S. Raymond ISBN 0-596-00108-8
- "In The Beginning was the Command Line"
  - Neal Stephenson www.cryptonomicon.com/beginning.html
- The Mythical Man-Month
  - Fred Brooks ISBN 0-201-83595-9



Why Open Source?

The Short Answer

- Analgesia:
  - Management looking for ways to cut TCO
  - Staff tired of waiting on hold for support
  - Vendors cannot afford to build new applications from the ground up
  - Developers hate reinventing the wheel

The Shortest Answer

- Microsoft
  - …or Sun
  - …or ORACLE
  - …or ca
  - …or IBM
  - …or whichever vendor you love to hate!

The Longer Answer

- Multiple, often wildly divergent perspectives:
  1) Customer staff
  2) Customer management
  3) Vendor staff
  4) Vendor management
- These are ***not*** the same constituencies!
  - Understanding this is essential to understanding (and countering) arguments

Customer Staff: Pro

- Source provided
  - Can understand and fix problems
- Standards-based
  - Correct behavior (at least somewhat) defined
- Publicly supported
  - Lots of others to give help with problems
  - "Community" development aspect is appealing
- Enables use of high-end skills

Customer Staff: Con

- Source provided
  - "I don't want to fix someone else's problems!"
- Standards-based
  - RFCs can be hard to understand
- Publicly supported
  - Documentation often poor or nonexistent
- May not ***have*** high-end skills to exploit
  - "I like my Microsoft GUI tools"

Customer Management: Pro

- Low- or no-cost
  - Implies lower TCO
- Standards-based
  - Interoperability removes vendor lock-in
- Trendy—touted by trade rags and airline magazines
- Openness forces vendors toward interfaces etc. that customers actually want and use

Customer Management: Con

- Source provided
  - Hackers can read the code, find vulnerabilities
  - “I don’t pay people to fix others’ problems”
- Not formally supported
  - “I can’t bet my job on some kid in Finland”
- Trendy
  - “Management by magazine” isn’t management
- Open protocols aren’t necessarily better

Vendor Staff: Pro

- Source provided
  - Can jump-start product development
- Standards-based
  - Appeals to anti-corporate sentiments
- Publicly supported
  - Even vendor engineers know they don’t know everything!

Vendor Staff: Con

- Source provided
  - I’m not giving away my code!
- Standards-based
  - Those long-haired geeks writing RFCs aren’t businesspeople, don’t know what’s truly needed
- Publicly supported
  - There’s no formal specification
  - What will I do when development forks?

Vendor Management: Pro

- Customer demand
  - Customers are moving to Open Source
- RAD
  - Building on an Open Source application saves big development $$$ ***and time***
- Openness promotes exploitation
  - Add-ons, ideas, enhancements (cf. id & Doom)

Vendor Management: Con

- We’re a business
  - “How can we charge thousands of dollars for something that we give away?”
- Intellectual property protection
  - “GPL means we have to give our stuff away”
- “Proven” failure of model
  - VA Linux, Netscape, et al. – “They’re all dead”

What About Bill?

Microsoft

Microsoft Is Not Evil

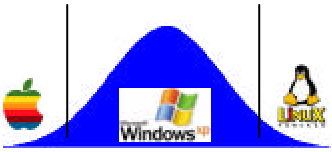
- Redmond is a ***business***
  - Has provided excellent return to stockholders
- Products are carefully designed and developed
  - Tens of millions of users love them!
- Consumers' willingness to put up with BSODs, etc. are our fault, ***not*** Bill's
- Apparently the value of Windows is greater (for most) than the pain

Microsoft Isn't Perfect

- *De facto* monopoly position reduces quality
  - Little or no corporate incentive to produce products of truly ***excellent*** quality
- Internet service distribution (Windows Update) greatly reduces service costs
  - Alas, it may further dampen initial product quality

The Reality

- Windows is "good enough" for most folks
- A classic bell curve distribution:



  - We can argue about where the lines should be, but this essentially reflects the reality

Microsoft May Be Doomed

- Microsoft's business model depends on customers upgrading to newer releases
  - Open Source applications threaten their ability to cram upgrades down consumers' throats
- PCs have passed the point where newest, fastest necessary for reasonable use
  - Increasing consumer resistance to upgrades
- Anti-trust issues are a huge distraction

Microsoft Is Not Stupid

- "Embrace and conquer" works
  - Just ask A. Hun, G. Khan, A. Hitler…
- Integration is the key
  - Love 'em or hate 'em, Microsoft applications work together better than a mishmash
  - MMC "Snap-ins", (moderately) consistent interfaces beat out command lines with most folks
- They are ***not*** ignoring Linux, Open Source!
  - See www.opensource.org/halloween/

Don't Count Microsoft Out…

- They can react quickly—remember their 1995 turnaround on the Internet!
  - Consider their current "security focus" sparked by consumer confidence issues (and antitrust)
- Prediction: debugging tools on the horizon
  - First sign: Internet Explorer error reporting, which sends ABEND information to Microsoft
  - Now: Windows XP error reporting, extending to more applications

Understanding the Issues

Why Do We Have Computers?

- You don’t buy computers to run OSes
  - You buy them to run applications
- Operating Systems are a dead end without new applications
  - At some point you’re ***forced*** to upgrade
- But “it works well enough” is compelling!
  - DOS, Windows 3.1/95, old Macs in daily use

Return With Us Now…

…to those thrilling days of yesteryear:

- Most applications written in -house
- Staff retention recognized as important to preserve “institutional knowledge”
- Staff ability to react to problems critical to survival!

Why Was That Good?

- Detailed staff knowledge of internal applications was considered competitive advantage
  - Obviously not true of unmodified Open Source
  - But self-destiny (fixability) still big advantage
- Intangible but real:
  - Staff “big picture” vision enabled avoiding some stupidity (cf. CRM disasters…)

How Is Open Source Different?

- Brooks’ Law seems not to apply:
  - Complexity and bugs do ***not*** rise with the square of the number of programmers involved!
- “Hacker culture” fundamentally different from traditional development culture
  - “Gift culture” makes knowledge-sharing valuable
  - Contrast with “proprietary advantage” theology

The Car Analogy

- Stephenson writes of:
  - Windows: Station wagons – ugly but popular
  - Apple: Euro-styled sedans – sexy but unpopular
  - Be: Batmobiles – very cool but hardly sellable
  - Linux: M1 Abrams tanks
- “I don’t know how to maintain a tank!”
  - “You don’t know how to maintain a station wagon, either!”

The Emotional Appeal

- Emotional arguments of “I hate Microsoft” (or Oracle, or…) are ***not*** business cases!
  - Many fail to recognize emotional involvement
- Consider the outrage over Microsoft “stealing” the GUI from Apple
  - Few are outraged that KDE and Gnome “stole” the GUI from Windows (or even Apple)

Cars Again…and Bourgeoisie

- Stephenson also compares the emotional allure of Linux to that of the MGB:
  - Difficult to maintain
  - Requires technical knowledge just to live with
  - “Separates the men from the boys”
  - Windows is “tacky”
  - Microsoft is evil simply because they are large
  - Enables “purity of essence” by avoiding Windows
- This is a fundamentally elitist attitude! (But is that bad?)

When Open Source?

- Raymond suggests that appropriateness depends on program use:
  - **Most appropriate:**
    Infrastructure (e.g., Samba, DNS)
  - **Less appropriate:**
    Middleware (e.g., databases)
  - **Least appropriate:**
    Applications (e.g., word processors)

The Distinction?

- **Infrastructure:**
  Commoditized, strong standards
- **Middleware:**
  Semi-commoditized, weaker standards
- **Applications:**
  Not commoditized, few or no standards
- As software evolves, it moves toward the “more appropriate” end of the spectrum

Something “Wants” to be Free?

- Stephenson further suggests that Operating Systems are “destined to be free”
- Remember why we have computers: applications!
- If sufficiently decent applications are available for free OSes, they will dominate
  - Microsoft will be forced to acknowledge this eventually
  - Netscape talked about commoditizing the OS, which is what caused Microsoft to take aim at them

When Not Open Source?

- **Integration issues:**
  Vendor apps typically better integrated
  - Although “Integration” often means “We put it all on one CD”
- **Customization issues:**
  Some types of applications “always” require significant custom work
  - E.g., CRM implementations

When Not Open Source?

- **Standing investment:**
  Existing, paid for product licenses
  - Consider switching at next upgrade cycle
- **Training and conversion:**
  Costs can be surprisingly high
  - Business units may rely on product features unknown to IT staff/upper management

Choosing Open Source

- Is the Open Source app good enough? (Is it even close?)
  - Can you wait for it to get there?
  - Is vendor application good enough?
- Is Open Source direction rational?
  - Not just a reaction to dislike of a vendor
- Is self-destiny benefit/avoidance of risk worth potential internal support cost?
  - “Closed-source when Open Source choices exist will be…grounds for shareholder lawsuit”

Some More Issues

- Open Source typically more secure
  - Reading source exposes weaknesses
  - Availability of fixes often measured in minutes
- Vendors can provide support “guarantees”
  - Can they live up to them?
  - If they don’t, what remedies do you have?
- Mission-critical applications require serious support—no question

Still More Issues

- Depending on platform, bugfixes for OSes may be essentially unavailable anyway
  - IBM (mostly) still gets it right
  - Have you ever gotten Microsoft to write a Windows patch for you?
- Commercial, closed applications are rarely more than 80% “done”
  - Insufficient ROI from further development

Making The Decision

The Real Argument(s)

- Saving money
- Saving time (which is really money)
- Saving staff (which is really money)
- Improving RAS (which saves money)
- Improving functionality (which saves money)

So How Do You Choose?

- Where are your ***real*** costs?
- Cost breakdown, biggest to smallest:
  - Labor: sysprogs, operators, et al.
  - Facilities
  - Hardware
  - Software (increasing mostly due to ISVs)
- How do you control TCO?

Controlling TCO

- Obvious answer: control spending on labor, facilities, hardware, software
- Open Source can (sometimes) help with all of these
  - **Labor:** many Open Source apps very mature
  - **Facilities:** server consolidation can save big
  - **Hardware:** server consolidation again
  - **Software:** the most obvious opportunity

Summary

Summary

- Primary Open Source drivers are financial
  - True cost/benefit of switching requires analysis
  - Emotional arguments need not apply
  - But include intangibles—staff retention and development
- Freedom from vendor lock-in valuable business argument, if difficult to measure

➢ **Open Source is the future—get used to it**

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