
FOSS Policies in the Asia-Pacific Region

FOSSAP

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Agenda

- **The Proprietary Software Crisis**
- **State of the Region**
- **Strategies we can adopt**
- **Conclusions**



Moore's Cannibal Principle

“The whole point of integrated circuits is to absorb the functions of what previously were discrete electronic components, to incorporate them in a single new chip, and then to **give them back for free**, or at least for a lot less money than what they cost as individual parts.

Thus, **semiconductor technology eats everything, and people who oppose it get trampled.**”

Source: Gordon Moore (Intel Chairman) quoted in Brent Schlender, "Why Andy Grove Can't Stop," *Fortune*, July 10, 1995, p. 91



The Proprietary Software Crisis

- Faulty software costs businesses **\$78B/year**
- Traditional software model **actually encourages buggy products**
- **Lack of competition has led to vendor intransigence**
- Proprietary software often results in **bad architecture**
- Bad architecture **locks you in**
- See:

<http://www.cio.com/archive/101501/wasting.html>



How Many Billion Dollars Are *You* Wasting?

- 2001: The Standish Group Estimated \$78B/year wasted on “Bad Software”
- 2002: NIST Estimated \$60B/year lost due to “software bugs”
- 2002: Net profits of F500 is approximately \$68B
 - Average cost of “Bad Software” is more than F500 profits by \$1B!
- 2003: US Federal IT budget set at \$59B
 - History suggests 80% will be wasted
- 2003: Excess cost of Windows viruses exceeds profit of MSFT
 - \$13B customer losses + \$4B anti-virus expenses vs. \$10B annual profit
 - “Breaking Windows” by David Bank explains why Windows is broken



State of the Region

- Asia-Pacific is one of the most active FOSS regions in the world
- 2003 saw the announcement of a number of major open source initiatives
- Reasons for these initiatives are varied, including cost savings, security, piracy issues and development of local industry
- All countries in AP have one or more grassroots-driven open source groups – mostly based in Universities, but others driven by individuals



Regional FOSS activities

- Much media attention was given to an announced plan between Japan, China and South Korea to create a regionally adapted FOSS operating system
- Japan reported to have committed US\$8.6 million to the project
 - Japan's METI and CICC has initiated the “Asia Open Source Software Symposium”
 - Inaugural AOSS in Phuket, Thailand in March 2003, second AOSS in Singapore in November 2003 and the next AOSS in Hanoi in March 2004
- Reported motivation: breaking the dominance of western software companies



National FOSS Initiatives

- China
 - One of the most active in the region
 - Announced in August 2003 that government departments can no longer purchase 'foreign' software.
 - Post office transitioning 1,200 branch offices. Beijing Municipal government transitioning 2,000 desktops.
 - Motivated partly by national security issues with foreign software. Also avoiding “foreign intellectual property rights trap”.



National FOSS Initiatives

- India
 - No Federal level policy presently
 - Multiple state level initiatives, including Madhya Pradesh transitioning over 2,000 schools to Red Hat Linux distribution. Rationale: public information should not be restricted by proprietary software
 - Central Excise Department has moved 1,000 desktops to Linux. Government supercomputers (C-DAC) on Linux
 - Indian President has spoken out strongly in favour of FOSS, noting that FOSS offers India the best opportunity to modernize



National FOSS Initiatives

- Thailand
 - Planned to have 5% of all systems on Linux by end of 2003. 50% is ultimate goal. Budget of 10 million baht.
 - Used Linux on Thai low-cost computers costing ~US\$250 each. Ultimately forced Microsoft to discount Windows + Office to US\$35 (from US\$500+).
 - Has highly successful localized version of Linux for schools
 - Thai distributions such as Burapha Linux from Burapha University <http://www.buraphalinux.org>



National FOSS Initiatives

- South Korea
 - Reportedly planning to convert 20% of all desktops and 30% of all servers to FOSS systems by 2007
 - Reasons cited include cost savings of US\$300 million a year, improved security and better interoperability between systems
 - Has thriving embedded Linux industry
- Japan
 - Considering moving e-government systems to FOSS due to security concerns. Payroll system already moving to Linux



National FOSS Initiatives

- Taiwan
 - Launched “National Open Source Plan” to build local FOSS capabilities to replace all proprietary software in government.
 - Primary motivation – avoidance of dependency on monopoly supplier.
 - Anticipates savings of nearly \$300 million in licensing fees, mostly Microsoft licenses.
 - Very active and knowledgeable OSS group within Academia Sinica – especially on licensing issues
 - Major device manufacturers deploying embedded Linux



National FOSS Initiatives

- Vietnam
 - Reported to be developing policy mandating FOSS in all state owned companies and government agencies. Piracy issues reported as a major reason for policy.
 - VietKey Linux (<http://linux.vietkey.net>) is a specialized Vietnamese developed Linux distribution



National FOSS Initiatives

- Philippines
 - The Advanced Science and Technology Institute (part of the Dept of Science and Technology) has launched the Bayanihan Linux project <http://www.bayanihan.gov.ph/>
 - Although there isn't an official Philippines government policy on FOSS, the creation and the deployment of the Bayanihan Linux project under the .gov.ph domain is very telling



Notable FOSS Policies Elsewhere

- European Union produced a paper that stresses open standards and encourages FOSS where appropriate. Also creating FOSS centres and funding health-related applications.
 - Rationale: improved interoperability between systems. Previous efforts were characterized as “closed, vertical, unscalable and frequently proprietary information systems”.
- German city of Munich converting 14,000 desktops to FOSS. German police force transitioning 11,000 users.
 - Rationale: Vendor independence and increased competition in software market



Notable FOSS Policies Elsewhere

- United Kingdom – emphasis on open standards, especially after vendor bankruptcy left UK hospitals with an unsupported and outdated system
 - Rationale: vendor independence.
- Brazil – plans to migrate 80% of all computers in state and state-owned institutions to FOSS.
 - Rationale: lower costs, development of local industry, foreign exchange savings and democratizing access to knowledge
- South Africa – Prefers FOSS unless there are compelling reasons otherwise
 - Rationale: Reduce imports, develop local capacity



Strategies We Can Adopt - Open Standards

- IETF, W3C, OASYS, ANSI conformant as appropriate
- All formats in which data is stored is published and are free from onerous patenting and licensing regimes
- If private extensions to formats are made, these must be published and not made proprietary – this is where government procurement standards can enforce and eliminate such proprietary tendencies
- The IETF model of two independent implementations of proposed formats/schemes has worked very well



Software Development Models

- Software is developed pretty much the same way no matter what the licensing or developmental model – a piece of software is a solution to a requirement
- The problem in the last few decades has been the increasing lock-in by vendors to force (blackmail?) their customers to only use their software.



Vendor Lock-in

- We can all agree that all data created by organizations and individuals belong to the creators.
- Such data stored, in many cases, can only be accessed by software from 1 vendor
- The argument is not that the **software** to access be open sourced, but that the **format** be published



Vendor Lock-in II

- Why are creators and owners of IP beholden to a particular vendor to access their IP?
- If government is to go with neutral principles, then one of these principles has to be the publication of all formats into which data is stored – this is hinted in point 3 of the BSA's document



Flaw in BSA's Point 3

- It also says:
 - ... When these standards are open and available to all through licensing they help developers to create products that can inter-operate with each other. ...
- The idea of licensing standards is OK so long as it not expensive and does not put the licensor under onerous non-disclosure terms. Cost-free and NDA-free licensing would be best.



Government Neutrality

- It is not so much that governments must not dictate the development models, but it is within the ambit of governments to dictate the availability of published standards and conformance to that – BSA's point 3 about interoperability among platforms
- Governments have a social agenda as well.



Confusing the Issue

- It is not neutrality that we should be looking at, but at how the economy will benefit
- Countries are encouraging the use of Open Source (and by extension, Open Standards), and as a mature economy of Singapore, for example, is hurting as the next generation of software developers are not getting the exposure they need



Strategies We Can Adopt

- Ensure that you understand the strategies being proposed by the so-called “commercial software vendor” community in promoting closed/unpublished formats/standards in products
- The BSA document is a good starting point for FOSSAP to formulate a similar document
- Demand that all documents created, used, archived by government have their formats published
 - A significant effect of this is the ability of the government to be able to contract to local players to data-mine and/or manipulate the documents



Three Roads Ahead?

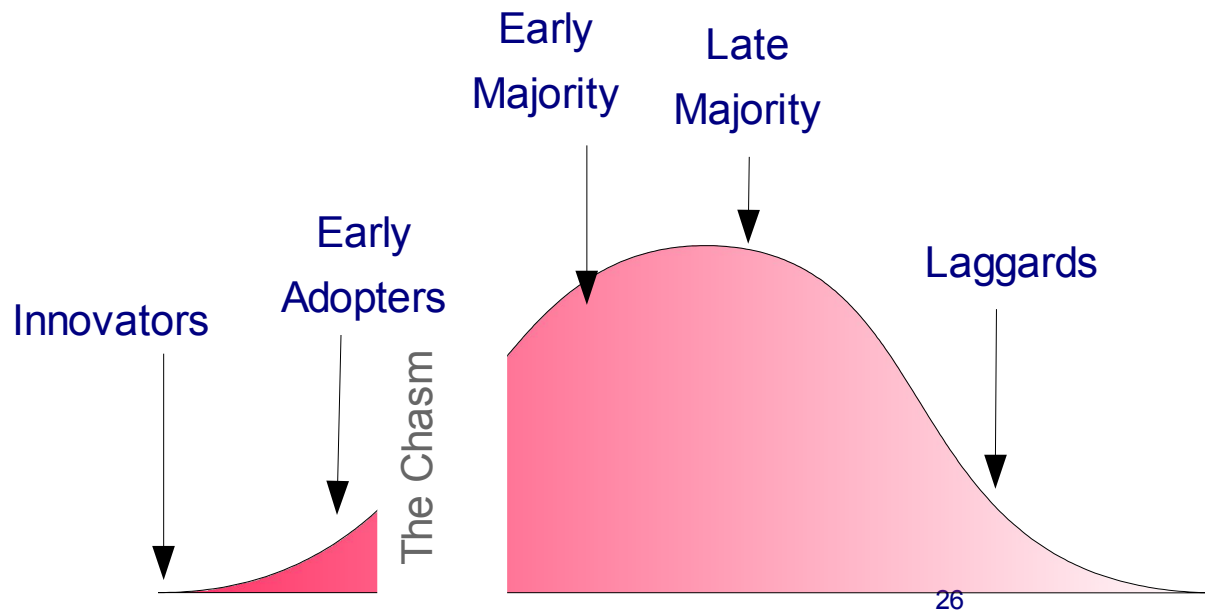
- Place all existing black boxes in one giant black box
 - Open Standards are promised
- Create many different/divergent platforms (like RISC/Unix)
- Shrink problematic black boxes with an Open Source Architecture
 - Open Standards are manifest
 - Open Source is provided
 - Greater commonality increases innovation and value



The Fundamental Question

What few things must be the same so that everything else can be different?

- Maximize option value
- Maximize Metcalfe's law - *“the usefulness, or utility, of a network equals the square of the number of users”*
- Achieve technical and costing transparency



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The Open Source Architecture is Open to Asia

- Numerous possible projects are open
 - Desktop
 - Fonts
 - Graphics (2D and 3D)
 - I18N and L10N
 - Networking (IPv6)
 - Proper integration of CE technologies
 - Security for CE devices
- Integration of 3rd-party Asian ISVs into Enterprise Linux ecosystem
 - ...or fragmentation?



Questions?



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Conclusions

- We can no longer afford the folly of proprietary architectures
 - Not enough money
 - Not enough time
 - Not enough (remaining) sanity
- Open Source is a very Democratic revolution – Open Standards help define the rules of the game
- The Open Source Architecture will profoundly affect
 - application development
 - Deployment
 - management

The Open Source Architecture is Now!



Desired Outcomes

- That FOSSAP publishes a set of Desired Outcomes to be put to AP governments that requires and mandates that all data stored in publicly maintained and funded systems comply with openly published standards and formats
- That it is desirable to encourage the use of technologies that can be licensed/IP-protected in many forms and that this is made known widely.



