Open Source and e-Learning — Considerations of Strategies, Policies and Standards

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**OPEN SOURCE AND E-LEARNING –
Considerations of Strategies, Policies
and Standards**

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Outline

About BSA

Setting the Context

Strategies

Policies

Standards and Interoperability

ABOUT BSA

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BSA Members

Our Views

Members of BSA are leading developers of tools based on a range of approaches
- BSA takes a balanced view of the issues
- Each model forms part of healthy, diverse, competitive software marketplace

SETTING THE CONTEXT

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E-Learning

Conceptually viewed as an **application** on a computing platform
- Besides traditional computers, may also include a range of new devices such as PDAs, mobile phones, etc.

Development
- Historically, CDROM based materials and static content
- Today, websites and other interactive online content

Building an Application

Content
- What distinguishes e-learning from other applications

Software
- Use versus Build
- Where OSS matters

Hardware
- Portability, interoperability, convergence

Software Models

Development Model
Business Model
Licensing Model

Software Development Models

Open Source
- – Collaborative – different people, different places, no formal association – contributing elements towards final software
- – Not exclusively so today
  - • Large companies also release in-house applications to community

Commercial Software
- – Usually developed by a commercial entity
- – Internal teams, though maybe over large geographical area or even international borders

Software Business Models

Open Source
- – Not primarily on the software product
- – Revenue model is on supporting services and hardware
- – System integrators

Commercial Software
- – Focus is on the product
- – Revenue on customer buying products and its upgrades
- – Motivation for customer to buy next version if it is more innovative and has improved functionality

Software Licensing Models

Open Source
- – Source code usually provided royalty free
- – Terms on redistribution, modification, addition stipulated, rather than requirement for fee to be paid

Commercial Software
- – Product sold or licensed to customer, In object code or executable form, for a fee
- – Source code may be made available to certain users through special licensing or other arrangement, but not to general users
  - • Usually not to be copied or modified, except as provided in arrangement

The Debate

Is one software model superior to the other?
- Not inherently!

Customer needs and circumstances determine what advantages and disadvantages are relevant and applicable
- No generic "truths" across the board

Strong IPR remains the foundation

STRATEGIES

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Strategies

Cost
Security
Flexibility

-> Considerations when choosing the platform – use versus build

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Issues – Cost

Cost of Ownership
- Reasonable to consider total cost and not just initial purchase cost
- Different business model apply
  - e.g. attract customer with lower up front cost, but recurrent cost to consider
- Numerous studies and reports showing one approach cheaper than the other

Cost is not always the main issue

Issues – Cost

Availability and Cost of Professional Support
- Availability of pool of professionals supporting commercial software and open source solutions
- Cost of maintenance and support a significant burden that should not be overlooked

Issues – Security

Common Myths
- Known mechanism => more secure
  - Source code always needed?
- Faster fix => more secure

Reality
- Implementation – security considered from beginning to end?
  - Quality of programmers
- Use – best security useless if wrongly configured
  - Care of consumers

See "Which Platform? Myths and Realities of Software Security"
"Software Source Code & Security: To disclose or not disclose?"
available at http://www.bsa.org/asia-eng/policy

Issues – Flexibility

Flexibility
- Users can change system to effect changes or make behavior desired by users, new features e.g. fonts
  - Assumption – User is savvy enough to make the changes
  - Is expertise or resource available?
- Do you really need to tweak the OS, or are most of the important functionality found at the application level?
- Organic growth of open source
  - Forking issues

Examination of Issues

Need to understand facts from hype

Danger of making policies and decisions without clear understanding of implications

See "Considering Open Source and Commercial Software",
available at http://www.bsa.org/asia-eng/policy

POLICIES

Policies

Software Piracy

Digital Divide

Domestic Software Industry Development

Competition

Sovereignty

Implications – Piracy

Not a solution to software piracy problem

- Software products not like other consumer-oriented commodity products
  - Different productivity gains; akin to engaging professional services
- Where piracy rates are high, lower cost of software does not deal with lack of mindset to buy legitimate copies
- Buyers of computers loaded with open source obtain pirated copies of commercial software to replace
- Both open source and commercial software predicated on strong copyright protection

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Implications – Piracy

Developer's perspective

- Risk assessment on code base and code reuse
  - Inadvertently use code subject to GPL?
  - Risk of being sued by competitor
- Piracy of a different form
  - Disregard of licensing terms
  - Incorporation into commercial products

Implications – Digital Divide

Widening digital divide concern
- Some reactions include providing low cost PCs

Holistic strategy needed
- Education / Skill / Training
- Content and applications
- Reliable connectivity

Not just physical access to ensure benefits can be reaped

Implications – Digital Divide

Making computers available to the poor
- Cost of hardware relative to software
  - Consider piracy rate – is software cost the issue?
- System usability considerations for the poor and unprivileged
  - Need for education first
  - Low cost educational versions of software available
- Availability and cost of maintenance and support
- Other public service options available from commercial software vendors

Implications – Developing Local Software Industry

Developing the local software industry
- Different segments of software industry with different needs
  - Products versus Services
- Tracking the reuse of software
- Effects up-stream and down-stream
  - Financial viability
  - Understanding Licensing and Limitations
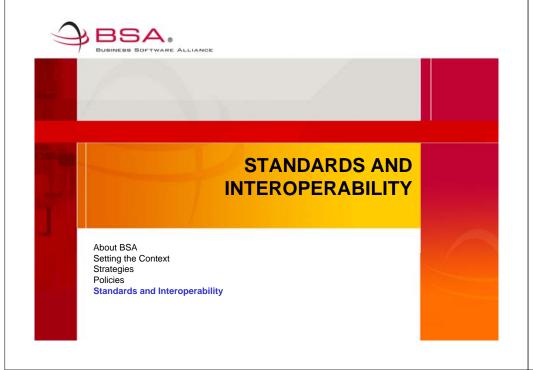
Implications – Competitiveness

Free market competition – drives innovation
- Greater efficiency, greater choice

Best product wins, not preferences

Distinguish inertia of change from lack of choice

Sovereignty considerations

STANDARDS AND INTEROPERABILITY

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Intellectual Property

Strong intellectual property protection remains the foundation of software industry, irrespective of development model

Intellectual property as the most important asset in the information economy

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Why Standards?

Technology standards:

- Enable products to work together
- Enable suppliers to develop own implementations for consumers to choose
- Create predictability, interoperability and competition, without homogeneity

See "Technology Standards and Interoperability: Why we should care about them", available at http://www.bsa.org/asia-eng/policy

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Market-Driven Standards Development

- Voluntary processes respond best to consumer demands
- Standards developed through range of processes
- Successful standard is one that solves the problem for which it is intended

Interoperability

- Driven by consumer demand and market forces
  - Takes place through range of methods
- Should not pick winners
  - Under guise of interoperability, including mandating specific standards
- Should promote innovation in interoperability
- Should refrain from legislating/regulating technology in name of interoperability

Role of Government

- Distinguish being a policy maker from being a consumer of technology
- Policies impact long term industry development and growth
  - Preferences tend to do harm, even if short term benefits may be derived
- Market driven process has best track record
  - Consumer needs (including government needs) to drive choices, not mandates

Open Standards & Open Source

Government focus on outcome,
  not development process of standard

- Open source software clearly distinguished from open standards
- Open standards can be implemented by both proprietary and open source software
- Availability of source code does not make an open standard
- Marketplace best evidence of successful standards adoption

Procurement Policies

Fair and open competition, not mandated preferences, should determine which products earn consumer confidence

Preferences disturb market competition
  - Why prefer if already market-competitive?
  - If not competitive, why prop up weaker products?

APEC Technology Choice Principles endorsed by the APEC Ministers in Hanoi in November 2006

E-learning & Open Source

Success is about **INNOVATION**
- Software innovation is a driving force for economic, social and technological progress
- Competition brings about choice
- Standards and interoperability brings about competition
- Industry must be able to continue to innovate to grow

THANK YOU

Questions? Comments? Clarifications?

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