



Seeing the Full Spectrum

Raising Awareness About BSD in the Government of Canada

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BSDCan

University of Ottawa



Public Works and
Government Services
Canada

Travaux publics et
Services gouvernementaux
Canada

Canada



Seeing the Full Spectrum

- Part A: Overview
 - GoC is **open for business as an open source user and contributor**
 - GoC **policies, legislation and agreements**
 - **What is a full-spectrum** in the software business?
 - Changing colours (**historical overview**)
 - So, **is there a problem?**
- Part B: Discussion
 - **What is required to raise awareness of xBSD solutions in the Government of Canada?**





GoC Policies, Legislation and Agreements Encourage a Full-Spectrum Approach to Business

- "Open source gives decision makers options to provide higher-level service to Canadians, to reduce costs, to foster a competitive environment, and to create opportunities for small and medium sized businesses. I'm not saying if you choose open source all these things happen. But because open source is in the mix these are the sorts of benefits you get. ... We're basically assisting the decision-makers throughout the public sector to gain and apply working knowledge about the full spectrum of operational and strategic business choices, because we consider this to be a business choice."

Gary Doucet, Senior Director
Infrastructure, Architecture and Security Division
Treasury Board Secretariat
Technology in Government, May/June 2004
www.ITBusiness.ca





GoC Policies, Legislation and Agreements Encourage a Full-Spectrum Approach to Business

- "Departments and agencies base their decisions to acquire, develop and use software (including Open Source Software) on their business needs, and the principles set out in the government's Federated Architecture Program. ... Existing Canadian federal legislation, agreements and policies accommodate a wide variety of business models for public sector software for acquisition, use, production and distribution. Accordingly, software solutions used in the Government of Canada, come under many license types, including certified "open source" or "free/libre" software licenses."

Reg Alcock, President
Treasury Board Secretariat



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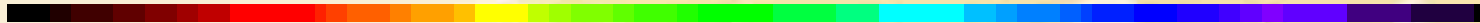
GoC Policies, Legislation and Agreements Encourage a Full-Spectrum Approach to Business

- Canadian federal legislation, agreements and policies accommodate a wide variety of business models for public sector software
 - acquisition
 - use
 - production
 - distribution
- Standards Council of Canada Act
- WTO Code of Good Practice for Standards
- North American Free Trade Agreement
- Accessibility Policies
- Government Security Policies
- Privacy Act
- Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts
- PWGSC Standard Acquisition Clauses and Conditions: Contractor to Own Intellectual Property Rights
- Business Transformation Enablement Program
- Cost Management Framework
- Policy on Stronger Financial Management and Accountability
- Policy on the Management of Government Information
- Access to Information Act
- Copyright Act





What is a Full-Spectrum of Software Business Models?



"Corporate community" refers to a relationship amongst software stakeholders under which knowledge of the internal architecture and program code is available on restrictive terms to specific personnel of the vendor organization and of its contracted business partners.

"Open community" refers to a relationship amongst software stakeholders under which knowledge of the internal architecture and program code is openly available to anyone to use, learn from, reproduce, adapt, and, under some conditions, redistribute.





What is a Full-Spectrum of Software Business Models?

Terminology

"Corporate community"

- Popularly referred to as "proprietary", "commercial" or "licensed".
- Confusion results from failing to acknowledge that Open Community solutions are collectively licensed, copyright-protected and may serve the commercial interests.
- "Corporately Owned Community" borrowed from urban architecture accurately differentiates this approach.

"Open community"

- Popularly referred to as "free", "libre" or "open source".
- "Free" confuses "free market" with "free lunch". The intent is to indicate free/libre market access to the functional knowledge. Some charge a distribution, administration or support fee, unlike free/gratis lunch.
- "Open Community" is preferred because it is less confusing, and still implies "libre".





What is a Full-Spectrum of Software Business Models?

Architecture and Development Process



"Corporate community"

- Software is architected, developed, maintained and evolved by one or more organizations via in-house projects and/or out-sourcing contracts.

"Open community"

- Software is architected, developed, maintained and evolved through multilateral communities of practice, including the initiators' in-house projects and/or out-sourcing contracts.





What is a Full-Spectrum of Software Business Models?

Access to Information & Knowledge

"Corporate community"

- Technical barriers restrict access to the concealed architectural documentation and program code, to specific personnel of the vendor organization and its contracted business partners.

"Open community"

- Technical support is provided to facilitate general public access to the architectural documentation and program code.





What is a Full-Spectrum of Software Business Models?

Software Marketing Strategy



"Corporate community"

- Software is marketed as a manufactured product, available under a “rental agreement”.
- Media charges may apply (CD, web services, etc.).
- Royalties (economic rents) are charged for use of the copyrighted code.

"Open community"

- Software supports a services marketing strategy and/or it is made available as a public service.
- Media charges may apply (CD, web services, etc.).
- No royalties are charged for use of the copyrighted code.





What is a Full-Spectrum of Software Business Models?

Services Marketing Strategy

"Corporate community"

- To adapt or extend the software, the licensor and its contracted business partners offer commercial services under contract.

"Open community"

- The customer is free to adapt or extend the software in-house, or in collaboration with other partners, or through independent commercial services firms in a competitive market.





What is a Full-Spectrum of Software Business Models?

Usage Licensing Terms

"Corporate community"

- Customers are charged a fee in exchange for a product-specific or customer-specific license authorizing each software installation, for each user, through a given time period, for specified purposes, and/or under other restrictions.

"Open community"

- Software is made available under a certified standard collective license to anyone for unlimited installs and unlimited users, for any purpose, over an unlimited time period.





What is a Full-Spectrum of Software Business Models?

Copyright



"Corporate community"

- Copyright law protects the organization that owns the work against unauthorized reproduction or adaptation outside the terms of the license.

"Open community"

- Copyright law protects the community members that own the work against unauthorized reproduction or adaptation outside the terms of the license.
- The license authorizes anyone to learn from, reproduce, adapt and derive from the work, and set terms for its redistribution.
- The license prohibits anyone from charging royalties on the collectively copyrighted work.





Changing Colours

"Digital Foundations" to "First-off-the-Mark"

- 1940s-1970s: Digital Foundations
Electronic computing began and progressed primarily under Open methods of scientific peer review.
- 1980s: First-off-the-Mark Competition
Early commercializers competed to capture overwhelming positions in embryonic markets. The majority of IT decision-makers in the commercial, academic and public sectors migrated towards the corporate business model.
 - Corporate Community approach came to be taken for granted
 - Open Community approach was dismissed by some major interests as unsuited to mature competitive business environments
 - Most IT decision-makers did not cultivate sufficient knowledge of Open solutions and methods to engage them effectively in operations





Changing Colours

"Internet" and "Knowledge Society" Foundations

- 1980s-1990s: Internet Foundations
Open Communities negotiate the interoperability standards, protocols and technology architecture of the Internet
 - *"The 'ah-ha' for open source software came to me when I realized, 'Wait, open source is the Internet'".*
- Software engineer to Lawrence Lessig
- 1980s-1990s: Knowledge/Information Society Foundations
Business gurus tout the importance of knowledge-sharing to organizational learning (Senge, Argyris, Demming, Drucker,...)





Changing Colours

"Commoditization" and "Competition"

- Late 1990s-Present: Commoditization of Software Solutions
Some operational IT and financial decision-makers in commercial, academic and public sectors re-discover how the Open Community business model for software can frequently *supply* and *demand* better, faster, cheaper means of achieving their business objectives.
- Today: More Competition, More Choice, More Learning!
IT decision-makers face a highly diverse, ultra-competitive technology and services business environment
 - Suppliers from across the full spectrum of Corporate-through-Open Communities are battling for mind-share and market-share
 - Choice amongst *competing technology solutions* has expanded to greater choice amongst *competing business models*





So, Is There a Problem?

"Culturally Embedded Systems"

- Today: More Competition, More Choice, More Learning! But...
 - "A particular culture can become so embedded that an organization is unable to adapt to changing circumstances even though it sees the need very clearly."
 - Edgar Schein (Editor). 2004. "DEC Is Dead, Long Live DEC: The Lasting Legacy of Digital Equipment Corporation". Sloan, MIT. http://www.decalumni.com/pdf/DEC_book_Press_Release.pdf
 - Culture is also embedded in information technology itself. This can be just as difficult to change as national culture or organizational culture.
 - Helen Nissenbaum, March 2001. "How Computer Systems Embody Values". IEEE Computer. Princeton University. <http://www.nyu.edu/projects/nissenbaum/papers/embodyvalues.pdf>





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 - Helen Nissenbaum, March 2001. "How Computer Systems Embody Values". IEEE Computer. Princeton University. <http://www.nyu.edu/projects/nissenbaum/papers/embodyvalues.pdf>
 - **RESULT: Few IT decision-makers in the public sector have sufficient working knowledge of the Open Community approach to include its business methods and technology solutions effectively in operations**





Let's Solve the Problem

Discussion

- What is required to raise awareness of xBSD solutions in the Government of Canada?





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Thank you!

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