Sharing Information on the Semantic Web: Unresolved Legal Issues

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The Internet

- Originates in research (not commercial venture)

- Access is its driving force (not property)

- Framed in the architecture of the network
  - Open Standards
  - Open Source Software (OSS)

The Internet

Why does it works?

OSS

- Motives to produce OSS
  - Ethical / policy reasons
  - Increase the speed of market adoption
  - Non-monetary incentives
  - Co-create and appropriate value
    - By building on previous works
    - By integrating external contributions

OSS

- Each contributor is adding to the pool of knowledge available to all

- This knowledge is more valuable than what any contributor can achieve individually

- Not new phenomenon (science, music, education, …)

OSS

- What the success of OSS makes us see clearly
  - In a networked world, centralized corporate production is not the only viable model
  - Distributed production by users sometime equals and surpass it

OSS - Legal Framework

- Collaborative development existed before
  - Under informal agreements
  - Under contractual schemes
- OSS licences created a favorable legal environment
  - By favoring reciprocity (BSD)
  - By securing openness (GPL)

OSS - Legal Framework

Is it applicable only to software?

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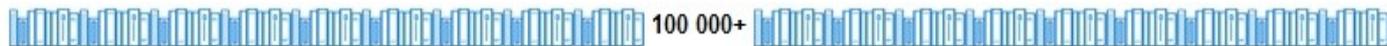
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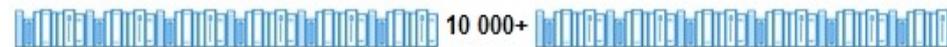
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Collaborative Initiatives

- Extensive use of Web services facilitating mass collaboration
    - Rich Internet applications
    - Web forums
    - Blogs
    - Wikis
    - Folksonomies (Social tagging)

Collaborative Initiatives

- Web-as-participation-platform
    - Architecture of participation
    - Users become producers
    - Collective intelligence
- Business revolution = Web 2.0

Collaborative Initiatives - Legal Framework

- Adaptation of OSS licences
    - GNU Free Documentation Licence
    - OpenContent Licence
    - Creative Commons (CC)
    - Domain specific licences (AEShareNet - Free for Education)

Collaborative Initiatives - Legal Framework

- Extended the favorable environment to all types of freely accessible information
  - By specifying the applicable reuse conditions (no permission required)
  - By clarifying the spectrum of potential rights
  - By standardizing the licensing process and making automated retrieval possible (CC)

Collaborative Initiatives - Legal Framework

What is the next step?

Aggregative Initiatives

- Collaborative initiatives developed independently from each other
  - Vertical information flow (Information silos)
- Accessibility & reusability of information call for reciprocity between them and other sources of information
  - Horizontal information flow (seamless interoperability)

Aggregative Initiatives

- Technical solutions are available
    - Heuristic (text-recognition)
    - Data modeling (XML, RDF)
    - Syndication technologies (RSS)
    - Ontologies (OWL)

Aggregative Initiatives

- Web understandable by computers
  - Data get a meaning
  - Dynamic discovery, composition and execution
  - Layers of services
- Evolution in progress = Semantic Web (Giant Global Graph)

Aggregative Initiatives

- W3C approach
  - Annotate the Web (full semantics)
  - Limited to the academic field
- Industry approach
  - Leverage on accessible information (limited semantics)
  - Pragmatic applications

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Aggregative Initiatives

- Limitations of current implementation
  - Information sources are limited (owned or preselected)
  - No reproduction of information (only links)
  - Avoid personal information

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Pierre-Paul Lemyre is a lawyer of the Quebec Bar and is in charge of the conception and development of LexUM International Projects. He is highly interested in the challenges that lasting development poses, as well as in syndication technologies for access to law and in the issues related to free and open source software.

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Aggregative Initiatives - Legal Framework

- Current legal obstacles to the aggregation of freely accessible information

  - Fragmentation of rights

  - Privacy concerns

Aggregative Initiatives - Legal Framework

Successful and complete implementation is
not just a technology issue

Issue #1
Fragmentation of Rights

- Rights are fragmented
  - By reuse conditions
  - By jurisdictions
  - By formats / domains
- Scalable to the smallest element (website > webpage > data)

Issue #1
Fragmentation of Rights

- Not a new problem
  - Request to limit the proliferation of OSS licences (FSF)
  - Tentative to standardize licensing (CC)
- Not fundamental as long as humans are in charge of the reuse of information

Issue #1
Fragmentation of Rights

- The success of aggregative initiatives will require computers to automatically
  - Retrieve applicable licences
  - Resolve their respective terms
  - Select information with adequate conditions for the anticipated reuse

Issue #1
Fragmentation of Rights

- Standardization under CC is helping
  - Embedded licence information ease their retrieval
  - Computer readable version ease their resolution
  - Standardized terminology and low number ease the selection

Issue #1
Fragmentation of Rights

- But it is a partial solution
  - Most content is not CC licensed
  - Copyright holders have the right to attach alternative conditions to their content
  - CC is not automatically accepting any new licence proposal
- Example of difficulties
  - Wikipedia vs Google "Usage rights" feature

Issue #1
Fragmentation of Rights

A higher level resolution mechanism is required

Solution #1
A Global Licences Repository?

- A database of licences and the conditions attached to them

- A standardized approach to licences resolution and selection (expand CC model?)

- A Web service that can be queried by users and computers

Solution #1
A Global Licences Repository?

- Issues that need to be addressed
  - Unlimited number of reuse conditions
  - Format and domain specific restrictions
  - Internationalization
  - Versioning of licences
  - Compatibility between licences (relicensing)

Solution #1
A Global Licences Repository?

- Possible solutions
  - Organizing conditions and restrictions into groups or categories?
  - Managing licences at the lowest possible level and associating related ones?
  - Limiting the designation of compatibility to the most common licences?

Solution #1
A Global Licences Repository?

- A successful implementation requires

  - Promotion and large-scale adoption of a standard tagging model for information

  - Involvement of a community of users in feeding and updating the database

  - Transparency and quality control procedures generating trust in the system

Solution #1
A Global Licences Repository?

- A successful implementation requires

  - Scalability insuring efficient interactions at every level of development

  - Provision of outputs in a large range of standardized formats

  - Provision of simple communication tools facilitating interactions with the repository

Solution #1
A Global Licences Repository?

- Architecture

  - Based on open standards and OSS to distribute the development

  - Use of collaborative technologies to distribute the management

  - Use of aggregative technologies to promote exploitation and reuse

Issue #2
Privacy Concerns

- Freely accessible information can include sensible data

  - Nominative, lifestyle, Internet use, medical, workplace information

- Do granting a right to reuse imply a total renunciation to privacy?

Issue #2
Privacy Concerns

- Privacy expectations are aligned on the original context of accessibility

- The aggregation of distributed information can alter it
  - By changing the audience (size, type)
  - By changing the usage
  - By associating information from diverse sources

Issue #2
Privacy Concerns

- Respectful players
  - Are impeded by the uncertainties about privacy expectations
- Non-respectful players
  - Are encouraged by the difficulty to detect unethical reuse (where information is not crawled)

Issue #2
Privacy Concerns

- Not a new problem
  - P3P
  - Access options of social networking websites (share with friends > other users > the Web)
- Not fundamental as long as large-scale automatic aggregation is not possible

Issue #2
Privacy Concerns

A standardized model for privacy
management is required

Solution #2
Privacy Tagging

- A technique for users to specify their expected degree of privacy for information they make accessible

  – Mix as you like

  – Do not mix with my personal data

  – Do not mix with the personal data of others

  – Do not mix

Solution #2
Privacy Tagging

- Possible solutions
  - A CC approach to privacy?
  - Development of an independent standard or integration with copyright licensing?
  - Limitation to the most basic conditions?
  - Compliance is evaluated according to applicable privacy laws?

Solution #2
Privacy Tagging

- A successful implementation requires
  - Simplicity to understand
  - Simplicity to technically integrate
  - Complementary efforts to promote the adoption of effective privacy laws

Conclusion

- Facilitating the sharing of information is the core function of the Internet
  - Not just about a more equitable distribution
  - Also about boosting the production of knowledge

Conclusion

- Less obstacles to the sharing of information = more opportunities
  - Innovative services
  - Knowledge products
- Benefits
  - Individuals and groups
  - Businesses

Conclusion

- Technology
  - OSS
  - Web 2.0
  - Giant Global Graph

- Legal framework
  - Copyleft
  - CC
  - ?

Conclusion

Finding solutions to the current legal obstacles is fundamental to the success of the next generation technology

Merci pour votre présence!

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