

Alternatives of Intellectual Property Rights (IPR) in Internet and Technology

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1 Web 2.0 Technologies

Web 2.0 is a term describing the trend in the use of World Wide Web technology and web design that aims to enhance creativity, information sharing, and, most notably, collaboration among users. These concepts have led to the development and evolution of web-based communities and hosted services, such as social-networking sites, wikis, blogs, and folksonomies. The term became notable after the first O'Reilly Media Web 2.0 conference in 2004. Although the term suggests a new version of the World Wide Web, it does not refer to an update to any technical specifications, but to changes in the ways software developers and end-users use the Web.

“Web 2.0 is the business revolution in the computer industry caused by the move to the Internet as platform, and an attempt to understand the rules for success on that new platform.”

- Tim O'Reilly

Some technology experts, notably Tim Berners-Lee, have questioned whether one can use the term in a meaningful way, since many of the technology components of ‘Web 2.0’ have existed since the early days of the Web.

The sometimes complex and continually evolving technology infrastructure of Web 2.0 includes server-software, content-syndication, messaging-protocols, standards-oriented browsers with plugins and extensions, and various client-applications. The differing, yet complementary approaches of such elements provide Web 2.0 sites with information-storage, creation, and dissemination challenges and capabilities that go beyond what the

public formerly expected in the environment of the so-called ‘Web 1.0’.

Web 2.0 websites typically include some of the following features/techniques:

- Cascading Style Sheets to aid in the separation of presentation and content
- Folksonomies (collaborative tagging, social classification, social indexing, and social tagging)
- Microformats extending pages with additional semantics
- REST and/or XML- and/or JSON-based APIs
- Rich Internet application techniques, often Ajax-based
- Semantically valid XHTML and HTML markup
- Syndication, aggregation and notification of data in RSS or Atom feeds
- mashups, merging content from different sources, client- and server-side
- Weblog-publishing tools
- wiki or forum software, etc., to support user-generated content

2 Openness

2.1 Open Standards

An open standard is a standard that is publicly available and has various rights to use associated

with it. The terms ‘open’ and ‘standard’ have a wide range of meanings associated with their usage. The term ‘open’ is usually restricted to royalty-free technologies while the term ‘standard’ is sometimes restricted to technologies approved by formalized committees that are open to participation by all interested parties and operate on a consensus basis.

Open standards have the following basic principles

2.1.1 Availability

Open Standards are available for all to read and implement.

2.1.2 Maximize End-User Choice

Open Standards create a fair, competitive market for implementations of the standard. They do not lock the customer in to a particular vendor or group.

2.1.3 No Royalty

Open Standards are free for all to implement, with no royalty or fee. Certification of compliance by the standards organization may involve a fee.

2.1.4 No Discrimination

Open Standards and the organizations that administer them do not favor one implementor over another for any reason other than the technical standards compliance of a vendor’s implementation. Certification organizations must provide a path for low and zero-cost implementations to be validated, but may also provide enhanced certification services.

2.1.5 Extension or Subset

Implementations of Open Standards may be extended, or offered in subset form. However, certification organizations may decline to certify subset implementations, and may place requirements upon extensions (see Predatory Practices).

2.1.6 Predatory Practices

Open Standards may employ license terms that protect against subversion of the standard by embrace-and-extend tactics. The licenses attached to the standard may require the publication of reference information for extensions, and a license for all others to create, distribute, and sell software that is compatible with the extensions. An Open Standard may not otherwise prohibit extensions.

2.2 Open Content

Open content, a neologism coined by analogy with ‘open source’, describes any kind of creative work published in a format that explicitly allows copying and modifying of its information by anyone, not exclusively by a closed organization, firm or individual. The largest open content project is Wikipedia.

Open Content refers to all material (text, sound, images) that the general public can freely use, distribute and modify without the traditional restrictions imposed by copyright. These actions can be sanctioned either by an Open Content license or by commonly accepted practice.

Open Content derives philosophically from the Free Software movement and attempts to achieve for the world of general content what FOSS did for software. The word ‘content’ itself may sometimes be misleading as it refers to a whole range of subject matter, from music to movies and literature to learning materials. The phrase ‘Open Content’ primarily refers to content that provides the greatest freedom (the right to modify), since other kinds of content which do not provide the right to modify may actually be covered by the Open Access movement.

Technically, open content is royalty free, share alike, and may or may not allow commercial redistribution public domain or under an open license, such as one of the Creative Commons licenses.

2.3 Open Access

Open access publishing is the publication of material in such a way that it is available to all potential users without financial or other barriers. An open access publisher is a publisher producing such material. Many types of material can be published in this manner: scholarly journals, known specifically

as open access journals, magazines and newsletters, e-text or other e-books (whether scholarly, literary, or recreational), music, fine arts, or any product of intellectual activity. In this context, non-open access distribution is called ‘toll access’ or ‘subscription access’.

Open access can be provided by traditionally-organized publishers, or under other arrangements. With respect to scholarly material, some distribution is carried out by locally organized and subsidized publishers; an example is the production of *Annals of Mathematics*, produced and supported by the Princeton University Department of Mathematics and the Institute for Advanced Study.

More normally it is a specialized publisher. Some open access publishers publish only open access material, such as PLoS; some publish open access journals as well as subscription-based material, such as BioMed Central (BMC).

The term has also been used in a wider sense to include publishers of Hybrid open access journals, which provide open access only for some article, those for which payment is made on behalf of the author.

It can similarly be used for publishers of Delayed open access journals, in which the articles are open access only after a period of embargo.

Even more loosely, the term is also used to describe publishers that permit or encourage self-archiving by authors and institutions.

3 Licenses

3.1 Creative Commons

The Creative Commons (CC) is a non-profit organization devoted to expanding the range of creative works available for others to legally build upon and share. The organization has released several copyright licenses known as Creative Commons licenses. These licenses, depending on the one chosen, restrict only certain rights (or none) of the work instead of traditional copyright, which is more restrictive.

The Creative Commons licenses enable copyright holders to grant some or all of their rights to the public while retaining others through a variety of licensing and contract schemes including dedication to the public domain or open content licensing

terms. The intention is to avoid the problems current copyright laws create for the sharing of information.

The project provides several free licenses that copyright owners can use when releasing their works on the Web. It also provides RDF/XML metadata that describes the license and the work, making it easier to automatically process and locate licensed works.

All these efforts, and more, are done to counter the effects of what Creative Commons considers to be a dominant and increasingly restrictive permission culture. In the words of Lawrence Lessig, founder of Creative Commons and former Chairman of the Board, it is ‘a culture in which creators get to create only with the permission of the powerful, or of creators from the past’. Lessig maintains that modern culture is dominated by traditional content distributors in order to maintain and strengthen their monopolies on cultural products such as popular music and popular cinema, and that Creative Commons can provide alternatives to these restrictions

3.2 Copyleft

Copyleft is a play on the word copyright and describes the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work for others and requiring that the same freedoms be preserved in modified versions.

Copyleft is a form of licensing and may be used to modify copyrights for works such as computer software, documents, music, and art. In general, copyright law allows an author to prohibit others from reproducing, adapting, or distributing copies of the author’s work. In contrast, an author may, through a copyleft licensing scheme, give every person who receives a copy of a work permission to reproduce, adapt or distribute the work as long as any resulting copies or adaptations are also bound by the same copyleft licensing scheme. A widely used and originating copyleft license is the GNU General Public License. Similar licenses are available through Creative Commons — called Share-alike.

Copyleft may also be characterized as a copyright licensing scheme in which an author surrenders some but not all rights under copyright law. Instead of allowing a work to fall completely into

the public domain (where no copyright restrictions are imposed), copyleft allows an author to impose some but not all copyright restrictions on those who want to engage in activities that would otherwise be considered copyright infringement. Under copyleft, copyright infringement may be avoided if the would-be infringer perpetuates the same copyleft scheme. For this reason copyleft licenses are also known as reciprocal licenses.

While the copyright only protects the exclusive rights of the originator by excluding all others under penalty, the Copyleft protects the freedom of all others, practically to use copyrighted works as if there were no copyright law at all, with one exception: Furthermore, copyleft also protects the open access to necessary information (e.g. source code) by enforcing its publication.

4 Content

4.1 Open Educational Resources

Open educational resources (OER) are an Internet empowered worldwide community effort to create an education commons.

The term “open educational resources” was first adopted at UNESCO’s 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries funded by the William and Flora Hewlett Foundation. Open educational resources are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute. Open educational resources include:

Learning content: full courses, course materials, content modules, learning objects, collections, and journals.

Tools: Software to support the creation, delivery, use and improvement of open learning content including searching and organization of content, content and learning management systems, content development tools, and on-line learning communities.

Implementation resources: Intellectual property licenses to promote open publishing of materials, design-principles, and localization of content. By the second half of 2006 it also became clear to some of the forerunners that OER and Free / Libre Open Source Software (FLOSS) do somehow belong together. As a result the discussion groups of IIEP on

OER and FLOSS were merged and forces were further joined through mergers with a related OECD campaign.

FLOSS communities are today known for producing good quality software using a different development approach than proprietary software producer. FLOSS is built by a community of volunteers and might be backed by companies that generate their revenues by providing services related to the software. In more recent years FLOSS communities also gained attention for their community production and support models and regarding their way of knowledge creation and learning. FLOSS communities possess many characteristics that educational settings seek to apply such as:

- Open and inclusive ethos: everyone can participate, no charges, no deadlines, life long participation
- Up to date content; everyone can add, edit and update the content
- Materials are usually the product of many authors with many contributions from people other than authors
- Frequent releases and updates where product features and community structures are the result of a continuous re-item negotiation / reflection process within a continuous development cycle
- Prior learning outcomes and processes are systematically available through mailing lists, forums, commented code and further instructional materials (re-use)
- A large support network; provided voluntarily by the community member in a collaborative manner nearly 24/7
- Free Riders (lurker) welcome paradox – the more the better
- New ICT solutions are adapted early by the community

4.2 Digital Commons

Digital Commons is the world’s leading hosted repository platform. This hosted service is licensed by the Berkeley Electronic Press. It is

used by associations, consortia, universities and colleges to preserve and showcase their scholarly output. Institutions can add their content to their repository through batch uploads, by linking to external sites, or via a submit form. Digital Commons allows for a variety of publication types and auto-converts Word, WordPerfect, and RTF documents to PDF. A unique web page is generated automatically for each article that includes title, author, abstract, and citation information. All pages maintain a persistent URL and meet web accessibility standards. Digital Commons supports data harvesting and feeding. Content is optimized for fast and accurate indexing by Google and Google Scholar and is OAI compliant. Digital Commons provides user notification tools. This includes RSS feeds and automatic email notification for reports of newly published content, Mailing list manager to announce new research, and the "Tell a colleague" email functionality. Digital Commons also provides individual readership statistics.

A Digital Commons license includes setup, training, support, documentation, upgrades, and hosting. In short, you'll receive a full-featured institutional repository with service and support at a price less than the cost of implementing a similar open source application.

5 Participation

5.1 Citizen Journalism

Citizen journalism, also known as public or participatory journalism, is the act of citizens "playing an active role in the process of collecting, reporting, analyzing and disseminating news and information," according to the seminal report "We Media" How Audiences are Shaping the Future of News and Information, by Shayne Bowman and Chris Willis.

They say, "The intent of this participation is to provide independent, reliable, accurate, wide-ranging and relevant information that a democracy requires." Citizen journalism should not be confused with civic journalism, which is practiced by professional journalists. Citizen journalism is a specific form of citizen media as well as user generated content.

In a 2003 Online Journalism Review article, J. D. Lasica classifies media for citizen journalism into

the following types: Audience participation (such as user comments attached to news stories, personal blogs, photos or video footage captured from personal mobile cameras, or local news written by residents of a community)

- Independent news and information Websites (Consumer Reports, the Drudge Report)
- Full-fledged participatory news sites (OhmyNews)
- Collaborative and contributory media sites (Slashdot, Kuro5hin)
- Other kinds of 'thin media.' (mailing lists, email newsletters)
- Personal broadcasting sites (video broadcast sites such as (KenRadio)

Dan Gillmor, former technology columnist with the San Jose Mercury News, is one of the foremost proponents of citizen journalism, and founded a nonprofit, the Center for Citizen Media, to help promote it. The Canadian Broadcasting Corporation's French-language television network has also organized a weekly public affairs program called, '5 sur 5', which has been organizing and promoting citizen-based journalism since 2001. On the program, viewers submit questions on a wide variety of topics, and they, accompanied by staff journalists, get to interview experts to obtain answers to their questions.

Citizen journalism websites are gaining popularity in India as well. Some like Purdafash.com allow people to not only share their grievances and problems, but also network together to help each other or to solve problems, using the strength in numbers.

5.2 Inclusive Participation

e-Inclusion or digital inclusion, written eInclusion when referring to specific policies, is the term used within the European Union to encompass activities related to the achievement of an inclusive information society. In this vein, new developments in technology turns the risk of a digital divide into "digital cohesion" and opportunity, bringing the benefit of the Internet and related technology into all segments of the population, including people who are disadvantaged due to education (a specific subset

called e-Competences), age (called e-Ageing), gender, disabilities (called e-Accessibility), ethnicity, and/or those living in remote regions (subject to the geographical digital divide). E-inclusion covers mainly the development of appropriate policies, maintenance of a knowledge base, research and technology development and deployment, and best practices dissemination. At EU level e-Inclusion is part of the third pillar of the 2010 policy initiative, managed by Directorate-General for Information Society and Media of the European Commission.

Next to these formal activities within the context of the EU, many people are and have been using the Internet to try to earn a living with all kinds of activities, while working at home. Known examples are the large group of “work-at-home-moms” across the Globe. Other groups that are often excluded are people that have been laid off after reorganisations or that are over 50.

e-Accessibility includes computer accessibility; approaches are essentially based on inclusion and the social model of disability as it applies to information technology goods and services; the Design for All principle, also called universal design or inclusive development in other fora, means availability of adequate assistive technology. e-Competences is a new term covering skills, knowledge and attitude relevant to education in the context of an inclusive information society; see also e-Learning and inclusive classroom in this area of accessibility to the differently-abled.

5.3 Internet Governance

Policies and mechanisms for Internet governance have been topics of heated debate between many different Internet stakeholders, some of whom have very different visions for how and indeed whether the Internet should facilitate free communication of ideas and information.

The definition of Internet governance has been contested by differing groups across political and ideological lines. One of the key debates centers around the authority and participation of certain actors, such as national governments and corporate entities, to play a role in the Internet’s governance.

A Working Group established after a United Nations-initiated World Summit on the Information Society (WSIS) proposed the following defini-

tion of Internet governance as part of its June 2005 report:

“Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the Internet.”

Law professor Yochai Benkler developed a framework for conceptualizing the idea of Internet governance through the idea of three “layers” of governance: the “physical infrastructure” layer through which information travels; the “code” or “logical” layer that controls the infrastructure; and the “content” layer, which contains the information that runs through the network.

The formation of the Internet Governance Forum was first recommended in the report of the Working Group on Internet Governance following a series of open consultations. This report was one of the inputs to the second phase of the World Summit on the Information Society in Tunis in 2005, which formally called for the creation of the IGF and set out its mandate.

Following an open consultation meeting called in February 2006, the UN Secretary-General established an Advisory Group, the MAG, and a Secretariat as the main institutional bodies of the IGF.

These organizational divisions should not be considered concrete, instead being malleable with future meetings, this means the organizations structures will continue to be changed and adjusted till they fit into the needs of the members.

The mandate of the IGF is principally that of a discussion forum for facilitating dialogue between the participants. The IGF may “identify emerging issues, bring them to the attention of the relevant bodies and the general public, and, where appropriate, make recommendations”, but does not have any direct decision-making authority

6 Internet and Development

Information and Communication Technologies for Development (ICT4D) is an increasingly popular, general term referring to the application of Information and Communication Technologies (ICTs) within the field of socio-economic development. ICTs can be applied either in the direct sense,

where their use directly benefits the disadvantaged population in some manner, or in an indirect sense, where the ICTs assist aid organizations or non-governmental organizations or governments in order to improve socio-economic conditions. In many impoverished regions of the world, legislative and political measures need to be taken to facilitate or enable application of ICTs, especially with respect to monopolistic communications structures and censorship laws.

ICT4D is geographically unspecific, and as such concerns itself directly with overcoming the barriers of the Digital Divide. It is rapidly becoming recognised an interdisciplinary research field as can be noted by the number of conferences, workshops and publications in the field. Such research has been spurred on in part by the need for scientifically validated benchmarks and results, which can be used to measure the efficacy of current projects. Many international aid agencies are now recognising the importance of ICD.

ICT4D initiatives and projects may be designed and implemented by private companies (e.g. Intel's Classmate), governments (e.g. e-Mexico initiative), non-governmental organizations (e.g. Hivos), or virtual organizations (e.g. OLPC.org). ICT4D projects address one or more of the following issues:

- Infrastructure: providing suitable computer hardware, operating systems, software, and connectivity to the internet. These would include the affordability of software and hardware, the ability to share software (as echoed in the Free Software movement), and the ability to sustainably connect to the internet.
- Capacity building and training in ICT: installing, maintaining, and developing hardware and software, digital literacy (technological literacy and informational literacy) and e-Awareness.
- Digital content and services: e-services (e-learning, e-health, e-business/e-commerce), including concerns related to local-language solutions in computing, and the Open Access agenda.
- Regulation of the ICT Sector and digital rights: Universal Access vs. monopolistic structures, Intellectual Property Rights, privacy, security, and digital identity.

- Ethics and Social Contexts

What's crucial in making any ICT4D effort successful is effective partnership between four key stakeholders: Public sector (governments - from developed nations, developing nations, international bodies, and local governments) Private sector (multi-national organizations wishing to expand their markets to the 4 billion people under US\$2/day and who have a strong commitment to rethink, redesign, and build innovative solutions for this target audience)

- Informal sector (NGOs, advocacy groups, think tanks)
- Representation from the target audience

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