Relevance of Open Source Software Licensing and Creative Commons for Resolving Intellectual Property Issues in Today's Knowledge Society

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ABSTRACT

The movement of open source software has set in. The open source community has already recognized the fact that software production can be given a boost while developing it in an open source environment rather than closed system software model. Public domain is considered as the pool of human knowledge from where anybody can pick up an idea to generate another piece of knowledge. If the free access is restricted then creativity suffers from limitation. Open source software has attracted the attention of governments and educational institutions and Universities around the world and has created a number of user's group. These users' groups are responsible to a certain extent to provide initial help to a new entrant in this school of thought. Yet, open source software is not a panacea, as one requires resolving the issues of technology insertion, flexibility, cost effectiveness, legalities concerning intellectual property and licensing. Conventional licensing fails to divulge the true nature of rights – user's rights as well as author's rights. Licensing of open source software can be better understood from Creative Commons' perspective and Intellectual Property rights perspective. Legal issues involved are also discussed and resolved.

Keyword: Free/Open Source Software (FOSS), Open Source Software Licensing (OSS Licensing), Open Source Initiative (OSI), Creative Commons (CC), Intellectual Property Rights (IPRs)

1. Introduction

The Intellectual Property (IP) Rules of the developing countries have been more or less the result of the strategic intentions of the developed countries (Jha, 2007). Being a developing nation, India requires quick and inexpensive access to build a knowledge society. Free and open source software definitely improves the access to commons information and builds up a robust public domain of information resource. Open Source Licensing is built on the legal foundations of Copyright Law of US and other countries (Williams, 2002). In case of the Copyright Law, it promotes an inflexible system of permission based access method for the third party user. The law even does not provide satisfactory solution in case of orphan copyright works, where the end user cannot legally use any substantive part of orphan text as there is no permitting authority, resulting in bounded creativity. Open source licensing is definitely a solution for such problems. Copyright Law differs significantly from open source license scheme in case of right of derivative work, - works that depend upon or develop from the original copyrighted work. Again, it has got some similarity with the Doctrine of Fair use and the Doctrine of Transformative Derivative work of Copyright Law. The

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Doctrine of fair use defines certain uses of copyrighted material as non-infringing such as for the purposes of commenting upon or criticizing the work, reporting, or teaching or research for non-commercial purpose etc. Fair use is unauthorized use deemed to be fair. The other non-infringing category of 'Transformative Derivative work' is based on a copyrighted work having a different identity and therefore copyrightable by the author who causes the transformation. But the base copyrightable work is usually recognized or sometimes overlooked. Copyright is attached to every original expression of an idea through a media automatically. But the author of the Transformative Derivative Work does not have the right under Copyright Law to create the 'Derivative Work'. This limitation is considered as one of the circumstances requiring open source licensing. This limitation to expressions also excludes protection from copyright of creations that are not expressed in a tangible, reproducible medium. For example, the recitation of Gayatri Mantra by a Pundit while performing a ritual at home is not protected by Copyright Law even if it is reproducible. If Music India Company produces an audio-CD containing the same, then it becomes a copyrighted product as available in a fixed media and hence can be reproducible.

The limitations of copyright protection of the creator are usually described by:

- The Doctrine of 'Work-made-for-hire'
- The Doctrine of Fair Dealing or Fair Use
- The Doctrine of Transformative Derivative Work

The works that are made for hire are the works of an employee, hired for the very purpose or specially commissioned for use in another work, such as a translation of a work. Doctrine of Fair Use defines certain uses of copyrighted material as non-infringing e.g. reporting/criticism of the work, teaching/education and non-commercial research. The other category of fair use is already defined as 'transformative Derivative works'. These works are copyrightable work in its own right though the author of the original work has no right over the new work. There is time bound limitation of copyrighted work also, protected for a given period of time. After the period of copyright is over, the work goes into the 'public domain', where anybody is free to make use of the work or commercially exploit the work thus aligned as per open source philosophy.

2. Difference between contract and copyright

The copyright came into being with the advent of the printing process to protect the rights of the printers, but not to a true sense of the authors. Therefore there was copyright violation and authors having contract with publishers could not do much. In fact, even today, the creators and their publishers are always at the battlefield of negotiation for the trade of licensing. Licensing is a type of contract of the work in exchange for payment or royalty. There are various kinds of royalties arising from the performers' license or the licensing of the derivative work. However, software publishing is not typically brought under such kind of royalties made by licensing of copyright in the more traditional work.

The development of software is teamwork and the team requires substantial capital which is usually provided by a software firm, thus the work is considered as 'work made for hire'. Copyright of software typically belongs to the employer, publisher and distributor of the software. The profit earned becomes the property of the publisher, not the developers of the software.

Open Source Initiative sets the basic principle of open source licensing: Open source must permit non-exclusive commercial exploitation of the licensed work, must make available the work's source code and must permit the creation of derivative works from the work itself. Open source licensing diminishes the right to exclusively exploit a work. Open source licensing helps the authors to reach to a broader audience; and at times requires surrendering all their copyright for free distribution and exploitation. Any piece of software can be judged from the intrinsic value (Open Source License Text, June 26 2007):

- Formal purpose as a database or another application
- Potential source of code for use in performing a totally different functionality - a very suitable candidate for commercially successful transformative derivative work.

Shrink-wrap licensing are provided with every commercial software, whereby a consumer becomes bound by contracts by opening the plastic wrap on the box containing the software, manual etc. These are binding contracts for not allowing the software for its above stated intrinsic values. Open source licensing eliminates the restriction put by Shrink-wrap licenses, Open source licensing allow (Rizvi & Mishra, 2005)

- Open distribution of the software
- Open modification of the source code
- Open time frame for original and derivative work
- Open source code and compiled code
- Integrity of the author's source code - distribution of 'patch' file or modification along with the original form rather than the distribution of modified source code. But it does not restrict the free distribution of compiled modified code.
- No discrimination against persons or groups
- No discrimination against fields of endeavor
- Distribution of license – thus the license should have legally effective provisions that give identical rights to and enforce generational limitations, if any, on subsequent generation of users
- License must not be specific to a product
- License must not restrict other software
- The License must be technologically neutral for free transmission of the code

The above definition is frequently updated at www.opensource.org,

The distribution of the original or derivative works under open source licensing has to be under open source licensing as per the above conditions. This kind of generational limitation prevent open source code from going 'closed' and intrinsic values of the open source is advocated and ensured. Rights propagate as the software or open source ware gets redistributed (Samaddar, 2007).

Open source differs from the traditional copyright licensing by permitting open distribution and open modification ensuring innovation, reliability and longevity. Open source ware is more likely to be built to open standards, so interoperable with other open standard system.

The free contribution to a work makes a work more valuable. This type or restriction is imposed by the symbol of 'Copyleft', opposite of copyright or ©, of Creative Commons organization. It may be noted that copyright is not equivalent to generational limitation, but can be continued as a type of generational limitation. Open source licensing also allow timely updating, revival and adaptation to new uses. Open source projects exist in commercial world e.g. Linux, Apache Web Server, and Mozilla browser (OPL, June 14 2007).

3. Issues with Intellectual Property and Licensing

An effective license must deal with the different types of rights e.g. right to have copyright, patent right etc. associated with it. A software license is a contract between the software owner (author/licensor/ distributor/publisher) and the licensee defining terms of use of software. Typical protection is provided to the software owners under the Copyright Law e.g. the Digital Millennium Copyright act (DMCA) of US and other Contract law which provides legal restriction on reverse engineering. A piece of software can come under copyright, patent or trade secret. Leaving aside trade secret, for the required treatment for its very nature, the licensor makes implicit or explicit assertion about copyright to the licensed work and grant

of patent (if any) to that licensed work. The licensor in this case, the original creator, can always has the right to license it under copyright. But in case of patent, the granting the rights is associated with a risk of possible unknowing infringement by the licensor. Again, obtaining a patent involves complex and elaborate paperwork and the process is time consuming. The licensor (patentee) has to prove novelty, uniqueness and usefulness beyond any doubt before the grant of patent up to the satisfaction of any third party. More over, the total process incurs a considerable amount of expenditure on the patentee (licensor). In case of license of patent, there is possibility to narrowing or eliminating the patent for possible litigation of infringement, considering the fact that the patent holder may not like to spend to defend the patent under the open source. In fact, the effect of patents law on software make it difficult to implement licensing on open source and force source software, indicating that software patents are not suitable candidate for open source licensing (Stallman, 2002). The most widely used open source license, GPL (roughly 85% of open source software) does not include grant of patent licenses.

The other issue which is not the part of open source definition is warranty disclaimers. There are various types of warranty. Out of this, a warranty against infringement is a type of warranty which is applicable to intellectual property only, in this case to the right to copyright and possible patent rights. If the product comes without warranty but with an open source license, then the second and subsequent generation of developers can provide support for product under contract. This opens a scope of business opportunity for developers from open source ware.

3.1 Management of Licensing for Sustainability

All the licensing effort is always considered as a way to expand the open source development. However, open source ware is not limited to software only. Therefore, sustainability of open source calls for open source ware going beyond software like in literature and arts which comes under the well-defined area of IP, namely copyright. Creative Commons License is a formidable step in this regard which tends to encompass the world of copyright under its fold. The experiment of Creative Commons can be considered as successful in open source ware. The creators of the Creative Commons Licenses indicate that the license is not particularly suitable for software, but there are Creative Commons enthusiasts, who have shown some way towards its applicability in Software as well.

3.2 Creative Commons Licenses

Creative Commons Corporation is non-profit organization founded in 2001 and it is based at Stanford University Law School. Creative Commons Series of licenses are designed to encourage creators of works to make their work available for public use. These licenses are used for licensing the open source use of texts, music, websites, films and thus going beyond the open source software licensing. The users take advantage of the well-written license model of Creative Commons. It provides alternative licensing and contract schemes to allow the authors/licensors to surrender some/all of their rights under the traditional copyright.

Creative Commons also provides other services like

- Public Domain Dedication – a license to surrender all rights of creator under copyright (Public Domain Dedication, June 14 2007)
- Founders' Copyright – it is a contractual undertaking between the creator and Creative Commons to provide the effect of Copyright Law.

The first service, Public Domain Dedication, raises some legal debate on the context of legal effectiveness as a contract as there is no consideration of exchange between the parties. Thus the binding legal effect remains absent. But there may be other legal methods by which it could be enforced. The users seeking such services again may seek expert opinion from a knowledgeable lawyer on the question of enforceability in the particular circumstances of use.

Nevertheless, all the Creative Commons licenses permit the free copying and distribution of the licensed work. The different kinds of Creative Commons Licenses can be accessed from creativecommons.org. Four specific licenses provided by Creative Commons:

- Attribution
- Non-commercial
- No derivative works
- Share alike

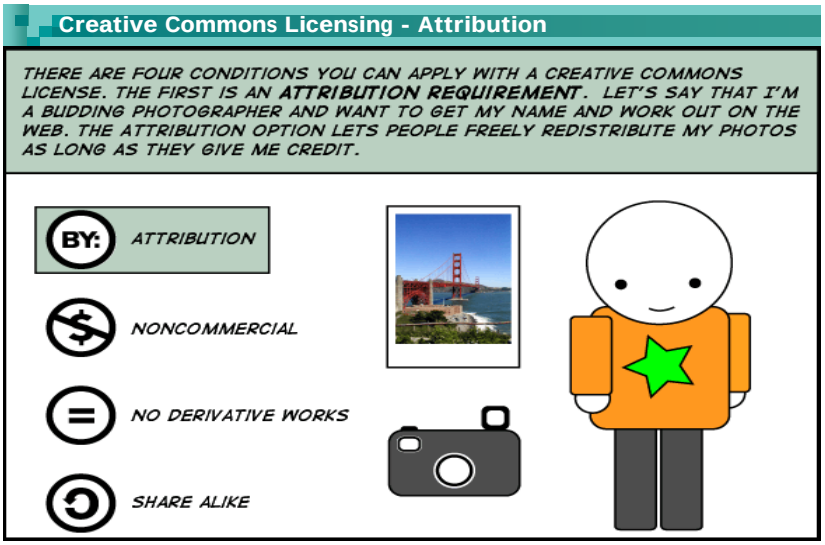

Figure 1: Creative Commons Licensing

3.3 Comparison of Creative Commons Licenses with other Open Source Licenses

Let us consider one of the types of Creative Commons Licenses – 'Attribution – ShareAlike'. This license permits free distribution of the original work and the creation and distribution of derivative works under the condition that such works themselves is subject to the terms of Creative Commons License. The license demands attribution towards the original author of the work in both the cases of original and derivative work. There is no difference between commercial and non-commercial use of a work as per license unless it is specified. This license governs the use of a written text or any original expression on fixed medium e.g. written text, not a software program which can come under patent as well (Figure 2).

Each Creative Commons License is attached with a 'Commons Deed'. 'Commons Deed' expresses the privileges granted and restrictions imposed by the license (Attribution –Non Commercial- ShareAlike 1.0, June 14 2007).

This license provides a Warranty disclaimer of not being a legal firm and not providing a legal service. The warranty also disclaims any liability for use of the license.

The provisions in the license are to a certain extent similar to General Public License (GPL), like stating that the exercising of any right under the license; the user accepts the terms of the license. Even the 'unenforceability for want of legal exchange' clause does not prevent the users from acceptance as the right to use cannot be obtained otherwise, save under the limited provision of doctrine of fair use or fair dealing. There are licenses having the flavor of open source license but violates the spirit to a certain extent e.g. Community Source License Agreement introduced by SUN Microsystem.

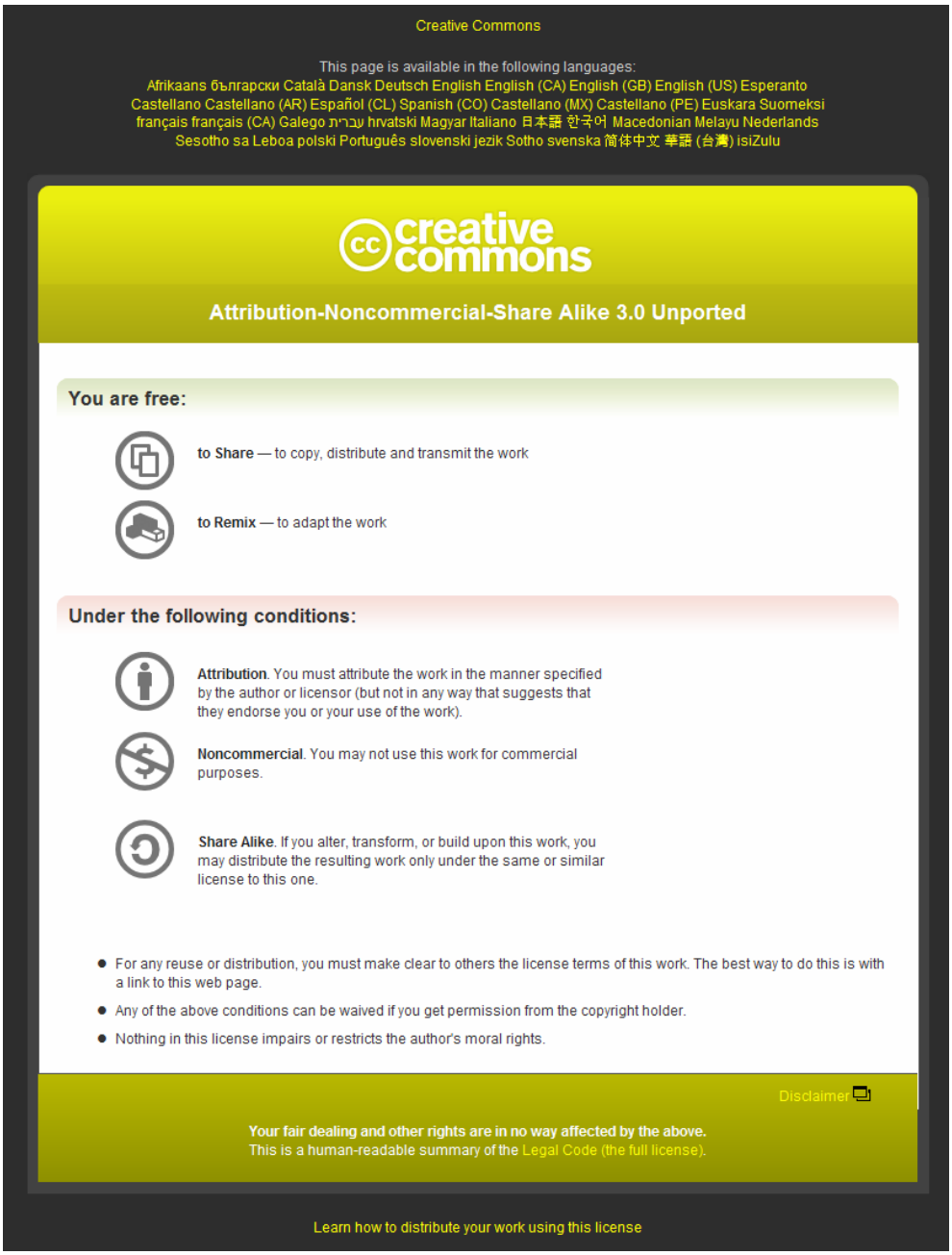

Figure 2: Commons Deed for the Attribution – ShareAlike License, Version 1.0

Creative Commons Licenses (CCPL) gives a list of definitions of the words like Collective work, Derivative work, Licensor, Original Author, Work, You, which are similar to Q public License (QPL- for distribution of the toolkit Qt Toolkit), Mozilla Public License (MPL) and the Artistic License (Perl). Traditional open source licenses are:

- GNU GPL (Copyleft)
- Library GPL
- MIT X Windows License
- BSD Style License

There are commercial open source style license as well:

- Netscape Public License – Mozilla
- SUN Community Source
- IBM Jikes

The Mozilla Public License is similar to GPL but can charge royalties for modified versions, can include source code within larger works licenses under different license types, thus the license is less liable to 'infect' all the downstream projects. Copyright notices and warranty disclaimers are retained. It may also provide additional warranties to downstream projects but may have to indemnify original developer for any claims arising as a result. A major difference with GPL is that MPL includes grant of patent licenses. The Free BSD License also includes grant of patent licenses. The Free BSD License, in a way, is unrestrictive license which requires only the preservation of copyright notices and warranty disclaimers (Stallman, 1999).

The next section of CCPL indicates that there is no prohibition on any rights that could be exercised under the doctrine of fair use or first sale doctrine. Section 3 provides the License Grant. License Grant states clearly the rights in the work (Laurent, 2004).

- "To reproduce the work, to incorporate the work into one or more collective works and to reproduce the work as incorporated in the collective works.
- To create and reproduce Derivative works
- To distribute copies or phone records of , display publicly, perform publicly by means of a digital audio transmission the work including as incorporated in collective works
- To distribute copies or phone records of, display publicly, perform publicly or perform publicly by means of a digital audio transmission derivative work";

The above rights may be exercised in all media and formats whether now known or hereafter devised. The above right includes the right to make such modification as are technically necessary to exercise the rights in other media and format. All rights not expressly granted by Licensor are hereby reserved.

The next section gives the restrictions to be considered which are similar again to GPL. For example, CCPL bars the inclusion of any condition that 'alters or restricts' the terms of the license. Thus any work under CCPL cannot include work licensed under GPL or MPL. It may be noted here that all the rights belong to the Licensor, not to the original author, thereby capturing the spirit behind the creativeness of mankind or 'Commons'. The generational limitation is again similar to the 'copyleft' imposed by GPL. However, the requirement of attribution is a unique feature which makes this CCPL license different from other CCPL licenses. Thus, in cases of original and derivative authors of the works, the original author of the work must be given the credit suitable to the format of distribution.

Unlike the other open source license, CCPL contains a warranty of non-infringement that is to guarantee that the work does not contain any infringing material to harm the privacy rights of any third party. This is very important as the licensor would be liable to the third party whose copyright is infringed and to the licensees. The licensee, who relied upon the rights granted under CCPL to enter into a business opportunity, is at a loss after the discovery of the violation of copyright. The section on Termination states

that upon any breach by the licensee, it stands terminated. The conditions in this case are similar to GPL. CCPL also contains sections for savings clause typical in commercial contracts.

CCPL gives all the liberty to the Licensor to choose the license suitable as per his or her need. The Creative Commons website is a licensor-friendly site with choose-your-own-license menu. Again, use of a licensed work of music with moving image, 'synchronization rights' from the author of the musical work is also included. The ease to add license to a work spreads the culture of open source ware as evident from the ccmixter.org website.

Creative Commons (CC) has 40 national jurisdictions and over 140 million worldwide CC licensed artifacts in audio, video, text, educational and website format (Jha, 2007). ccmixter.org is an example of community music site having remix under CC.

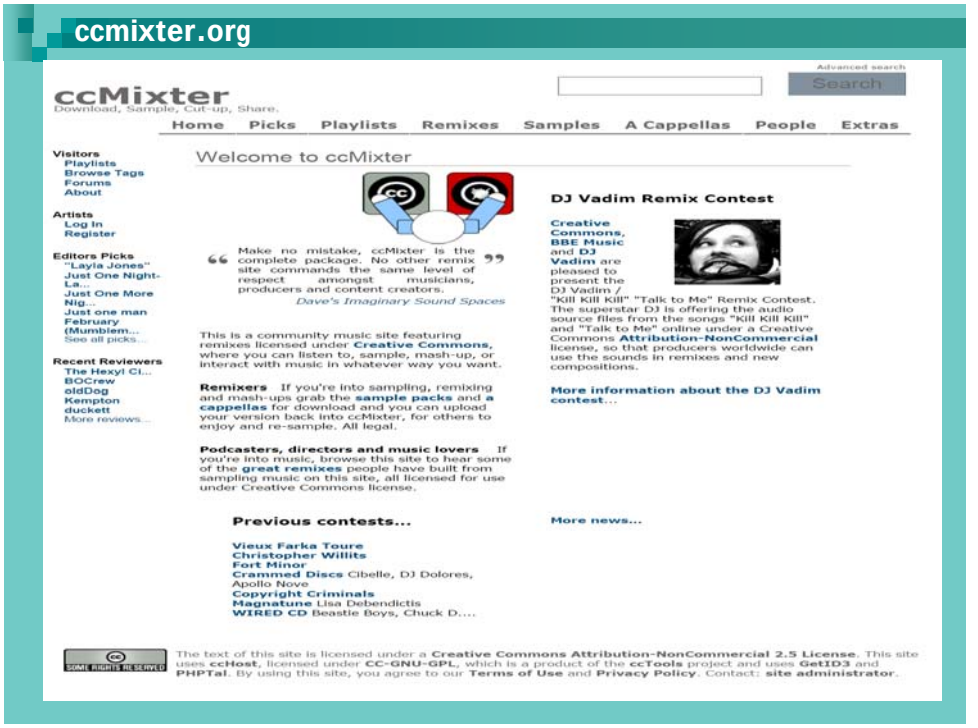

Figure 3: Home page of ccmixter.org

There are many more applications like the one cited above, e.g. MIT Open Courseware at mit.ocw.edu

3. Concluding Remarks

The Creative Commons project successfully extends the ideas behind the open source and free software licensing movement to works other than software. The ease of use and understanding makes CCPL a viable option for the users to readily opt for the CCPL licenses. Rather than searching for an appropriate license from the jungle of licenses after seeking considerable legal support from knowledgeable lawyers, it is always preferred to easy uploading of works with required open source license. The movement can be considered successful to that extent. The legal effectiveness of such licenses remains an argument for want of proper legal exchange. But that becomes a secondary issue for the open source ware savvy users of Creative Commons. The licenses meant for documentation like GNU Free Documentation License, GFDL

(GFDL, June 14 2007) and Open Publication License, OPL (OPL, June 14 2007), are more focused on technical documentation and publishing. These open source analogs of CCPL lacks the general appeal of free aesthetic works licensing. Available digital networks certainly contribute towards productivity and growth of knowledge society breaking the barriers of caste, creed and nation. It contributes to individual freedom to access information as well.

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