

ANALYSIS OF OPEN-SOURCE LICENCES AND ITS IMPACT ON EVOLUTION OF COPYRIGHT REGIME

AUTHORS – RATN PRIYA CHAUHAN* & DR. LAKSHMIPRIYA VINJAMURI**, STUDENT* & ASSISTANT PROFESSOR** AT LAW COLLEGE DEHRADUN, UTTARANCHAL UNIVERSITY, DEHRADUN, UTTARAKHAND, INDIA

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ABSTRACT

For software development, two property regimes can be identified. On the one hand, corporations can establish a Private Regime that prevents any external parties from accessing the software assets of the company. It is demonstrated how, over the past 20 years, the protective tools of secrecy, copyright, and patent have been significantly enhanced. Conversely, a Public Regime of hackers can be identified, started by people, groups, or companies, where source code is shared openly. It is suggested that copyright is used in an innovative way in this instance. Authors assert their ownership rights and create "open source licences" that permit the public to access the code while controlling who may use it. A "controlled commons" is established. The analysis is divided into three main sections: the most significant open source licences to date, the issue of potential incompatibility between them (particularly with regard to the widely used General Public Licence), and the potential fragmentation into many user communities.

INTRODUCTION:

In a traditional sense the term copyright simply refers to the legal right of the owner of an intellectual property. Copyright simply put is right to copy and in legal sense the term copyright grants the creator of an original work exclusive rights to determine whether and in which conditions the original work may be used by others which goes on for a limited period. Although the miniscule details differ from nation to nation, yet it is assumed to be universal in nature. Although copyright came into existence predominantly for the protection of literary works but with time new facets were added to the ever-growing list of works (see musical, dramatical, pantomimes etc) which are qualified under the copyright domain.

With the advent of technological innovations software are also one of such facets which are now under the umbrella of copyright protection. The source code of the software is copyrightable which could be licensed to other

parties with the consent of the owner of the intellectual property. According to the Trade related aspect of intellectual property rights (TRIPS) **Article 10.1**⁴⁷⁵ both the object and the source code are under the protection as copyrightable works.

Open source software⁴⁷⁶ (OSS) is a kind of software whose source code is openly published which is usually available at zero charge often produced by voluntary efforts. The OSS has been subject to many a debate regarding its ambit under the copyright protection and how a traditional copyright regime has to mould itself so as to fall in line with this new species of intellectual property.

This thesis will examine the scope of copyright protection when it comes to software and new trends in different countries. The paper will further delve into the concept of OSS and how

⁴⁷⁵ Trade related aspects of intellectual property rights, Art. 10.1.

⁴⁷⁶ Peeling, Satchel, Analysis of impact of open source software, QINETIQ/KI/SEB/CR010223, 2001.

does the copyright regime take care of the protection requirement of OSS as well as the concept of **Copyleft**⁴⁷⁷ and how does the traditional copyright regime is shaping itself to cope with the ever-increasing popularity of the OSS and the controversies which come with it with the help of some relevant case laws.

The creation and dissemination of knowledge are examined from the perspective of information disclosure in the "new economics of science" (see Dasgupta and David, 1994). The main query is whether knowledge is sought for to add to the pool of information available to the public or to profit from its private use. From this vantage point, it is possible to distinguish between two types of systems, commonly known as science and technology. Whereas the latter requires results to be kept a secret, the former requires knowledge to be published in an open manner. One can also arrive at this distinction between regimes by concentrating on market mechanisms. With the backing of state-granted intellectual property rights (IPRs), technology is the domain of the market. The state, on the other hand, established the science regime, which consists of public laboratories and subsidies, in an attempt to address market failure. Dasgupta and David emphasise that knowledge workers can be classified as "scientists," "technologists," or both. What will determine the situation is not their cognitive activities but the regime in which they operate.

This essay will analyse software, a particular type of knowledge. How are computer programmes developed under market and non-market modes? The distinction between private appropriation of information and public revelation will be the main focus, in accordance with the analysis above. Surprisingly, IPRs will be heavily discussed in both regimes in the analysis. The market regime is in effect in the software industry within businesses, primarily

those that generate hardware or software. Remarkably, the non-market regime emerges inside groups of computer hackers, who are present everywhere, including outside of colleges. Thus, to prevent any misleading implications, we shall henceforth refer to these two software regimes as Private and Public Regimes, respectively, instead of Technology and Science. Because software is different from other knowledge products in certain ways, it need particular consideration. An algorithmic concept is the first thing a coder works with. It is possible to programme this algorithm. This was done directly in machine language, which was the language that computers could read in the early days of computing. However, humans find it challenging to even "read" these languages, much less modify them. Thus, to make programming simpler, higher order languages—which are easier to read—were created. Programming has been done since then using a computer language that must then be converted to a machine language. To put it in technical terms, a compiler must convert source code into object code. It will become evident how important the contrast between an algorithm, source code, and object code is in both regimes.

We will first study the Private Regime as it exists within firms. It will be demonstrated that there has been a significant evolution in both secrecy and IPRs since the 1980s. The research then shifts to the Public Regime, which has developed alongside hackers who freely share source code. This is where IPRs will be demonstrated to have a quite different function: as copyright holders, authors have developed new types of licences that control the admission of others (rather than their exclusion). Since the 1990s, the "open source software" movement has also gained traction in the business sector. As an experiment, several companies have allowed outside hackers to work on their in-house software projects or taken advantage of existing projects. The examination will demonstrate that as a result, new open source licences were created in order to take into

⁴⁷⁷ Bonvoisin, Jérémy ; Thomas, Laetitia ; Mies, Robert ; Gros, Céline ; Stark, Rainer ; Samuel, Karine ; Jochem, Roland ; Boujut, Jean-François Current state of practices in open source product development ISBN: 978-1-904670-90-2, pg.111-120, 2017

account commercial interests, and open as well as mixed property regimes—which combined aspects of the Private and Public Model—evolved.

The production of open source software is becoming more and more popular among academics. In particular, the following sources should be given for comparison's sake. The most important studies were those conducted by legal scholars Yochai Benkler and Lawrence Lessig, who created important new directions for the study of open source software (Benkler, 2001, Benkler, 2002a, Benkler, 2002b, Lessig, 2002a, Lessig, 2002b, Dreyfuss et al., 2001). In a more recent publication, Research Policy (vol. 32, no. 7, 2003) had a special issue on the topic, with various writers discussing property rights. For the sake of comparison, West (2003) stands out among these. I will cite all of these sources multiple times in the future. It could be helpful to clarify in advance which accounts my analysis differs from. I do not limit myself, in general, to the simplistic view of the open source community as using only two types of licences (the General Public Licence or the Berkeley Software Distribution licence; see below). Instead, I thoroughly examine the entire spectrum of "open source licences" that have developed, whether they were created by individuals, groups, or businesses. Additionally, the difficulties posed by merging source code covered by various licences are investigated. A more detailed image of the open source movement and its user communities will consequently surface.

LITERATURE REVIEW:

During my research to find out more about the synchronicity of the open source software and the copyright regime I came across some interesting literature which would help me to further my research on the mentioned issue.

David Dorman in his periodical journal for the American Law Association naming "**Open Source Software and the Intellectual**

Commons⁴⁷⁸" has talked about how open source software regime which started with modest beginnings in the 1980's has now occupied a substantial position in the modern software landscape. He in his article goes on to explain what prompted the rise of the open source software regime and why need for privacy prompted many software developers to take this path. He then goes on to help the readers to understand what the benefits of using an open source software is. He then tries to debunk the popular myths which surround the open source software usage and goes on to criticize the digital millennium copyright act of 1998 and how acts such as these are hindering the progress of open source computing. Later in the article he talks about grid computing and how open source is the reason behind the rise of LINUX- the fastest growing operating system of the 21st century.

Brian Fitzgerald in his article titled ⁴⁷⁹"**The Transformation of Open-Source Software**" talks about how just a few years ago it was preposterous to think that the power and control of mega software industries such as the Microsoft and Sony could be threatened by the largely volunteered open-source software regime. He then goes on to explain how the rise of the open-source software regime has basically altered the nature of the software industry by explaining how the traditional 'pay as you play' has been somewhat altered as various reward mechanisms, distribution of developed work and abstract business models have now become the chief source of supply and how profits could be achieved. He then cites Moore's law and explains how the demand for the open-source software is increasing dramatically every 12 months or so. At last he also talks about how this rise of open source software has also somewhat resulted in rise of various Intellectual Property infringements. In the end he advocates for a proper balance in this rise of open-source computing and I.P. laws.

⁴⁷⁸ Dorman David, Open Source Software and the Intellectual Commons, 33 NO.11 ALA, 51, Dec. 2002.

⁴⁷⁹ Fitzgerald Brian, The Transformation of Open Source Software, 30 No. 3, MISRC University of Minnesota, 587, Sep. 2006.

Georg von Krogh and **Eric von Hippel**, in their article “**The Promise of Research on Open-Source Software**”⁴⁸⁰ talk about how the open-source computing is indeed a public good and advocates how contrary to the popular but incorrect opinion there is a good copyright mechanism which surrounds open-source computing. They explain that open-source computing is a non-rival and involves copyright licenses which keep any private intellectual claims out of the way of both the developers and the users of the software at the same time providing the source code for anyone to use and access. They go on to explain how open-source projects are initiated, how they are developed. They have also given various examples of platforms such as sourceforge.net which has on the website around 11000 projects with source codes available which can be indeed be used as a good source of inspiration ranging from operating systems to video games.

Jonas P. Herrell in his journal for Berkeley School of law titled “**The Copyright Misuse Doctrine’s Role in Open and Closed Technology Platforms**” talks about how the closed source platforms software with forced updates are making the consumers in-fact reluctant towards their use and how the open source software with its modest settings are now winning over majority of the consumer base in the modern age of computing. In the open source circuit, the user has all the freedom to choose when he wants the updates and those updates are incremental in nature, so the user is not forced to adopt them. This will according to the author decrease the time needed to embrace the next technology, leading to quicker adoption periods at the market level. To adopt subsequent innovations of a closed platform, however, would require the “locked-in” user to adopt an entire new platform containing

the technology and to spend a larger amount of time learning about it.

Bruce Kogut and **Anca Metiu** in their article for the Oxford University press titled “**OPEN-SOURCE SOFTWARE DEVELOPMENT AND DISTRIBUTED INNOVATION**” talk about the open source computing from an economic perspective. They talk about how open source computing is thriving despite the absence of traditional economic and property right claims. They try to explain through their article that how meticulous the mechanism of traditional closed sourced computing is right from the developers to the eventual consumers and how the open source computing with their innovative ideas regarding development and distribution are making the job seem easy and are easily perceived a threat to the traditional closed source computing. They criticize how initially the corporations such as Microsoft and AMD were exercising monopolies which has been somewhat curbed by the rise of open source operating system such as LINUX which is slowly being taking over the operating system landscape by storm as many governmental agencies are now favouring Linux over the more traditional counterparts.

Emily Menell and **Samuelson Carver** in their book titled ⁴⁸³**Software and Internet law** talk about open source software from the license point of view. They go on to talk about what kind of licenses are comprised within the open source computing and talk about concepts such as copyleft and reciprocal license. The topic then goes on to explain the difference between a **copyleft** and a **reciprocal** license. They also lay stress on the fact that a license can further be divided on whether they are compatible with the **GPL** or not. There are also within the topic several case laws which further have helped in getting a proper understanding as to how open source software work.

⁴⁸⁰ Georg von Krogh and Eric von Hippel, The Promise of Research on Open Source Software, 52 No.7, INFORMS, 975, Jul.2006

⁴⁸¹ Herrell Jonas P., The Copyright Misuse Doctrine’s Role in Open and Closed Technology Platforms, 26 No. 1, University Of California Berkeley School of law, 441, Jan.2011

⁴⁸² Bruce Kogut and Anca Metiu, OPEN-SOURCE SOFTWARE DEVELOPMENT AND DISTRIBUTED INNOVATION, 17 No.2, Oxford University Press, 248, Summer 2001.

⁴⁸³ Emily Menell Samuelson Carver, Software and Internet law, pg.300-301, 4th edition, 2000

In the case **Jacobson v Katzer**⁴⁸⁴ the district court held that open source artistic licenses created an “intentionally broad” non-exclusive license which was unlimited in scope and thus did not create liability for copyright infringement. And the preliminary injunction was denied.

RESEARCH OBJECTIVES:

The focal objectives of the research are as follows:

- To get an in-depth idea about the open source software regime and how it has certainly made a splash ever since its inception.
- To explore the subjects related to OSS such as ‘copyleft’ and ‘free source’ and how much they are affecting the open source regime.
- The paper will also examine that how the local copyright laws are evolving to cater the disputes that may arise in the software world with special emphasis on Indian Copyright regime.

RESEARCH QUESTIONS:

The focal questions on which the research is based on are as follows:

- What are the benefits of an open or free source software compared to that of a closed source software?
- What recent developments have been witnessed in the open source sector which have acted as a catalyst for normalisation of such usage?
- What are the hinderances which are faced by open source creators as well as whether countries have wholeheartedly accepted the idea?
- How the Indian Copyright regime addresses the concept of open source software in the new copyright act?

STATEMENT OF PROBLEM:

With the advent of TRIPS regime, it has been observed that much of the confusion which

existed regarding the implementation of I.P. laws more particularly which surrounded the copyright (what works come under its ambit, duration etc.) have some what cleared but with the advancement of technology particularly in the software development sector, more new questions have been raised. Earlier the questions were chiefly related to what part of the software would come under the copyright protection. With this research I would try and understand how open source programmes work to get a proper understanding. The focal problem which would be addressed in this research would be as to whether the modern copyright regime acts as a lubricant or as a shackle when it comes to open source and more recently free source software.

CENTRAL ARGUMENT:

Around November 1999, open source, importantly the LINUX based operating system started gathering chatter and now almost every personal computer user has interacted with an open source software (VLC media player!). With the help of this research I would like to put light on the fact that majority of Governments today have in fact promoting the usage of open source software and gone are those days when open source programming felt out of place in the abyss of major corporations.

SCOPE AND RESEARCH METHODOLOGY

The research focusses primarily on the various periodical journals who have chiefly talked about the importance and emergence of the open source regime. For more credible research there will be an in-depth study of the copyright laws of some sample countries and more importantly India to have an idea how the government is promoting the use of open-source software. Emphasis will also be given to various international convention regarding copyright and importantly TRIPS to have a better understanding about the copyright regime.

The research will predominantly be doctrinal in nature but at times empirical data will be

⁴⁸⁴ Jacobson v Katzer, 535 F.3d1373, (fed. Cir.2008)

compiled to provide a statistical point of view as to explain the rise of the open-source software since the 1990's. Since the aim of the research is to showcase the importance of the open-source programmes and their consonance with the copyright regime, the nature of research shall be descriptive in nature and shall depend on government statutes, newspaper article, journals and some important publications regarding the subject matter.

CONCLUSION:

As a model for the development, dissemination, and collaborative evolution of software platforms, we examined the evolution of commercial engagement with open source. It seems that Open Source's intrinsic worth is that it offers guidelines for cooperation amongst several parties, each with their own goals. Open Source as a concept and licences like the GNU GPL have unquestionably produced enormous value in practice, even though the ideas behind it challenge perceptions from the standpoint of proprietary software development and some would argue that measures derived from Open Source are unnecessary.

The field's dynamics are shifting as Open Source continues to mature and collaboration expands into areas such as legal and business analytics. One recurring issue is that proprietary and open-source approaches to software and intellectual property rights management unavoidably collide and look for ways to cooperate. Even if it seems improbable that either side would want a catastrophic confrontation to occur, there may still be tension in the air after this. Therefore, we conclude that in order to effectively engage with improvements in Open Source governance, stakeholders in the field will see increased collaboration on all forms of legal issue, and those stakeholders—from the perspectives of both Open Source and proprietary business—will ultimately reach an equilibrium and form of accommodation.