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INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS

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PATENT PROTECTION FOR SOFTWARE – NEED OF THE HOUR

(By: P. Shiyamala Nisha & Nandhini Ramalingam)

Abstract

Software is a set of instructions, data or programs which are used to execute specific tasks. We are all living in the era of Information Technology where our world is filled with electronic gadgets. Software plays a vital role in our day today transactions. Software is not a constant one, it’s changing from time to time. The situation compels protection not only to the software, but also the developers who develop the software through Intellectual Property. Copyright protects only the expression of an idea and not the idea itself. So there arises a necessity to offer a stronger protection for the software. In this paper, we are going to see why software has to be patented but not copyrighted.

Introduction -

In the modern era, Computer Software plays a crucial role in all fields of technology. Our routine life is impossible without the help of the computers. Legally computer software is protected under copyright. But the protection of computer software is inadequate in nature. Copyright law protects only the original work in the tangible form like coding the software. Copyright is preventing duplication of software programs as well as copying any portion of the software code. Both are considered as literal infringements of copyright. Copyright law is not providing stringent protection to computer software, because the principle of copyright protects only the expression of the work and not the idea itself. Nowadays software patents are becoming notorious and protection of software under patents is inevitable. On the contrary, Software patents protect the creation of the inventive concept of the work by providing rigid protection than copyright. Henceforth patenting is an effective method for protecting computer software.

Definitions -

Software is a set of instructions or programs instructing a computer to do specific
tasks. Computer software or programs are instructions that are executed by a computer in the form of source codes and object codes, which take a lot of skill, time and labor to develop them.

Software patents can be defined as “an invention that is completely embodied in software, even if the claims of the patent refer to a system or article of manufacture.”

"Computer" includes any electronic or similar device having information processing capabilities. A computer programme is defined as "a set of instructions expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result".

According to the Copyright Act 1957, "literary works" includes computer programmes, tables and compilations including computer databases.

A software patent is defined by the Foundation for a Free Information Infrastructure (FFII) as being a "patent on any performance of a computer realized by means of a computer program".

Copyright Protection for Software -

Copyright law protects an original work in the tangible and fixed form. Under the Copyright Act 1957, copyright protection is conferred on literary works, dramatic works, musical works, artistic works, cinematograph films and sound recording. Copyright protects only the expression of the work and not the underlying idea.

The intention of Copyright law of India is to promote creativity and generate more original works for overall development of society and the nation. At the same time, if a work is created by substantially copying the expression of others, such works are considered to be infringement of others work and becomes non-copyrightable subject-matter.

Copyright in software will protect the creativity in the code functions that software performs in

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1 Technopedia, available at https://www.techopedia.com/definition/4356/software. [accessed on 5 March,2021]
2 “Source code” is a computer program in the form written by a programmer (in a language such as Perl or C).
3 "Object code" is a computer program converted into the form in which a computer would run it (in "machine language", i.e. ones and zeros).
5 Section 2(ffb) of the Copyright Act,1957.
6 Section 2(ffc) of the Copyright Act,1957.
7 section 2(o) of the Copyright Act was amended in 1994 to include 'computer program' as 'literary work'.
8 “Foundation for a Free Information Infrastructure”.
9 Section 13.
the computer. The applicant is required to provide the copy of the source code and object code while filing an application for software with the copyright office.

With regards to computer software, copyright can be used to prevent the total duplication or copying of a portion of the software code which will be regarded as “literal infringements” of copyright. Since the object of copyright law is to protect only the expression of an idea, not the idea itself, the protection provided by copyright is completely fragile.

**Patent Protection for Software**

In order to claim a patent for a software work, the invention should fulfill the following conditions.\(^\text{10}\)

1. Patentable subject matter;
2. Capable of industrial application;
3. New (novel),\(^\text{11}\)
4. Inventive step (be non-obvious); and
5. Disclosure of the invention in the patent application must meet formal and substantive standards.

Section 3 of the Patent Act lists down subject matter that cannot be patented, and Section 3(k) specifically states that “computer program per se” is not a patentable subject matter.\(^\text{12}\) The intention of legislature in the attachment of the words "per se" was elaborated vide Report of the Joint Committee (Presented to the Rajya Sabha on the 19th December, 2001) stating that "This change has been proposed because sometimes the computer programme may include certain other things, ancillary thereto or developed thereon. The intention here is not to reject them for grant of patent if they are inventions. However, the computer programmes as such are not intended to be granted patents."\(^\text{13}\)

There can be certain exceptional situations wherein the computer programmes or software may qualify as patentable. Software can be protected under the patents regime if it has a "technical

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\(^{11}\) Section 2(1)(l) of the Patents Act 1970, states that "new invention' means any invention or technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification, i.e., the subject matter has not fallen in public domain or that it does not form part of the state of the art.”

\(^{12}\) Section 3(k) of the Patents Act 1970 states that "a mathematical or business method or a computer programme per se or algorithms”.

It is pertinent to note that the Guidelines for Examination of Computer related Inventions (CRI) mentions the following important aspects for examination of CRI:

1. Novelty
2. Inventive Step
3. Industrial Applicability.

**Granted Software Patents**

Indian Patent titled as “Disaggregated Secure Execution Environment” has been granted by the Indian patent office on 19th September 2016 on the subject matter relating to an electronic device, such as a computer, which may be adapted for self-monitoring for compliance to an operating policy.

Another Indian patent titled as “A system facilitating a computer object access control” was granted on 18th April, 2011 by the Indian patent office. The subject matter of this patent relates to a system facilitating a computer object access control for controlling access to the computer objects.

In the case of Accenture Global Service Gmbh Vs. The Assistant Controller Of Patents & Designs, it was held that the instant invention as claimed in this invention is not software per se but a system which has improvement in web services and software and does not fall in the category of section 3(K), viz software per se and the patent was granted.

**Need For Patent Protection of Software**

A copyright protection is extended to the expression of an idea, however, where a work is modified by a third party without any creativity of its own, then the original copyright holder will be eligible to claim infringement on the grounds of substantial copying and absence of minimum requirement of creativity. Computer programs are pertaining to high market value and hence it can be easily copied and used by unauthorized persons, which calls for more protection to the

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15 The inventive step is identified under the following parameters of identifying the inventive concept, common general knowledge in the state of art on the date of priority, difference in the invention claimed and cited inventions.

16 IPAB, OA/22/2009/PT/DEL.

software in addition to copyright protection.

However the patent law helps in protecting the computer software by preventing others from selling, using, or making the patent. With respect to software, a patent owner may prevent others from using algorithms, functions within the programs without his consent. A Copyright owner can prevent others from copying the whole program, as well as some parts of source code. Hence, copyright law will not prevent from creating a program that makes use of the same ideas as an existing program.\(^\text{18}\)

In the case of software programs, only the software program is protected under copyright, and not the functionality of the software programs. Therefore, patenting the software provides much greater protection than copyright. With more developers understanding the true value of software patents, more patents are being issued. Software Patents such as business software, expert systems, operating systems and editing functions are being granted every year. Patents are granted only when the software is new, useful and non-obvious.\(^\text{19}\)

Copyright law and patent law provide different types of protection. Copyright protection extends only to expressions, and not to ideas, procedures, methods of operation or mathematical concepts as such, whereas a patent is an exclusive right granted for an invention, which is a product or a process that provides a new way of doing something, or offers a new technical solution to a problem.

Software patents, in contrast, protect the creation of the inventive concept behind the works, which provides a stronger protection than copyright. Patenting is therefore an attractive method of protecting original computer programs, although obtaining it is not straight forward.

Protecting a software only under a copyright limits the scope of safety and can be enforced only when the source code of software is literally copied and does not adequately protect the invention. In this digital era, where a user’s safety can be compromised within seconds where piracy is spiking, and regular attempts to defraud innocent users are made – it becomes quintessential to provide stronger intellectual property protection to software creations.

A patent offers a broader protection over an invention, barring anyone else from manufacturing, selling, or using it in any way. With a patent, come licensing rights. These rights can be used by


\(^\text{19}\) Ibid.
the inventor to benefit commercially. For a business, a patent offers international visibility and recognition which can lead to rewarding alliance.

Software Patentability In United States And European Union -

Software Patents is well developed in countries like the U.S and E.U in granting an increased number of Software Patents than other countries in the world.

Software Patents in United States -

Software Patents granted in the United States are enforceable within the U.S and its territories upto 20 years from the date of application, preventing others from using, making, or selling the software. Generally, there are three types of patents namely utility, design and plant patents. Invention or discovery of any new process, machine, articles or compositions of matter comes under Utility Patents. Anyone who invents a new, original and ornamental for an article can claim Design Patents. Plant patents are granted to whoever invents or reproduces any new or different variety of plants.

Software patents are granted under “utility” patents. The Patent law protects computer software in an efficient way than copyright. Software Patent holders may prevent others from using algorithms, functions within the programs without their consent. Software patents such as business software, expert systems, operating systems and editing functions are granted to safeguard the credibility of the software developers.

European Union Software Patents -

According to European Patent Convention (EPC), software is non-patentable. European Patent Office (EPO) grants software patents declaring them as computer implemented inventions.

Softwares, computer programs and computer implemented inventions are patented under the EPC governed by the Convention on the Grant of Patents, 1973. The validity of the patents granted by EPO are upheld by the National Courts.

**Pros and Cons of Copyright Protection -**

A patent over a software invention can be used to prevent others from utilizing a certain algorithm without permission, or to prevent others from creating software programs that perform patent protected functions. Copyright can only prevent the copying of a particular expression of an idea i.e. copying of source code or a portion of it, and not the copying of the idea/functionality.

Patent law protects functional aspects of an invention whereas copyright protects only the idea that is expressed. Copyrights become effective the moment a work is created in a fixed, tangible form of expression but in the case of Patents, it needs to be applied for before the same is made public. Copyright protection extends for the author's lifetime plus 60 years, whereas the term of a patent is 20 years.  

**Conclusion -**

*Softwares are computer programs that can be patented only by fulfilling the criteria such as new, novel, inventive step and industrial application. Irrespective of an inventive process, a software can be protected under copyright but not under patent, because patent protection covers only if there is an inventive aspect combined with the software product or process. Patent protection to software programs is comparatively higher secured and effective than copyright. Traditionally computer software was protected under copyright in most of the country, because some countries do not harmonise the patentability of software by recognising the inventions allied with the computer software. In this scenario, software copyright is cost effective than patenting, though it prevents software piracy and protects the developer or inventor’s interest. This will also create a well equipped platform for blooming developers and the Indian Software industry.*

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23 Siddharth Dalmia, Software Patenting in India and USA, (Feb., 27, 2021).