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AN ANALYSIS OF SOFTWARE PROTECTION UNDER PATENT AND COPYRIGHT LAW IN INDIA

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ABSTRACT

In this Digital era, technology has a very significant role in the development of the economy. Software is becoming an essential factor in the global economy by promoting technological advancements. Is there adequate protection provided under to software? Intellectual property laws protect the work's owner and its creation. Software is protected under copyright laws. However, copyright laws only safeguard the owner's expression of ideas rather than the idea itself. Now, the question is why it shouldn't be protected under patent law, which covers the product's innovative ideas and the invention. The protection under Copyright laws in India is very limited and it only focuses on the written source code and the object code of the software. Patent, on the other hand, under section 3(k), deals with the computer program per se, which is not patentable under the Indian Patent Act. Other nations have flexible approaches towards the patentability of software. Both the Patent and Copyright laws have a significant role in software protection. This paper tries to focus on why software patenting is not recognised and how the judiciary addresses this issue. This paper also looks into how other developed countries addressed software patenting.

Keywords: Software Patent, Copyright, Patent, Technology

Introduction

Software systems have significantly advanced various industries, leading to the rise of software patents aimed at safeguarding computer-related innovations. Software, typically comprising coded instructions for operating computers or executing specific tasks, encompasses programs, procedures, and routines vital for computer system operation. Software patents may cover codes, user interfaces, libraries, or algorithms. India has experienced a surge in the export and import of software-related innovations, prompting the establishment of intellectual property laws to govern the protection of such inventions within the country.

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Section 2(o) of the Copyright Act, 1957[1], delineates that computer programs are categorized as literary works. This law offers safeguarding for original expressions within computer software. Nonetheless, if a computer program results in a technical effect, it qualifies for patentability under the Indian Patent Act, 1970[2]. In essence, the mere expression of methods and programming codes is copyrightable, while the technical impact and operational aspect of software are eligible for patent protection as they do not fall under copyright jurisdiction. Section 3(k) of the Patent Act, 2002, specifies that computer programs cannot be patented independently. However, computer software is eligible for a patent grant if it does not pertain to business methods, mathematical methods, or algorithms. Moreover, compliance with section 3(k) necessitates demonstrating the incorporation of hardware as a fundamental component alongside the software in the invention.
Repeatedly, various courts have dealt with issues surrounding software patents, impacting their status regarding patent eligibility. The case of Ferid Allani v. Union of India stands out as a pivotal judgment in assessing the patentability of software in India. In this case, Ferid Allani filed a patent application for a method and device enabling access to web information sources and services. The Indian Patent Office rejected the application, citing the invention as a computer program under section 3(k) and lacking novelty and inventive step in the device. On appeal, the Delhi High Court ruled for a reassessment of the patentability of computer-related inventions. The court determined that the patentability of such inventions would depend on the presence of a "technical effect and/or technical contribution".[3] If the invention demonstrates either, it qualifies for a patent despite being a computer program.

Despite various tests, criteria, and court rulings, the patentability of software remains a contentious issue. One argument is that patenting software could stifle research and development by granting complete monopoly to the patent holder, thereby hindering other researchers, scientists, and students from working on the patented software. Many argue that software, essentially a set of programs akin to transcripts of algorithms in programming languages, cannot be patented as these languages have roots in mathematical transcripts, which are not patentable. Conversely, there is support for software patenting within the tech community.

Patenting software carries several economic advantages. It allows for licensing, potentially increasing the valuation of small tech startups. Patents provide exclusive rights to the inventor or

[1] Copyright Act, 1957
[2] Indian Patent Act, 1970
[3]https://www.law.cornell.edu/wex/intellectual_property#:~:text=Overview,monopoly%20in%20the%20protected%20property

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assignee for a limited period, encouraging innovation as inventors strive to develop new software types for the associated financial benefits. The economic gains from patenting can be reinvested in further research and development. Software is integral to progress across multiple industries.[4] While software patenting has drawbacks, they can be mitigated through Intellectual Property mechanisms like patent pools and compulsory licensing.

This paradigm suggests that copyright law is sufficient to protect software since copyright protection subsists on a piece of work without necessarily registering it. Several companies and developers have created open-source software that can be obtained for free to oppose software patents.

Software Patents in India

Innovation serves as the driving force behind the advancement of any modern economy. Inventions, which form the foundation of innovation, are geared towards enhancing productivity. The provision of incentives for inventors fosters heightened productivity, resulting in an augmented supply of goods and services in the market and thereby fueling economic expansion. Therefore, safeguarding these intellectual creations becomes paramount. The patent system offers inventors the means to safeguard and exert control over the utilization of their inventions

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In today's increasingly digital world, a plethora of tools and technologies we rely upon operate on coded software and computer systems. The Information Technology (IT) sector has emerged as a significant and sought-after industry globally. Consequently, it is imperative to protect the interests of innovators contributing to this domain through the development of computer technology, software, and computer programs.

While Indian legislation provides protection for inventive technology and software through copyright and patent laws, our focus here is on safeguarding computer software under Indian patent law.

As per the Indian Patents Act of 1970, an 'invention' is defined under Section 2(i)(j) as a novel product or process capable of industrial application and involving an inventive step.[5] Thus, any

[4] Richard Morgan and Kit Burden, Legal Protection of Software: A Handbook, Encyclopedia ofInformation Technology, Universal Law Publishing Co. Pvt. Ltd., First Indian Reprint, 2007
[5] https://legislative.gov.in/sites/default/files/A1872-09.pdf

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product or process, including computer software, seeking patent registration must fulfill these three requirements.

Protecting intellectual property rights to a software

When we talk about software licensing, the two things that automatically come to the minds of experts are copyright and patents, which are the two well-known methods of protection for intellectual property. Copyright is one of the most common methods of protecting software programs because writing source codes or programs are quite similar to writing a literary piece. A patent is one of the best ways to protect intellectual property but the process is not that easy, especially in India. There is a stringent criterion that needs to be fulfilled in order to get a patent for software. Firstly, the patent can only be granted to something new, which means it cannot be something which is already discovered and in use. Secondly, it needs to be an inventive solution and lastly, it needs to have industrial applicability. However, despite going through a lengthy process of getting a patent, there is always the risk of infringement and piracy of the software, thanks to the new digital world.

With such advanced technologies and programs, it is possible to copy the whole code of the program in just a few minutes. On top of that, copyright protection does not necessarily mean that it will protect the process, procedure or discovery of a program or software. In general, novelty, non-obviousness and industrial usage of the technology are the parameters which are seen before granting a patent to an invention, however, computer software and algorithms fall in a different category altogether. Patent laws create an exception when it comes to mathematical formulas, scientific discoveries and algorithms.

Coming to India, the software is not directly patented and a patent is granted if it is attached with novel hardware which means that it is a unique invention and is capable of industrial usage.

According to the RBI's annual survey, the export of India's software services increased to more than $108 billion in 2017-2018 from just $30-40 million in the 1990s. It is expected to grow to 227 billion dollars in the year 2021-22. Considering this amazing expansion and growth of the software industry, the Intellectual Property laws need to be amended, in order to keep up with the modern day because the last time Intellectual Property Laws were amended in India was in the

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year 2005, which is 17 years back.

What are Software Patents?

Before delving into why software patents face challenges under Indian law, it's essential to comprehend the concept of software patents. Although not explicitly defined in Indian statutes, legal experts rely on the dictionary definition, which describes software patents as protections for computer programs utilized for specific tasks.

However, the issue with patenting software arises from Section 3 of the Patents Act. This section delineates what cannot be patented in India. Particularly, Section 3(k) of the 1970 Act excludes mathematical or business methods, computer programs per se, or algorithms from the definition of 'inventions.'

While Section 3(k) explicitly prohibits patenting computer programs (and, consequently, software), the inclusion of the term 'per se' in the Patents (Amendment) Act of 2002 creates space for certain computer programs and software to potentially qualify for patent protection.

The rationale behind incorporating 'per se' can be traced back to the perspective articulated by the Joint Parliamentary Committee during the introduction of the Patents (Amendment) Act of 2002. According to the Committee, the intention was to extend patent eligibility to computer programs that encompass additional elements ancillary to or developed from such programs, thus rendering them potentially eligible for patent protection.

Guidelines for computer-related inventions

Despite various efforts by the Indian Patent Office to clarify the excluded scope under Section 3(k), ambiguity persists. In 2015, the Patent Office introduced the 'subject matter' test to assess the eligibility of computer programs for patents. This test mandated that the program either interact with novel hardware or induce a technical effect altering hardware functionality or performance.

However, the 2017 guidelines from the Patent Office abolished this test. While the test aimed to limit the number of software patent applications granted, its removal reinstated the reliance on interpreting the term 'per se' to determine patent eligibility. Consequently, there remains no clear

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legislative foundation for granting software patents, necessitating a case-by-case assessment for each application.

How can Software be Patented in India?

Section 3(k) undoubtedly presents a significant obstacle to securing patents for software. Despite the Indian Patent Office's various attempts to clarify this section through guidelines, ambiguity persists, complicating the path to software patents. However, several Indian court judgments have highlighted key considerations for successfully filing software patent applications.[6]

(a) Software itself is not inherently patentable. A landmark case, Telefonktiebolaget LM Ericsson (Publ) v. Lava International Ltd.[7], emphasized that Section 3(k) applies when an abstract formula, like an algorithm, is purely theoretical and applied for patenting. However, if an algorithm is utilized by hardware components or creates a technical or practical effect leading to a physical realization, it may be eligible for patenting. Mere mention of an algorithm in a patent document does not imply that the invention is solely the algorithm.

Similarly, Telefonktiebolaget LM Ericsson (Publ) v. Intex Technologies (India) Ltd. established that inventions demonstrating technical effects or contributions beyond being a computer program per se are patentable.

(b) Software need not demonstrate special adoption of hardware to be patentable. In Accenture Global Service Gmbh v. The Asst. Controller of Patents & Designs & Ors.[8], it was ruled that software or computer programs do not need to show inherent novelty, non-obviousness, or be special adaptations of existing hardware to qualify for patent registration.

(c) Software purely representing a business method is not patentable. The case of Yahoo v Controller of Patents & Rediffcom India Limited clarified that software tools purely embodying business methods would not be granted patents. Technical advancements must not merely manifest core business methods.

[6] Patent FAQ 2020, Office of Controller General of Patents, Designs and Trade marks, India available at https://ipindia.gov.in/writereaddata/Portal/Images/pdf/FinalFREQUENTLY ASKEDQUESTIONS_- PATENT.pdf
[7] Telefonktiebolaget LM Ericsson (Publ) v. Lava International Ltd CS(OS) No. 764/2015
[8] OA/22/2009/PT/DEL

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(d) Substance over form is crucial in evaluating software patents. The 2017 guidelines emphasize that the substance of software patents, judged on novelty, industrial use, and inventive step, is paramount over their specific form. The decision in Lava International Ltd. reinforces that a software patent's dismissal based solely on its form as a computer program or algorithm is inadequate.

(e) Inventions displaying technical effects are patentable despite being based on computer programs. Ferid Allani v. Union of India & Ors. underscored that modern inventions often rely on computer programs. The court clarified that the bar on patenting pertains to "computer programs per se" and not all inventions employing computer programs. If an invention demonstrates technical effects or contributions, it remains eligible for patenting, even if based on a computer program.

These judgments provide critical insights into the patentability of software in India, clarifying that Section 3(k) does not universally apply to all inventions utilizing computer programs or software.

In the case of Enercon India Ltd. v. Aloys Wobben, a similar ruling was made regarding a computer program designed to enhance power output from wind turbines. An objection under Section 3(k) was raised against the program. However, the court, recognizing that wind turbines require advanced computer technology for control and cannot be manually operated, determined that a computer program executing a technical process, such as optimizing wind turbine performance for maximum power output, cannot be categorized as a 'computer program per se.' The court held that such an invention does not fall under the objection outlined in Section 3(k) of the Patents Act when the patent claim encompasses process steps aimed at carrying out a technical process or achieving a technical effect.

LEGAL PROTECTION GUARANTEED UNDER COPYRIGHT LAW

Software is primarily viewed as the subject of protection under Copyright Law. According to Black's Law Dictionary, 'software' refers to the information, typically in the form of computer programs, which direct a computer to perform specific functions. Essentially, computer software comprises instructions guiding technical functions, often in human-readable formats known as

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'source code' and 'object code'. The Indian Copyright Act, 1957, under section 2 (ffc), defines a 'computer programme' as a set of instructions expressed in words, codes, schemes, or any other form capable of instructing a computer to perform a particular task or achieve a specific result. Notably, the Copyright Law safeguards only the expression of ideas, not the ideas themselves. Therefore, protection under the Indian Copyright Act is limited to the words used to express software codes in a readable medium. Software codes fall within the purview of 'literary work' as per section 2(o) of the Copyright Act, 1957, encompassing computer programs, tables, and compilations, including computer databases. However, the Copyright Act does not extend protection to the non-literary functionality of software. In the case of Shyam Lal Paharia v. Gaya Prasad Gupta,[9] the Allahabad High Court relied on Justice Peterson's observations in University of London Press Ltd v. University Tutorial Press Ltd,[10] stating that while substantial copying is unlawful, adopting a work's central idea does not constitute infringement. Similarly, with software works, the central idea is susceptible to being copied, albeit with a different source code generating similar results as the original software. Consequently, Indian Copyright Laws do not protect the idea behind the work, only its expression. Although considering software as literary work is not entirely inaccurate, it is deemed incomplete. While Copyright Law protection is automatic, it solely guards against literal copying and replication of software source code or object code, without safeguarding the underlying software invention. Hence, the Copyright protection provided for software is deemed insufficient, as companies can appropriate valuable innovations existing in copyrighted software by rewriting the code using different text combinations than the original.

LEGAL PROTECTION GUARANTEED UNDER PATENT LAW

In the late 20th century, with advancements in technology, the focus shifted from physical to virtual objects, particularly from hardware to software. Patent laws primarily aim to protect novel and inventive ideas, with less concern for their expression compared to copyright laws. However, the requirements for patent registration are stricter, necessitating novelty, an inventive step, and non-obviousness to a skilled person in the relevant field.

The registration of patents for software has been widely debated, both in India and internationally. Article 10 of the TRIPS Agreement, read in conjunction with Article 27(1), permits patents for

[9] Shyam Lal Paharia And Anr. vs Gaya Prasad Gupta 'Rasal', AIR 1971 Allahabad 192
[10] University of London Press Ltd v. University Tutorial Press Ltd, 1916-2 Ch. D. 601

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subject matter possessing a 'technical character,' including software, provided it exhibits certain technical characteristics.[11]

The Indian Patents Act, 1970, underwent amendments in 2002 and 2005. Prior to these amendments, patents for computer software were not explicitly excluded. However, following the 2002 amendment, computer programs were expressly excluded from patentability, introducing the term 'computer programme per se' in Section 3(k) of the Act.

Ambiguity surrounds the interpretation and applicability of Section 3(k) of the Indian Patents Act. For instance, in the case of Accenture Global GMBH v. Assistant Controller of Patents and Design Office, the Intellectual Property Appellate Board ruled that a patent for a system for developing internet-hosted web services and software was novel and did not fall under Section 3(k). However, no clarity was provided on the conditions to be considered while analyzing a software patent application under Section 3(k).

In 2015, in the case of Telefonaktiebolaget LM Ericsson (PUBL) v. Intex Technologies (India) Limited, the Delhi High Court stated that if an invention demonstrates a technical contribution or effect and is not merely a computer program per se, it is patentable. However, ambiguity remains regarding what constitutes a substantial technical contribution or effect.

To provide clarity, the Office of Controller General of Patents, Designs, and Trademarks issued Guidelines for Examination of Computer Related Inventions (CRIs) in 2016. These guidelines introduced a three-tier test for examining patent applications related to CRIs. However, the three-tier test was removed in the Revised Guidelines for Examination of CRIs in 2017, which emphasized considering patent claims as a whole and not in isolation.

Despite these guidelines, protection for software under the Indian Patents Act remains insufficient, as it does not allow for the grant of patents for CRIs with novel and inventive software operated on known hardware.

[11] https://www.wto.org/english/docs_e/legal_e/27-trips.pdf

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CONCLUSION

In today's society, software holds significant importance in its sustenance and advancement. The world heavily relies on various computer software codes, ranging from everyday devices like smartphones and smartwatches to complex machinery and industrial equipment. Hence, it is imperative to safeguard and advance inventors' rights in software creation through a more robust patent enforcement system.

Indian courts have embraced the notion of allowing software patents, and this article aims to outline how software patents can be safeguarded in India based on court decisions. Presently, there are established legal precedents defining the patentability of computer programs and software. Future court rulings will further refine the interpretation of Section 3(k) and its relevance to software and computer programs.

The importance of granting registration for software patents in India is more pronounced now than ever, given the pervasive use of the internet and smartphones in today's generation. However, achieving this requires a clear and unambiguous stance on software inventions' protection in India. The current regime offers minimal protection for innovations from India's flourishing software industry, leading to a lack of incentive for domestic software developers to pursue patent protection. Consequently, domestic business owners are left without a vital safeguard for their creations.

Indian policymakers must address the necessity of software patents to safeguard the interests of the software industry and attract foreign investments into the Indian economy. It is essential for the Indian Intellectual Property Office to clarify the patentability criteria for computer programs and software inventions and ensure their effective enforcement. There is a pressing need for policymakers to expand the scope of protection for Computer Related Inventions (CRIs) under Intellectual Property Laws in India and reconsider Section 3(k) to include computer programs per se within the realm of patentable subject matter.