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A CRITICAL ANALYSIS OF **PATENTABILITY OF SOFTWARES** **UNDER INDIAN PATENTS ACT 1970**

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Abstract

The fact that software is a type of code should not exclude it from being eligible for patent protection, especially in today's internet-driven era where much innovation is based on software. Therefore, it is crucial to patent software to encourage and protect technological advancements. While India was the first country to provide legal protection for software, it has fallen behind in the area of software patenting. This passage discusses software patentability in India and the United States and the TRIPS Agreement. The Indian Patents Act of 1970 excludes "computer programs" from patentability, but software-related inventions can still qualify for patent protection if they have a technical impact or resolve a technical issue. The Copyright Act of 1957 also provides protection for software. The TRIPS Agreement states that patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step, and are capable of industrial application. However, each member country of the WTO has the flexibility to decide whether or not to allow software patents within its domestic laws and regulations, as long as it complies with the general principles set forth in the TRIPS Agreement. In the United States, software patents are allowed if the invention is novel, non-obvious, and has some practical application, but abstract ideas implemented on a computer are not eligible for patent protection. This article explains the way the courts have granted patents to software through various case laws and provides for better understanding of the current scenario of software patentability in India.

Research problem

In India the Copyright Act, 1957 grants protection to original expression and computer software is granted protection as a copyright unless it leads to a technical effect and is not a computer program per se. The computer software which has a technical effect is patentable under India Patent Act, 1970. However, Section 3(k) of the Indian Patents Act 1970 excludes "mathematical or business method or a computer program per se or algorithms" from patentability, which has created an impact on innovation and entrepreneurship and has led to controversy and uncertainty over the years, particularly in the software industry.

Claim Statement

It is contended there is an ambiguity in Section 3(k) of the Indian Patents Act which excludes "mathematical or business method or a computer program per se or algorithms" from patentability, regarding software patents that has led to different interpretations by judges which has created an impact on innovation and entrepreneurship and has led to controversy and uncertainty over the years.

Research Question

How does the exclusion of "mathematical or business method or a computer program per se or algorithms" from patentability under Section 3(k) of the Indian Patents Act 1970 affect the protection of Computer software in India?

Research Methodology

The paper mainly follows the doctrinal research methodology, wherein the Research is based on Legal Statutes, Judicial decisions, journal reports, articles and other similar sources of information. The paper mainly gives a legal analysis in order to identify the problems and solutions to it but is not completely limited to the above-mentioned source.

Research Objective

The main objective of this paper is to critically analyse the grant and protection of software patents under Indian Patents Act 1970. This paper also aims to analyse the problems that have been caused by the inclusion of Section 3(k) into the Act which excludes "mathematical or business method or a computer program per se or algorithms" from patentability, regarding software patents that has led to

a never-ending debate whether or not software can be patentable.

Introduction

Software has progressively merged into our daily lives on an indispensable level. In practically every gadget we use, from smartphones to cars, software is essential. A global discussion concerning whether software is eligible for patent protection has arisen as a result of the emergence of software and its significance in our everyday lives. Softwares are those sets of instructions, data, or algorithms which operate the computer system and carry out specific tasks. Thus, the websites we visit or the computer application we download are all classes of software. Software patents ensure the owners their property right that protects computer programs or any performance from that computer. Unlike software copyright, which ensures protection for only the code of the program, a software patent ensures protection not only for the code but also for the methods, performance, and output of the program. As tempting and powerful as it sounds to obtain a software patent license, the reality is vastly different. There has been a never-ending debate on the topic that whether or not the software can be patentable. Due to this, there has been an ambiguity regarding the provision and has left owners confused or cautious to approach one. In this paper, we will discuss how software patentability is enforced under various jurisdictions.

Software Patents in India

The Indian Patents Act of 1970 stipulates that innovations that meet specific conditions are eligible for patent protection in India. The contemporary economy cannot function without patents, which shield inventors from lawsuits and promote spending on Research and development. According to the act, software is considered a "computer program" and can be protected if it meets the criteria of being novel, non-obvious, and having an industrial application. Section 3(k) of the Indian Patents Act, 1970, specifically excludes "computer programs" from patentability. However, there have been instances where software-related inventions have been granted patents by the Indian Patent Office.

A computer programme alone is not patentable under the Patents Act. However, the computer programme can qualify for patent protection if it has a technical impact, resolves a technical issue, or enhances a technical procedure. For instance, software may qualify for patent protection if it is connected to a cutting-edge piece of hardware or a business method. The Copyright Act of 1957 also provides protection for software in addition to patent protection. The Copyright Act forbids the

copying, dissemination, and reproduction of software without the consent of the copyright holder and automatically protects the original software code. Software may also be secured by trade secrets, which entails keeping the functionality and source code of the software a secret from outsiders. However, trade secrets are still not protected under Indian law.

In India, software or computer algorithm patentability is limited by the Indian Patents Act 1970, which excludes patentability for subject matters containing mathematical or business methods, computer programmes per se, or algorithms. However, there is still scope for software patentability in India. The 2017 guidelines issued by the Office of the Controller General of Patents, Designs & Trademark state that "The sub-section 3(k) excludes mathematical methods or business methods or a computer programme per se or algorithms from patentability. Computer programmes are often claimed in the form of algorithms as method claims or system claims with some "means" indicating the functions of flow charts or process steps.¹

It is well-established that, while establishing patentability, the focus should be on the underlying substance of the invention and not on the particular form in which it is claimed." Therefore, if a claim falls under the excluded categories of method/process, apparatus/system/device, or computer program product/computer-readable medium, it would not be patentable. However, if the claim, taken as a whole, does not fall under any of the excluded categories in substance, the patent should not be denied.

TRIPS

The TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement, which is part of the World Trade Organization (WTO) framework, sets out international standards for the protection of intellectual property, including patents.

Article 27 of the TRIPS Agreement deals with the patentability of inventions, including software. The article states that patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step, and are capable of industrial application.²

Regarding software, the article allows for the patenting of computer programs as long as they meet

¹ LexCampus. (n.d.). Patentability of Computer Related Inventions. Retrieved from <https://www.lexcampus.in/patentability-of-computer-related-inventions/>

² Dwivedi, D. 2015. "Trips Agreement And Protection Of New Plant Varieties: Issues And Implications For Agricultural Sector In India." Vidhigya 10 (1): 1.

the general criteria for patentability. However, the article also provides that members may exclude from patentability inventions that are contrary to order public or morality, including those that are harmful to human, animal, or plant life or health, or that are prejudicial to nature or the environment.

In essence, TRIPS Article 27 establishes that software is not excluded from patentability, but it does not mandate its patentability. This means that each member country of the WTO, including India, has the flexibility to decide whether or not to allow software patents within its domestic laws and regulations, as long as it complies with the general principles set forth in the TRIPS Agreement.

US Position on Protection of Software Patents

In the United States, the protection of software patents is based on the interpretation of patent law by the US Patent and Trademark Office (USPTO) and the US courts. Generally, software patents are allowed in the US if the invention is novel, non-obvious, and has some practical application.

The US Supreme Court has issued several landmark decisions regarding the patentability of software. In the case of *Alice Corp. v. CLS Bank International* (2014),³ the Court held that abstract ideas implemented on a computer are not eligible for patent protection. The Court clarified that a patent-eligible invention must involve more than just implementing an abstract idea on a computer and that the invention must be innovative and useful.

Following the *Alice* decision, the USPTO issued guidelines for examining software patent applications, which require examiners to evaluate whether the invention goes beyond the mere implementation of an abstract idea and whether the invention provides a specific technological solution to a problem.

However, there is still ongoing debate about the scope of software patent protection in the US. Some argue that software patents stifle innovation and that the USPTO and courts need to apply stricter standards for granting software patents. Others argue that software patents are necessary to incentivize innovation in the technology industry.

Overall, the US stands in a position where software patents are allowed but require a specific technological solution to a problem and not just the implementation of an abstract idea. The

³ Mondaq. (2018, July 6). Case Analysis: *Alice Corp. v. CLS Bank*, 134 S. Ct. 2347 (2014). Retrieved from <https://www.mondaq.com/india/patent/731008/case-analysis-alice-corp-v-cls-bank-134-s-ct-2347-2014>

interpretation of these requirements and the scope of software patent protection remains a subject of ongoing discussion and debate.

The position of the Indian judiciary

The Indian judiciary has also grappled with the issue of the patentability of software. In the landmark case of *Tata Consultancy Services v. State of Andhra Pradesh (2004)*,⁴ the Indian Supreme Court held that computer software is not patentable if it does not have any technical application. In the case of *Infosys Technologies Ltd. v. Assistant Controller of Patents & Designs (2014)*, the court held that a computer program that merely implements a business or mathematical method is not patentable.

Software patents were mentioned by the Honourable Delhi High Court in the cases *Ericsson v. Intex* and *Ericsson v. Lava*,⁵ both of which were recently decided. The order(s) states that "It should be noted that merely referencing the use of a "procedure," "method," or "algorithm" in an apparatus that includes various network or hardware elements, components, etc. in order to achieve a technical effect or perform a technical process does not reduce/make the claimed invention an algorithm or computer programme per se or even a mathematical method or formula as contemplated under section 3(k)."⁶

The Court further declared that when algorithms are used by hardware components to accomplish a technical function, the 3(k) bar does not apply. The Court continued by stating that the patents at issue were not computer programmes in and of themselves, abstract algorithms, or mathematical procedures, and that, at least initially, the inventions had produced an advance in technology and a real physical representation.

However, in the case of *Ferid Allani v. Union of India (2018)*,⁷ the Delhi High Court held that a software patent can be granted if the invention lies in the technical contribution of the software beyond the exclusionary subject matter. The court clarified that software that demonstrates a technical effect

⁴ ITATOnline. (n.d.). *Tata Consultancy Services v. State of AP* [2004] 271 ITR 401 [192 CTR 257] [141 Taxman 132] 137 STC 620. Retrieved, from <https://itatonline.org/digest/tata-consultancy-services-v-state-of-ap-2004-271-itr-401-192-ctr-257-141-taxman-132-137-stc-620sc-2005-1-scc-308-sc-air-2005-sc-371/>

⁵ SpicyIP. (2016, July 22). *Ericsson v. Lava: Delhi HC passes interim injunction for Lava to stop manufacture and sale*. Retrieved April , from <https://spicyip.com/2016/07/ericsson-v-lava-delhi-hc-passes-interim-injunction-for-lava-to-stop-manufacture-and-sale.html>

⁶ *India's Information Technology Industry: A Tale of Two Halves* - Springer. https://link.springer.com/chapter/10.1007/978-981-13-8102-7_5

⁷ IPR Law India. (2019, December 12). *Ferid Allani v. Union of India Decided on 12th December 2019*. Retrieved , from <https://iprlawindia.org/ferid-allani-v-union-of-india-decided-on-12th-december-2019/>

or solves a technical problem can be patented.

The Honourable Delhi High Court stated in a more recent lawsuit that "... In today's digital age, when the majority of inventions are based on computer programmes, it would be regressive to suggest that all such ideas would not be patentable. Computer programmes would form the foundation for innovation in the fields of artificial intelligence, blockchain technology, and other digital goods, but they would not simply cease to be patentable innovations for that reason. According to the Court, "...The meaning of "technical effect" is no longer in dispute due to the development of judicial precedents and patent office practises internationally and in India.."

Similarly, in the case of Yahoo v. Controller of Patents, the Intellectual Property Appellate Board (IPAB) held that a software program, if it has a technical effect or solves a technical problem, can be patentable.⁸ The IPAB also held that mere automation of a manual process does not make it patentable.

In the case Intellectual Property Attorney Association v. Controller General of Patents, Designs and Trade Marks & Anr, decided in 2017 by the Delhi High Court⁹, the court struck down the guidelines issued by the Indian Patent Office in 2016 that allowed for the patenting of software. The court held that the guidelines were contrary to the provisions of the Indian Patents Act and the previous court decisions on this issue.

In the case Endurance International Group Inc. v. Endurance Domain Technology, decided in 2019 by the Bombay High Court, the court held that a computer program that improves the functioning of a computer system can be patented. The court emphasized that the patentability of software depends on the technical nature of the invention and its contribution to the field of technology.

Overall, these cases show that the Indian judiciary's stance on software patents is somewhat uncertain and subject to ongoing debate and interpretation. While software per se is not patentable in India, if it has a technical application and provides a technical solution to a technical problem, it can be patented. However, the scope of patentability of software is still being debated and clarified by the courts.

⁸ In brief: patent prosecution in India - Lexology. <https://www.lexology.com/library/detail.aspx?g=6c8faaab-0abb-4c30-bce2-70c70aaf4a8e>

⁹ IPleaders Blog. (2021, March 1). Intellectual Property Attorneys Association v. The Controller General of Patents, Designs, Trade Marks & Anr. Retrieved, from <https://blog.ipleaders.in/intellectual-property-attorneys-association-v-the-controller-general-of-patents-designs-trade-marks-anr/>

It appears that there is still some ambiguity regarding the patentability of software in India, despite the clarification provided by the CRI Guideline 2016. While the guideline allows for patents on computer programs if they are "in conjunction with a novel hardware," it does not provide a clear definition of what constitutes "novel hardware." As a result, the question of whether a software invention qualifies for patent protection remains open to interpretation. Additionally, the CRI guidelines do not allow for the patenting of mathematical or business programs, which are considered non-patentable subject matter. However, it appears that there may be some inconsistency in the Patent Office's approach to granting patents for software inventions that could be considered business methods under section 3k of the Patent Act.

Overall, it is important for inventors and businesses to carefully consider the patentability of their software inventions and consult with legal experts to navigate the complex landscape of intellectual property law in India.

Conclusion

In conclusion, the patentability of software under section 3(k) of the Indian Patents Act 1970 is a complex and contentious issue. While the IPO and the Indian judiciary have provided some guidance on this issue, there is still significant uncertainty about what types of software are patentable. The Indian government may need to clarify the law on this issue to provide greater certainty to innovators and to encourage investment in research and development. In India, computer software can be protected under copyright law, but there is still some uncertainty about how much protection it offers to different parts of the program, the author's rights, and the concept of fair use under licensing agreements. Software can also be eligible for patent protection, as long as it is not considered a "software per se". However, there is no clear guidance or legal precedent on when software crosses the threshold from "software per se" to being eligible for patent protection. Patents encourage innovation by disclosing information and providing legal protection for inventors. They also promote transparency and prevent larger companies from stealing ideas from smaller companies. However, Section 3k of the Indian Patent Act is often criticized for its ambiguous language regarding software patents, which can lead to different interpretations by judges. This can benefit large companies but harm others. Additionally, patents can sometimes hinder technological progress and lead to monopolies. While the CRI guidelines are helpful, the law should be stricter in regulating the software patent controversy.