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## **SOFTWARE VIS -A -VIS IPR**

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### **ABSTRACT**

Software is an intangible collection of instructions that governs how a computer system operates. Due of the peculiar characteristics of software, it does not fit into any of the traditional good categories. Unlike with other types of products, when a customer purchases software, he or she receives a licence to use the product as well as some other particular and specified rights that govern how the product is used.

Software and computer programmes face serious market competition, and they are particularly vulnerable to economic loss due to the fact that they can be accessed without payment and are also prone to piracy and duplication. Additionally, as a result of intense competition, there is a significant risk of becoming obsolete very quickly, as competitors may immediately produce a competitive product. Not only would IPR protection secure the owner's economic interests, but it will also foster innovation and creativity.

The intellectual property legislation has been modified multiple times to meet the expansion and growth of the software sector. However, there is no regulation that handles software and computer programmes alone. While software is protected by copyright, patents, and in some circumstances trade secrets, our country lacks jurisprudence and hence heavily adapts the American way.

Computer software is considered to be valuable property and is classified as intellectual property. India's intellectual property regime is evolving in lockstep with global markets. Copyright and patent law, as well as trade secrets, can all be used to protect software.

**Introduction:**

This paper will analyse protection of software licenses under IPR in India and other countries concurrently inspecting the complications of software patentability. Due to greater efficiency and expanded functionality, software programmes have become an integral component of the everyday life of a man. Businesses are relying incrementally on software innovation to fuel growth. India has a well-established presence in the Information Technology (IT) sector globally. According to RBI's annual survey, export of India's software services increased by 11.6% to \$108.4 billion in 2017-18 (sonal, 2019)<sup>1</sup>. The Indian government plans to boost its contribution to the global software product industry by the year 2025, as per the National Policy on Software Products, 2019 (simran bhullar, 2020)<sup>2</sup>. The research clearly states how the development of Intellectual Property (IP) is one of the aspects of software products that contributes to the overall value. Protecting the intellectual property (IP) vested in software, programmes, and any machineries that utilise such programmes and software has become imperative in the fast-growing software business.

Software is an intangible set of instructions that controls the operation of a computer system. Because of its unique nature, software does not fall into any of the classic good's categories. Unlike other traditional items, when a software is purchased, the customer receives a licence to use the software as well as some other specific and defined rights that dictate how the product is used.

Software and computer programmes confront fierce competition in the market, and they are particularly sensitive to economic loss because they may be accessed by users without paying, and they are also prone to piracy and copying. Furthermore, due to severe rivalry, there is a considerable risk of becoming obsolete very fast, as competitors may immediately introduce a competitive product. Software protection under the IPR system will not only safeguard the owner's economic interests, but will also encourage innovation and creativity.

The IP regulations have been revised numerous times to accommodate the software industry's expansion and growth. However, no legislation exists that specifically and only addresses software and computer programmes. Though software is protected by copyright, patents, and

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<sup>1</sup> <https://www.mondaq.com/india/trade-secrets/810286/is-software-patentable-in-india#:~:text=In%20India%2C%20software%20is%20not,and%20capable%20of%20industrial%20use.>

<sup>2</sup> <https://www.lexology.com/library/detail.aspx?g=33f758e5-8ad4-4741-94f0-18172267449b>

in some cases trade secrets, our country lacks jurisprudence, therefore the American method is adapted extensively.

Computer software is regarded as valuable property and is included in the category of intellectual property. India's intellectual property regime is undergoing changes at the same pace as worldwide markets. Software can be protected by both copyright and patent law, as well as trade secrets.

### **PROTECTION OF SOFTWARE UNDER COPYRIGHT:**

The Copyright Act ,1957 protects original works of writing that are fixed in any tangible medium of expression. The Act grants the copyright holder exclusive rights to reproduction, derivative work preparation, and distribution. The Copyright Act protects original literary, dramatic, musical, and creative works, as well as cinematograph films and sound recordings. The computer programmes are included in the description of literary work. As a result, computer software programmes are protected as literary works, as defined by Section 2(o) of the Copyright Act 1957, which includes computer programmes, tables, and compilations, including computer databases. The copyright legislation protects the precise code that a programmer develops, but it does not protect the idea behind that code, nor does it prevent someone else from recreating it with identical functionality using different code.

The author of the work, in most cases, is the owner of the copyright. However, in the case of an employee-employer connection, unless there is an agreement to the contrary, the employer is the first owner of the work if it is created during the course of employment. The case with software and computer programmes is similar to that of the employer-employee relationship. The copyrighted software's owner has exclusive rights to store and duplicate it. Any third party that does so without permission will be charged with copyright infringement.

The Act, on the other hand, allows for fair use and reverse engineering of the programme, which will not be considered an infringement. Furthermore, a valid proprietor of such programme generating copies or adaptations of such programme in order to provide a temporary back up for the possibility of loss or destruction of such software programme for the purpose for which it was transferred shall not constitute infringement. Furthermore, anyone who has been granted a licence to utilise a copyrighted work by the copyright owner cannot be held accountable for copyright infringement.

In the case of **Microsoft Corporation v. Yogesh Papat**, the Delhi High Court awarded damages in the amount of \$1,795,000 for copyright infringement. Microsoft claimed that the defendant, who was in the business of selling assembled computers, was loading software in which the plaintiff had a copyright without a licence on the hard discs of computers being sold. By indulging in such activity, the defendant was infringing the plaintiff copyright financial loss to the plaintiff. The Court passed judgment in favour of the Plaintiff and issued decree for injunctive relief, order for delivery up and decree of damages.

### **PROTECTION OF SOFTWARE UNDER PATENTS:**

A patent is an exclusive right granted for an invention, which is a product or a process that, in general, provides a new way of doing something or a new technical solution to a problem. Patents give their owners the right to prevent others from using a claimed invention, even if it was developed independently and there was no copying involved<sup>3</sup>. Patent law prevalently dominates the applicant's choice over copyright because of its obvious advantages, but the irony is that the patent law does not allow software protection. Because of its obvious advantages, patent law is frequently preferred by applicants over copyright, but the irony is that patent law does not offer software protection.

A software patent has no legal or conclusive meaning. The Foundation for a Free Information Infrastructure (FFII) has proposed a definition of software patent as a "patent on any computer performance performed by means of a computer programme." (sharma, n.d.)<sup>4</sup>.

When it comes to the protection of ideas and the functionality of software, a patent can be an excellent option. However, in order to be given a patent, the software must be more than an algorithm and must be a technological invention that qualifies for such a patent. A computer programme cannot be patented in and of itself, according to Section 3 (k) of the Patent Act of 2002.

To be eligible for a patent, computer software must not be –

1. A business approach, mathematical approach, or methodology

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<sup>3</sup> <https://www.wipo.int/patents/en/>

<sup>4</sup> <http://www.legalserviceindia.com/legal/article-9-software-patentability-in-indian-context-.html>

## 2. An ineligible-for-patent computer software

However, if software is related to an invention and constitutes a component of that invention, it can be patentable. To avoid the claim of sec. 3 (k), it is necessary to demonstrate that hardware, in addition to software or a computer programme, is an integral aspect of the invention.

Patent laws, like copyright laws, let the patent owner to licence or assign his patented work to any individual or third party, granting them specific rights over the patented work. Such a licence must be issued through a formal agreement that spells out all of the terms and restrictions in detail.

**GETTING A SOFTWARE PATENT REQUIREMENT:** In order to get a patent in India, an invention must meet four criteria:

**1. Applicability in Industry:** - "Capable of industrial application" refers to an invention's ability to be manufactured or used in a specific industry.<sup>5</sup>.

**2. Inventive Step:** An "inventive step" is a feature of an invention that includes technological development over existing knowledge, has economic value, or both, and is not obvious to a person versed in the art. <sup>6</sup>.

Hon'ble Supreme Court in *Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)* (sharma u. , 2018)<sup>7</sup>, The following points must be objectively appraised in order to determine whether or not the invention has an inventive step when viewed as a whole:

1. Determine who is a "person skilled in the art," i.e., a competent craftsman or engineer, as opposed to a mere artisan.
2. Determine that person's relevant common general knowledge at the priority date.
3. Determine the creative concept of the claim in dispute, or construe it if that is not possible.

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<sup>5</sup> Sec 2(1) (ac) Indian Patent Act, 1970

<sup>6</sup> Sec 2(1) (ja) Indian Patent Act, 1970

<sup>7</sup> <https://blog.ipleaders.in/computer-related-inventions-india/>

4. Determine whether there are any disparities between the materials cited as part of the "state of the art" and the claim's innovative concept or claim as construed.

**3. Novelty:** -"new invention" means any invention or technology that 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 a patent application with complete specification, i.e., the subject matter has not become public domain or is not part of the state of the art.<sup>8</sup>.

**4. Patentability exclusion for software or computer program:** -Mathematical business method computer programme per se or algorithms<sup>9</sup>.

### COMPUTER RELATED INVENTIONS GUIDELINES:

In the matter of *Yahoo v. Controller and Rediff*, the Intellectual Property Appellate Board (IPAB) upheld the lower court's decision. In the absence of any rules for granting patents on computer-related inventions (CRI), it was discovered that although some patent offices refused to grant software patents, others were more likely to do so. In order to eliminate anomalies in the awarding of software patents in India, the Controller of Patents first announced CRI guidelines in 2015. (Known as CRI Guidelines 2015). Patent offices in India were forbidden from issuing business method patents under the 2015 rules, however computer programmes might be patentable if specific circumstances were met.

Following that, in February 2016, new instructions were announced. Even patents on computer programmes could not be issued under the 2016 Guidelines unless the inventor could establish that the innovation incorporated a computer programme "in conjunction with a novel hardware" (also known as "new hardware requirement"). Non-patentable business processes continue to exist.

### WHY NOT PATENTS CAN'T BE GRANTED TO SOFTWARE?

In India, the argument behind withholding software patents is to encourage innovation. If software is patented per se, a small number of companies will hold the vast majority of software inventions. It is necessary to offer programmers the freedom to experiment with new ideas.

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<sup>8</sup> Sec 2(1) IPA, 1970

<sup>9</sup> Sec 3 IPA, 1970

Programmers and coders must have access to open-source software in order to create better software. In keeping with this attitude, Section 3(k) prohibits software patents that are not applicable to hardware.

It's worth noting at this point that Section 3(k) does not intend to make software patents illegal in India. It solely states that computer programmes are not patentable in and of themselves. Because the phrase "computer programmes in general" has not been defined, there has been significant ambiguity. To that purpose, the government issued Guidelines that help clarify the scope, or more accurately, the method in which software inventions are patentable.

### **NOTABLE PATENT GRANTS:**

#### **Accenture Global Service GMBH v. Assistant Controller of Patents & Design and the Examiner of Patents<sup>10</sup>**

Where the applicant was seeking a patent for a technique of creating a data mapping document. The applicant responded to the objection that the method's technical effect was unidentifiable by claiming that the current claims recite "technical solution to a technical problem of the need for a data document design system and design tools that addresses one of the most important technical challenges faced by database systems, data migration." After examining the merits of the inventions, the Patent Office determined that the innovation is not software per se, but rather a system with web-services and software, and so does not fall under section 3(k), and a patent was awarded in May 2013.

#### **Patents grant to Facebook**

In February 2017, Facebook received a patent (Application No. 830/CHENP/2009) for a technique "for providing dynamic relationship-based content, personalised for users of a web-based social network." Because the innovation "implements a technical method and has a technical effect," Facebook asserted that section 3(k) did not apply in this case. On April 25, 2017, Facebook received a new patent (Application No. 6799/CHENP/2009) for a technique of sharing user-profile data with third-party Facebook applications. According to Facebook's patent application, its invention is more than just a computer software because it "includes hardware limitations and delivers technical advances and benefits such checking privacy

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<sup>10</sup> OA/22/2009/PT/DEL and Miscellaneous Petition No. 118/2012 in OA/22/2009/PT/DEL

settings connected with the user profile." This submission was accepted by the Chennai Patent Office, and Facebook was granted a patent for its idea. (agarwal, 2017)<sup>11</sup>.

### **Apple's patent on media management program**

Apple was granted a patent (Application No. 461/KOLNP/2009) by the Kolkata Patent Office in May 2017 for a "system for browsing data items with respect to a display screen associated with a computing device and an electronic device." One of the questions addressed during the patent application examination was whether the invention met the new hardware requirement. Apple claimed that its invention has a "improved technical impact" and thus should be patentable. Surprisingly, the patent office agreed with Apple's case, and Apple was granted a patent on the idea. (agarwal, 2017).

### **Patent granted on Google's information retrieval system**

Google just was received a patent for an idea called "identifying in an information retrieval system." Google maintained that its innovation isn't an algorithm or a computer programme in and of itself, but rather "provides a technical solution to a technical problem of how to automatically detect terms in a document collection." Even though the term "new hardware" isn't defined in the CRI Guidelines (allowing patent examiners to interpret it as they see fit), it's worth noting that business techniques are illegal in India, and the "new hardware" criterion only applies when the invention is a computer programme. While software/business processes patents are illegal under Indian patent regulations, patent offices in the country have a predisposition for granting such patents. (agarwal, 2017).

## **INTERNATIONAL POSITION ON SOFTWARE PATENTABILITY:**

### **TRIPS AGREEMENT:**

**TRIPS and software:** Article 27.1 of TRIPS states that patent protection is available for all inventions and that patent rights can be exercised without discrimination based on technology fields. TRIPS Article 27 does not define the term "invention" in its entirety. It does, however, identify patentable characteristics including novelty, inventive step, and industrial use.

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<sup>11</sup> <https://www.firstpost.com/tech/news-analysis/software-patents-prohibited-under-indian-law-but-granted-in-spirit-3702725.html>



Exclusion from patentability is also mentioned in the same clause, however it does not apply to software or computer programmes<sup>12</sup>.

## Europe

A computer programme described as such is prohibited from patentability under the European Patent Convention (EPC) (Art. 52(c) and 3) in Europe. However, an appeal by IBM (case No. T 1173/97) before the European Patent Office's Board of Appeals provided important information. To comply with Art. 27 of the TRIPS Agreement, which deals with patentable subject matter, the Board stated that a restricted reading of the relevant clauses indicated that not all computer programmes should be barred from patentability. The Board came to the conclusion that "computer programmes" solely referred to those that were non-technical in nature. To put it another way, as long as a computer programme is technically sound, the medium on which it is stored is unimportant, and it is patentable. Given the present broad commercial distribution of software over the internet, this is a particularly significant conclusion. (sharma a. , n.d.).

## UNITED STATES OF AMERICA

Patent protection for software-related inventions in the United States is confined to those on recordable medium, not computer programmes themselves. When it comes to software distribution over the internet, this protection falls short. Regrettably, the Supreme Court's ruling in Alice Corp v. CLS Bank has had a negative impact<sup>13</sup> and in certain following decisions, clear bounds for the patentability of software-related inventions have not been established..

## JAPAN

On the other hand, the Japanese Patent Act (Art. 2(3)(i)) specifically mentions computer programmes as patentable subject matter. To qualify as a patentable invention, the claimed subject matter must be regarded as a development of technical concepts based on natural law, according to the Act. According to the JPO's Examination Guidelines, a claim for a software-

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[https://en.wikipedia.org/wiki/TRIPS\\_Agreement#:~:text=The%20Agreement%20on%20Trade%2DRelated,Wor ld%20Trade%20Organization%20\(WTO\).&text=TRIPS%20also%20specifies%20enforcement%20procedures% 2C%20remedies%2C%20and%20dispute%20resolution%20procedures.](https://en.wikipedia.org/wiki/TRIPS_Agreement#:~:text=The%20Agreement%20on%20Trade%2DRelated,Wor ld%20Trade%20Organization%20(WTO).&text=TRIPS%20also%20specifies%20enforcement%20procedures% 2C%20remedies%2C%20and%20dispute%20resolution%20procedures.)

<sup>13</sup> 134 S.Ct. 2347(June 19,2014)

related innovation must establish that software and hardware resources function together to be patent-eligible (sharma a. , n.d.).

### **PROTECTION OF SOFTWARE UNDER TRADE SECRETS:**

- Trade secrets are proprietary knowledge protected by intellectual property (IP) rights that can be sold or licenced.
- In general, for knowledge to qualify as a trade secret, it must be:
  - financially valuable due to its secrecy,
  - be known only to a small number of people, and
  - be subject to the legitimate holder of the information taking reasonable precautions to keep it secret, such as using confidentiality agreements with business partners and workers.<sup>14</sup>.

Unauthorized acquisition, use, or disclosure of such secret information by others in a manner that is inconsistent with honest commercial practises is considered an unfair practise and a violation of trade secret protection.

A trade secret could be a software concept, structure, or design specification. The nature of the programme and how it is delivered affects trade secret protection. If the source code is kept secret, a software that is only released as object code can be protected partially.

However, there are significant drawbacks to using trade secrets as a kind of protection. There is no method for the owner to sue someone who is able to reverse engineer the trade secret using publicly available data. It's also worth mentioning that if software or computer technology is weak and easily copied, it's not fit to be considered a trade secret.

Trade Secrets are protected under contract and tort laws in India. However, such contractual protection is limited to the parties that sign the contract and thus, does not have any effect on the parties who are not a party to the contract provided they act in good faith.

In India, trade secrets are protected by contract and tort laws. However, such contractual protection is restricted to the individuals who sign the contract and has no bearing on those who are not parties to the contract as long as they behave in good faith.

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<sup>14</sup> <https://www.wipo.int/tradesecrets/en/>

**CONCLUSION:**

In general, copyright rules govern the protection of computer software in India. However, under the ambit of licencing agreements, there is a scope of protection for literal and non-literal components of software, fair use criteria, and authors' rights that has yet to be established and recognised by Indian courts. It is also concluded that such a programme can be protected under patent laws if it is more than algorithm-based software and is an invention in and of itself. Due to a lack of clear legislation outlining the scope of trade secret protection for software, trade secret appears to be a limited and restricted alternative for protecting software-related IP.

With such limited choices for protecting, one's original work in the realm of software and computers in such an advanced and developing digital era, it's possible that a lack of innovation and creativity may emerge. As a result, it is critical that all of these regulations, which are currently dispersed and ambiguous, be drafted and implemented in order to better safeguard the creator's work.