SOFTWARE PATENTS IN INDIA- THE MISSING LINK

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Software patent grants in India is in its nascent stage and this feature became a part of the Indian jurisprudence in the early 2000s. Patents can be described as "a legal document which provides protection to the ideas of any individual. Usually, patents constitute of four different classes: Machine (a device or apparatus created by a person for the performance of a specific task), process (a process created by an individual), manufacture (any fabricated or manufactured product) or the composition of matter (any chemical mixture or compound created by a person)."[1] Arguments may be put forward both for and against patenting of computer softwares. On overall considerations, and to sustain desired level of equilibrium between Law and Technological Advancements, India should aim for a comprehensive legal framework to usher in transparent and unambiguous software patentability provisions. This step will help the Indian software talent pool to continually come up with technological breakthroughs in a field where it has already left a stamp of supremacy in the global arena.

Introduction

Patents bestow a right of ownership of the invention over the patent holder and its use. Patent "gives its owner the legal right to exclude others from making, using, selling, and importing an invention for a limited period of years, in exchange for publishing an enabling public disclosure of the invention." Software, by definition, is "the information, in the form of computer programs that make a computer carry out certain functions."[2] Grant of software patents has been widely contested and debated upon in Indian and International jurisprudence. While some countries vehemently support the grant of software or computer related invention's patent- others such as the United Kingdom and India do not permit them.

Patent application and grants are governed by the Patent Act, 1970 (hereinafter known as the Act), the Patents (Amendments) Act, 2002 and, subsequently, the Guidelines for examination of Computer Related Inventions 2015 (later amended in 2016 and 2017). The Act grants patents to new[3] inventions[4] which have potential applications in various industries,[5] and which involve an inventive step[6]. "The invention must have a feature

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[1] Black's Dictionary of Law
[2] Black's Dictionary of Law
[3] Section 2(1)(l): "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;
[4] Section 2(1)(j): "invention" means a new product or process involving an inventive step and capable

of industrial application;
[5] Section 2(1)(ac): "capable of industrial application", in relation to an invention, means that the invention is capable of being made or used in an industry;
[6] Section 2(1)(ja): "inventive step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art;

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that involves being technically advanced" vis-à-vis prevalent know-how or bring forth economic enhancement or both. "Moreover, this feature should be such as to make the invention not obvious to a person skilled in the art."[7] This implies that any person with reasonable knowledge in the field of the invention shall not easily assume or predict the said invention. Thus, "the 'obviousness' of the invention shall be strictly and objectively judged. One of the many tests used for determining the obviousness is: "whether the alleged discovery lies so much out of the tract of what was known before not naturally to suggest itself to a person thinking on the subject, it must not be the obvious or natural suggestion of what was previously known."[8] Further, to determine the novelty of the invention and thereby the inventive step, the invention ought to be looked at as a whole and not as a part thereof. The inventive step is to be looked at in consonance with the invention and it should be proved that it does not bear any links to any of the excluded subjects/inventions.

Jurisprudence of Software Patentability
While, patenting of software programs protects the idea of the inventor and grants him the right to royalty over his invention, at the same time, patenting also prohibits and deters innovation of other ideas and inventions which would be hinged upon previously published works or concepts. Granting patents would incentivize others with benefits such as royalty or licensing fee and also lead to better market competition, whereas, allowing long-term software patents would be rendered useless as it would be outdated in short periods of time (due to

technological advancement) and long-term protection would forestall technological growth.

In the Indian context, patentability of an invention is determined under sections 3 and 4 of the Patents Act. Under section 3(k), a mathematical or business method or a computer program, per se, or algorithms, are non-patentable as they are not recognized as inventions. The Patent officers in India, that is the authority which grants patents to numerous inventions, have expressed varied opinions on the subject of patentability of software programs and other computer - related programs.

The Indian jurisprudence on software patentability is predominantly pronounced by the Intellectual Property Appellate Board (IPAB) and the Supreme Court of India, and they have not come to any consensus about the criteria of patentability of software programs.

The Appellate Board, in its decision of *Accenture global GMBH, Switzerland v Assistant Controller of Patents and Design Patent Office*[9], opined that the claimed novelty in question would not fall into the category of section 3(k), which is software, per se, but a system for developing Internet-hosted web services and software. The IPAB does not delve into the explanation of the term 'per se' as given in section 3(k).

The Appellate Board in another judgement of *Electronic Navigation Research Institute v*

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[7] Novartis AG v Union of India [2013 (6) SCC 1]
[8] Biswanath Prasad Radhey Shyam v Hindustan Metal Industries [1979 (2) SCC 511]

[9] Accenture global GMBH v Assistant Controller of Patents and Design Patent Office [2012 SCC Online IPAB 192]

Controller General of Patents and Design[10] concurred with the Deputy Controller of Patents, Delhi and pronounced that the so-called "Chaos Theoretical Exponent Value Calculation System" is founded on relevant numerical solutions to mathematical relationships. The Appellate Board, in this instance, did not share the stand of applying the technical effect theory outlined under the European Patent Law… and, therefore, the claimed invention was not granted patent under section 3(k) of the Act. The Appellate Board further added that as per the impugned order the indicated innovation was itself the excluded element and the claimed technical novelty was but a numerical method founded on various mathematical solution techniques.

The IPAB in its landmark judgement *of Enercon India Limited v Aloys Wobben*, Germany laid emphasis on the terms 'per se'. "Attention was drawn to section 3(k) to show that while "computer programs per se" was not a patentable invention, the words "per se" are not attached to algorithms... but attached to business methods and computer programs"[11]. The court further said that the invention in question "is normally a computer operated or computer controlled technical instrumentation… that cannot be regarded as relating to a computer program per se or a set of rules of procedure like algorithms and thus are not objectionable from the point of view of patentability, more so when the claims do not claim, or contain any algorithm or its set of rules as such, but only comprise of some process steps to carry out a technical process or achieve a technical effect finally the maximum power output by controlling the wind turbine. Hence the

objection that invention is not patentable under section 3(k) fails or not valid."

If a subject matter is not a patentable invention or an invention at all, other tests and checks, such as anticipation, obviousness, etc. , need not be applied. In other words, patentability of an invention is the first step to determine whether a patent can or would be granted to it.

In another case before the IPAB, a claim was made as to the superiority of an online competitive bidding process, i.e. the 'pay for performance' process, over the conventional internet search queries. As per this proposition, the newly invented process "provide a powerful advantage to business and others seeking to increase their web exposure"[12]. The controller disagreed and opined that the invention was but just a business model, and hence not patentable. The IPAB in this case of *Yahoo Inc v Assistant Controller of Patents and Designs*, opined that the claimed technical enhancement reflects only an improved way of doing business. The IPAB held: "Therefore, we affirm that this ground alone is sufficient to reject the present application. The impugned order could have been more clear while giving the conclusion regarding patentability. But the conclusion is correct and is affirmed."[13] The Board in its approach to reach the conclusion thoroughly probed the terms 'business method'. It held that "if the present case is tested by these views, and if the technical advancement is itself only a business method, then the mere fact that there is a technical advance will not give any advantage to the appellant." The U.K. Court

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[10] 2013 SCC Online IPAB 105
[11] 2010 SCC Online IPAB 176

[12] Yahoo Inc v Assistant Controller of Patents and Designs [2011 SCC Online IPAB 106]
[13] Yahoo Inc [supra]

reiterated that pinpointing the precise ground for declining software patentability can be a difficult proposition. Further, what constitutes "a business method" can also be a tricky question shrouded in certain ambiguity. In the claimed invention, there is a certain business transaction viz., bid amount, bidder's account and position of advertisement. *Symbian*[14] again refers to the same decision mentioned above where it was held that there must be "Further technical advance or facts associated with specific features of implementation over and above the facts and advantages enhanced in the excluded subject matter". In that case, it was held that the effect of the alleged invention improved the speed and reliability of the function of the computer. It was not just a better programme but it was a fast and more reliable computer."[15]

The Indian jurisprudence on whether computer programs are patentable or not is rather ambiguous in nature. Judgements pronounced by the IPAB, such as in the cases of *Yahoo Inc* and Accenture Global Service, attempt to clarify certain aspects of the law but a crystal-clear picture is still not available. The terms 'per se' as given under section 3(k) of the Act is abstruse and the courts have not ventured in the deep waters of this term.

The Courts in India should establish an exhaustive, unambiguous criteria to determine the patentability of software programs and other inventions linked to computer technology. The case of *Smartflash LLC v Apple Inc*.[16] the United States Supreme Court determined a check involving two elements to evaluate software patentability. Firstly, to ascertain if the claims of the issue in hand fall under any if the excluded themes (judicial exceptions), and secondly, to search for the 'inventive concept' - i.e., "an element or combination of elements that is" sufficient to justify that the patent embodies significant improvements.

In the case of *Gottschalk v Benson,* the US courts held that mere algorithm to covert binary code decimal (BCD) to a system of binary numbers with the process outcome devoid of any practical utilization or application to industries would not qualify to be patented. The Indian legal system, if not via legislative action but through judicial orders, can set an outline to determine the patentability of software patents in India. It can proactively interpret the terms 'per se' used in section 3(k) of the Act and respond to some of the following questions:

- The terms 'per se' is attached to which kind of invention, i.e. software programs , algorithms, business methods?
- The terms 'per se' would encompass what types of inventions?
- Would the terms 'per se' imply a proviso to the exception under section 3?

One case which delves into the terms 'per se' is the case *of Telefonaktiebolaget LM Ericsson (PUBL) v Intex Technologies (India) Limited*[17]. In this case the Delhi High Court held that "prima facie that any invention which has a technical contribution or has a technical effect and is not merely a computer program per se as alleged by the defendant and the same is patentable." Intex

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[14] Symbian Ltd. v. Comptroller of Patents, Court of Appeal, ((2008) EWCA Civ 1066)
[15] Yahoo Inc [supra]

[16] Smartflash LLC v Apple Inc [2015 WL 61174]
[17] 2015 SCC OnLine Del 8229

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was accused of patent infringements in the areas of proprietary Edge technologies concerning cell phones and tablets as also 2G and 3G technologies. The Delhi High court order came out in support of Ericsson to pay 50% of the royalties within a time span of a month from the date of the filling such suit.

Are Software Patents granted?
While on one hand the judiciary has an active role in determining and interpreting the criteria for software patentability, the Intellectual Property Controller too interprets the various laws, guidelines and judgement to grant patents to various applicants.

Recently the Intellectual Property Officer in Kolkata granted a patent to *Apple Inc*. The invention was titled, "A method for browsing data items with respect to a display screen associated with a computing device and an electronic device"[18]. The controller held that "the claimed method involves concrete and tangible steps of providing...,displaying...,receiving.....moving....,etc., to thereby browse data items with respect to a display screen associated with a computing device." The controller opined that these steps imply practical use and utilisation of a computer programme. Although the steps of the method are worked out with the help of a software, the method represents a practical application of this computer software to result in a product with good utility of enhanced advantages while overcoming certain limitations of the prevalent operating modules. According to the submission, even if a method utilises a computer program or algorithms for controlling the steps for achieving the desired result/effect having a sufficiently qualified technical character. it should not be taken out from the ambit of possible patentability. Rather, this should depend on whether the manner in which the system for implementing the claimed method into effect is conditioned/programmed involves features/steps which make a contribution in a field outside the range of matters excluded from patentability. The claimed "method" allows suitable application of program's utility to be put to gainful use and, therefore, it should be considered as a patentable subject matter. The controller further clarified that: "The claimed "method" should not therefore be deemed to relate to a computer program as such. Moreover, "computer readable medium" claims have been deleted from the specification."

In another decision by the Controller of Chennai, *Facebook* was granted a patent on the grounds that "the present subject matter implements a technical process and has a technical effect. In view of the above, it clarifies that the presently amended claims i.e. claims 1 to 6[19] does not fall under the

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[18] In the matter of patent application no.46llKOLNp/2009 filed on 3'd February 2009 (International application no. PCT/US2007 | 07 B0S2 dated 10.9.2007)- Hearing in May, 2017.
          [19]We claim:
1. A method for generating a personalized data for viewing of user of a social network comprising: storing, by a content engine associated with a social network, one or more actions performed by each of one or more users of the social network;

accessing relationship data, by the content engine, for each of the one or more users, wherein the relationship data indicates relationship between the one or more users in the social network; associating, by the content engine, at least one action with at least one user to produce one or more consolidated data, wherein each of the one or more consolidated data indicates at least one action and a corresponding user performing the action; identifying, by the content engine, one or more elements associated with the one or more consolidated

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purview of sub-clause 'k' of section 3 of the Indian Patents Act, 1970."[20]

One more patent application filed by Facebook was granted a patent on grounds that "the present invention includes hardware limitation and provides technical improvements and benefits like checking privacy setting associated with the user profile and based on the privacy setting the access is provided to the third party application and the third party application personalizes the user content data. So the set of claims do not attract the provision of section 3(k) of the Patents Act, 1970"[21]

"In Feb 2005, *Google* sought for a patent on an invention titled, 'phrase identification in an information retrieval system'. One of the claims presented this invention as a basic mathematical algorithm with the logical steps

which would attract section 3(k) of the Patents Act, 1970 and therefore not qualify for patenting. Google, nevertheless, reasoned that its invention is not a mere algorithm or a computer software, per se, "but provides a technical solution to a technical problem of how to automatically identify phrases in a document collection". It opined that the technical solution i.e. the final outcome which is an index, that resides in a memory consisting of related valid phrases, is a new and improved solution altogether in the form of an invention that deserves to be patented.. On hearing the above submissions, the Patent Office concluded that it is "a technical advancement over the prior art" and thus granted it the patent in May 2017."[22]The Controller held that "the hardware components have already been provided in the amended claims and so

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data; aggregating, by the content engine, the one or more consolidated data comprising one or more common elements to provide an aggregated consolidated data, wherein the aggregated consolidated data identifies at least one action associated with a common element, a user of the social network who performed the action, and one or more other users of the social network who also performed an action associated with the common clement; generating, by the content engine, a data personalized for one or more viewing users of the social network, wherein the data comprises at least one of a description of the action, the user performing the action, and the one or more other users who also performed an action associated with the common element; and sending, by the content engine, the data for displaying to the one or more viewing users of the social network.

2. The method as claimed in claim I, further comprising storing the data personalized for the users of the social network.

3. The method as claimed in claim 1, wherein the relationship data comprises friends of the one or more users of the social network.

4. The method as claimed in claim 3, wherein the relationship data comprises friends of the friends of the one or more users of the social network.

5. The method as claimed in claim 1, wherein the at least one action is a change to a user profile.

6. A system comprising a content engine for generating a personalized data for a viewing user of a social network as claimed in any of the preceding claims 1-5..

[20] In the matter of Patent Application No. 830/CHENP/2009 filed on 12/02/2009- Hearing in January, 2017

[21] In the matter of Patent Application No. 6799/CHENP/2009 filed on 18/11/2009- Hearing in April, 2017

[22] Sharma, Ajay, Software Patentability : In Indian Context
<http://www.legalserviceindia.com/legal/article-9-software-patentability-in-indian-context-.html#targetText=There%20is%20no%20legal%20or%20conclusive%20definition%20of%20a%20software%20patent.&targetText=The%20intellectual%20property%20regime%20in,according%20to%20the%20international%20markets.>

these claims cannot fall within the scope of section 3(k) of the Act."

Conclusion

In 2015, the Government of India introduced the 'Guidelines for examination of computer related inventions'. The CRI Guidelines clarified that business methods and algorithms are not patentable. A new term, "technical effect", was introduced in the CRI Guidelines with a view to explaining "technical advancement" under Section 2(1)(ja) of the Patents Act. In furtherance these guideline allowed the patentability of computer programs and mathematical method in complete contradiction to the Patent Act, 1970. Due to such inconsistencies, the CRI guidelines were recalled only to be amended and re-enacted in 2016. The CRI guidelines 2016 had taken into consideration comments and inputs on important legal issues in the Guidelines and suggested alternate examples and checklists for the purpose of scrutiny of patentability of inventions linked with computer applications. While the first set of guidelines were too liberal, the second limited and restricted the guidelines way too much. Hence a third was introduced in 2017 and it is a work somewhat akin to tight rope walking with 'diplomatic finesse'. Nevertheless, they have not helped to define what is patentable in view of Section 3(k) or how an examiner would test the same.

Innovation is at the heart of progress and economic development. In today's world, technological innovations , including in the field of computer software, move very fast. It is thus imperative that India claims her rightful place in this global movement and prepares herself to take full advantage of such technological advancements. While aiming for this high-priority national goal, it is crucial that the right equilibrium as regards the equation between law and software patentability is viewed through a dynamic prism of latest developments and global trends.

It may be concluded that the current status of Indian Patent Law is highly vague regarding the protection of computer software and the law is devoid of incorporating any specific provision for the same. There appear to be no crystal-clear guidelines or procedures that work as comprehensive and unambiguous framework to be followed by the Indian Patent Office regarding patentability of computer software. As per current provisions, computer programs, per se, are not granted patents. Notwithstanding this, a claim to a manufacturing process resulting in a distinctly new product which was based on a mathematical algorithm installed in a suitable computer hardware / software system may be patentable. The apparent lack of clear-cut and unambiguous criteria to determine the computer program patentability or lack of it in India needs to be addressed comprehensively and in keeping tune with the latest global standards.

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