Copyright v. Patent – The Great Software Debate

In India, where software has traditionally been protected under copyright law, patent protection is viewed as a trade-off between the need to encourage innovation and the necessary evil of allowing a temporary monopoly to the innovator. **Neeraj Dubey** dives into the debate over which would be better.

In India, software has traditionally been protected under Copyright Act, 1957 (the Act) as software programme, as Section 2(c)(o) of the Act defines the term "literary work" to include computer programmes. Computer software has a market value and is subject to fierce competition due to a short life cycle and the potential danger of blatantly being copied or developed by reverse engineering. Granting protection to software through appropriate IP mechanisms, therefore, becomes essential to secure enhanced rights of the creator over the software and encourage creativity, innovation and investment. Such a protection of computer programmes can also be seen as a form of legal subsidization of a particular industry and technology.

> **"The Copyright Act provides protection to 'computer programmes' as a set of instructions expressed in words, codes, schemes, or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieving a particular result."**

Attempts to extend protection under patents were hindered in 2005 with an amendment in the Patents Act, 1970 (Patents Act) which excluded computer programmes from the list of inventions which could not be patented. The expression used in section 3(k) of the Patents Act is "a mathematical method or a business method or a computer programme per se or algorithms." The interpretation of "computer programme per se" has been a contentious issue; it is often understood that software inventions could be patented while mere computer programmes should not be patentable. In light of the above legal position in India, the specific questions that emerge are (i) considering the nature and significance of software, is copyright protection sufficient, and (ii) given the limitation of the copyright protection and the advantages that patents offer, should software be subject to patenting? Is there need to extend patent protection to software in India?

Software Protection Under Copyright

Section 2 (ffc) of the Act provides protection to "computer programmes" as a set of instructions expressed in words, codes, schemes, or in any other form, including a machine-readable medium, capable of causing a computer to perform a particular task or achieving a particular result. This protection extends only to the particular expression of an idea that was adopted and not to the idea itself or the procedures, methods of operation or mathematical concepts. Copyright confers an exclusive right to reproduce the material, issue copies, perform, adapt and translate the work for a minimum period of the lifetime of the author plus 60 years. The exception is in the case of the rights of fair use for academic purposes, news reporting etc. It entitles the owner to prevent copying of the protected work to prevent the distribution of copies and to prevent preparation of derivative works.

Computer software includes items like the programme manuals and papers, punched cards and magnetic tapes or discs required for the understanding or operation of computers, all of which are capable of copyright protection as they fall under the notion "literary work." The expression "schemes or in any other form" indicates that the source code, which is a computer programme written in a programming language, and the object code, which is the version of a programme in which the source code language is converted or translated into the machine language of the computer with which it is to be used, are entitled to copyright protection. Both the TRIPS Agreement, 1995 and WIPO Copyright Treaty, 1996 provide that computer programmes, both in source and object code, must be protected by copyright. Procedurally, the ease with which copyright can be obtained and the duration of protection it provides makes it a popular mode of protecting software.

> **"Software evolves rapidly and gets replaced in markets even before the previous version becomes redundant, so two or more such inventions can simultaneously survive in the market."**

Is Copyright Protection for Computer Programmes Adequate in India?

There are certain limitations of copyright protection in India. For instance, the law as it stands today cannot prevent the creation of a competing programme that utilizes the same ideas as an existing programme. Further, there is no protection of the "ideas" underlying the computer programme, which often have considerable commercial value. The expression of a method of operation and principles of a computer programme cannot be protected by copyright. Functional aspects of a computer programme are excluded from copying. It also fails to prevent the reverse engineering from independent inventions and has often been found more susceptible to piracy (cyber piracy as well) and data theft. In order to prove copyright infringement, it is essential to establish that the defendant has in fact copied the work from the owner of the copyright. Interestingly, there is no infringement and the owner of a programme is entitled to make copies (including back-up copies) or adaptation of a computer programme, so long as the copy is utilized for the purpose for which it was supplied. (*See section 52(AA) of the Act.*)

Extent of Existing Patent Protection in India

Patents are granted to any "new" and "useful" art or process or method or manner of manufacture or machines or appliances or other articles or substances produced by manufacture. It grants an absolute monopoly or the right to prevent others from marking, using, offering for sale without the consent of the patent holder for a period of 20 years from the date of the application. This right is granted to the one who applies first, regardless of who invents first. In the case of software, it is sometimes accompanied by hardware and, in such a case, the protection extends to the level of the idea embodied by software and injuncts ancillary uses of an invention as well.

In the Manual of Patent Practice and Procedure released by the Indian Patent Office (Manual), as modified on March 22, 2011 technical applicability of software claimed as a process or method claim is required to be defined in relation with the particular hardware components. Thus, "software per se" is differentiated from software having its technical application in the industry.

Per the Manual, a claim directed to a technical process carried out under the control of a programme whether by means of hardware or software, cannot be regarded as relating to a computer programme as such. Consider, for example, "a method for processing seismic data, comprising the steps of collecting the time varying seismic detector output signals for a plurality of seismic sensors placed in a cable": here, the signals are collected from a definite recited structure and hence allowable. An invention consisting of hardware along with software or computer programme in order to perform the function of the hardware may be considered patentable such as, for example, embedded systems.

Arguments Against Software Patenting

Computer software is a complex component which generally comprises of several million lines of code having the potential of thousands of inventions, any of which is capable of being patented. It depends upon a vast range of technologies which evolve rapidly and gets replaced in markets even before the previous becomes redundant, so two or more such inventions can simultaneously survive in the market. The basis of granting a patent to software (to foster the growth and evolution of the industry) is defeated as even if software meets the technological criteria for patent protection, such protection would be useless because of the very short market life of software. A great deal of debate surrounds the validity of the grant of 20 years protection versus lifetime plus 60 years for copyright. A valid view is that 20 years of monopoly rights is preposterous in an industry where the rate of turnover of technology is less than a year or so.

Software patents hinder the development of software. The effect of patenting has led to keeping the software source code, which is the essence of practical technical knowledge in software, secret. The process of integrating functions of one

piece of software into another, and vice-versa, which is the key to innovation in software faces impediment due to patenting of source code. As the patent applications are confidential, so a computer programmer will never be aware if he is violating any patent. This makes the survival of small players difficult. When protection for the code or expression is available under the Act, there seems no reason to protect the ideas or functionality of that software as well. Understandably, patenting software helps large software corporations that already have a large number of software patents and those corporations that do not create software, but only trade in patents or sue on the basis of patents.

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Advantages that Patenting can offer to Computer Programmes

The patenting of software has certain advantages over copyright law.

- Their usefulness contributes in the evaluation of a company's intangible assets.

"If software is both functional and expressive, then software is susceptible to protection by patent and copyright law both or some hybrid of the two."

- In a patent infringement claim, the patent holder has the advantage of not facing the defence of independent creation.
- The patent holder has a monopoly right to license his product and since disclosure of the invention is a requirement of patentability, the inventor will not be concerned with secrecy problems that copyright holder faces.
- The patent holder receives a 20-year monopoly over the invention, during which time others are prohibited from making using or selling the invention.

Patent protection is not compromised by competitors' independent invention and reverse engineering. The developers who do not want their technical knowledge to benefit competitors can keep their software source code secret. Such a protection is a great incentive to research and development companies. The positive effects include rewarding the inventors and perpetuating the industrial tradition, the economy, and the legal system. The patent litigation process in India is getting better by the day aided by the rising patent awareness in India, many constructive changes in the patent system and change in the judicial approach seen in recent decisions like *TVS Motors v. Bajaj* and *Roche v. Cipla*. However, changes in the legislation are yet to be made.

Conclusion

The software industry has a very characteristic nature which makes it extremely vulnerable to being easily monopolized. Some of these are interoperability and compatibility problems, the low cost of massive reproduction of software, the difficulty of inspecting software distributed without the source code, and the rapid evolution of the market. Copyright supplements these characteristics whereas patents are restrictive. If software is both functional and expressive, then software is susceptible to protection by patent and copyright law both or some hybrid of the two.

However, in the present competitive economy, patent protection is viewed as a trade-off between the need to encourage innovation and the necessary evil of allowing a temporary monopoly to the innovator. It additionally helps in fighting the menace and commercial loss caused by piracy. Unlike copyright that protects only the final work, software patent protect the imitation of features, elementary ideas. Software patents, by allowing holders to claim even elementary ideas, constitute an extremely powerful monopoly-creating instrument as the holder of patent can prevent the selling of all software implementing the patented idea – whatever the application domains can be! So to ensure effective protection, patent protection should logically be extended to software programmes per se as well. Of course, the opposition by the proponents of the open source community and fair usage needs to be worked out beforehand for a wholesome effect. AIP

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