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PATENT PROTECTION FOR COMPUTER PROGRAM - ANALYSIS OF THE FORMS OF IP PROTECTIONS AVAILABLE FOR COMPUTER PROGRAMS AND JUSTIFICATION FOR PATENT PROTECTION IN THE INDIAN CONTEXT, Authored by Arya Mathew, IP Attorney with Altacit Global. Email: info@altacit.com web site: www.altacit.com

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INTRODUCTION

The laws which govern the protection of computer software fall under the domain of intellectual property. Intellectual property protection is generally granted for the benefit of both creator of the property and public welfare. There is a three step process linking the public welfare with intellectual property. The first step involves expanding the scope of legal protection offered to software creator by granting them enhanced monopoly rights. The second step is this kind of enhanced protection creates a reward system motivating further creativity. Finally, this expansion of inventive activity brings about the discovery of more ideas and faster advancement of technology. The end result of this process is that the public receives different range of software products.

The granting of intellectual property protection to computer programmes can be seen as a form of legal subsidization to a particular industry and technology. The intellectual property regimes that protect computer software have had a direct impact on the ownership and user regimes that have been established; the alternatives to proprietary software, open source and free software have been a philosophical and practical response to the existing legal regimes.

The persons seeking protection for their software related inventions follow the three important intellectual property rights for the protection of their programs are copyright, patent and trade secrets.(sometimes trade mark and trade dress law also apply for the protection of computer software).

WHY PROTECT COMPUTER SOFTWARE

'Computer software' also referred to as computer programs are the instructions executed by a computer. In other words, the explanations, instructions, commands and systems which have been developed in order to run the machine are called 'computer software'. Software comprises of the following one or more components: the source code itself which contains the programmer's invaluable comments any literature that may be supplied with the package which could be in the form of manuals or explanatory material regarding the running of the programme. All these components require protection because the making of it involves the expenditure of skill, time and labour and therefore the resultant work should be protected from misappropriation.

Software has a market value. Computer software is subject to ferocious competition with a shorter life circle and is liable to be copied soon, as it is "read all on the face" technology. Because of its nature the owner of computer program will have two problems (i) economic problem and (ii) competition. Economic problem means, others can access it without payment to the creator. Competition means the competitors will make competing products based on the creation either by reserve engineering or blatant copying. Apart from protecting the economic interest of the owner the protection of software through appropriate IPR mechanism is considered necessary to encourage creativity, innovation and investment. As already mentioned software may be reproduced at no cost, some means of restricting the free copying and redistribution of software work is necessary to preserve an investment in a software product.

There is a divergence in views among various jurisdictions of the world as to what category of intellectual property may that is to be granted to protect computer software. Presently there are two principal modes of protection of software, copyright and patents. Copyright is most commonly used to protect computer program, because writing of a code is similar to any type of literary work. The copyright protection is extended to expression of ideas.

To establish intellectual property protection to computer software domestically and internationally the signatories of TRIPS Agreement, Berne convention, and WIPO Copyright Treaty (WCT) have agreed to protect copyright in a computer program until, at a minimum 50 years after the author (software writer) of the program dies. For citizens of more than 162 members of Berne convention countries, once protection is grated to a work in one member country that work is automatically protected with in the borders of all other signatory countries. However, it is the discretion of the states to given protection for computer program under copyright or patent laws.

FORMS OF IP PROTECTION FOR COMPUTER SOFTWARE

1. **COPYRIGHT PROTECTION**

Copyright protection, like patent protection, exist on the theory that "the public benefits from the creative activities of authors, and that the copyright monopoly is a necessary condition for such creative activities". Copyright protects the expression of an idea and not the idea itself, provides that the expression constitute 'the fruits of intellectual labour', and it should not be copied from else where. Under copyright laws of different jurisdictions world over, software is considered as a literary work.

Copyright subsist in original works that are capable of being reproduced from a fixed medium. Movies, musical compositions, painting and other creative expressions are protected by copyright. The copyright regime is oriented towards the protection of existing works, already accessible to the public, the existence of the protection making it possible to regulate by subsequent contracts the way the public can access these works.

It is a well established principle that computer programs are copyrightable subject matter, just like any other literary work. Both the TRIPS Agreement, 1995 and WIPO Copyright Treaty (WCT), 1996 state that computer programs, both in source and object code must be protected by copyright. Copyright protection applied to software, would protect only the intellectual property embodied in the software as a mode of expression. Copyright is a bundle of rights, which entitle the owner to prevent copying of the protected work, to

prevent the distribution of copies and to prevent preparation of derivative works.

Computer program mean a set of instruction expressed in words, codes, schemes or any other form, including a machine readable medium capable of causing a computer to perform a particular task or achieve a particular result. The words 'schemes or in any other form' would seem to indicate that the source code and object code of computer program are entitled to copyright protection.

2. PATENT PROTECTION

Unlike the copyright law which merely protects the expression of an idea, patent law protects the concepts of the invention. Currently some countries protect computer software like any other invention as long as it is a proper subject for patent protection i.e. if it is a new and useful process involving an inventive step and capable of industrial application. The subjects which excluded from patent protection are laws of nature, natural phenomena, abstract ideas and mathematical expressions of scientific truths. Mathematical and scientific expressions are denied patent protection because technology is suppressed against the desires of the authors of the constitution, if such patents are granted.

Comparing to the protection given under patent law, the protection given by copyright and trade secrets has limited scope. The owner of the copyright over an item of software has the right to prevent any other person from copying the code as it is written but does not have the right to prevent the utilization of idea behind the code, providing that the person utilizing the idea must use in a manner that different from the arrangement of the code. The copyright law is also limited to prohibit unauthorized copying of the protected work but it does not prohibit all forms of copying. The expression of a method of operation and principles of a computer program cannot be protected by copyright. Functional aspects of a computer program are excluded from copying. A patent provides more secure protection than the copyright and the trade secret. It protects the 'idea' or 'functionality' of the software. Copying of an idea is very easy to do and anybody can describe it simply, that is might a patent is restricting from doing.

If a computer software is merely an algorithm it should not be protected under patents. The term of algorithm is not defined in the patent act. If the invention is technical in nature it will entitled to get protection under patents. The mathematical algorithms which *per se* are not regarded as patentable subject matter universally, they are merely considered as abstract ideas or mental steps.

2. 1 ADVANTAGES OF PATENT PROTECTION

Patenting software has three specific advantages over both copyright and trade secret protection.

a. If a patent holder files a patent infringement claim he cannot be faced with the defense of independent creation.
b. The patent grant the creator a monopoly right to license his product and since disclosure of the invention is a requirement of patentability, the inventor need not

concern himself with the secrecy problems facing copyright and trade secret holders.

c. The patent holder receives a 20 year monopoly over the invention, during which time others are prohibited from making using or selling the invention.

There has not been any international convention which granting patent to computer software. The Paris convention, 1883, on the protection of industrial property, leaves it to member countries to specify the protectable subject matter for patents.

The World Intellectual Property Organization (WIPO) 1978 provided that for granting patent protection for computer software it must fulfill the criteria's of new and inventive technical solutions. However in most of the countries, the question of patentability can not be answered with any degree of certainty.

The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) describes patentable subject matter under article 27.1, subjects to certain exceptions or conditions under the agreement "patent shall be available for inventions, whether products or processes, in all fields of technology, provided they are new, involve an inventive step and are capable of industrial application". TRIPS prohibit any field specific exclusion of patents.

SOFTWARE PATENT HISTORY IN INDIA

In India the 1970 patent Act exclude mathematical or business or a computer program *per se* or algorithms from patentability. In the last 10 years of India's experiments with TRIPS compliance in the domain of patents, put a major test in section.3.

In 2004 a major amendment was introduced in section 3 through Patent Amendment Ordinance with respect to the patentability of computer programs. By the new clause sec.3 (k), a computer program *per se* other than its technical application to industry or a combination with hardware; a mathematical method or business method or algorithms. The key expressions in the amendment are 'technical application to industry" and "combination with hardware". This means that if an invention is directed at computer software having technical application to industry or coupled to hardware then it is patentable. But this attempt was short lived as the government repealed ordinance through an amendment Act in 2005.

This section laid down a blanket prohibition on the patentability of computer software; it extends only to computer programs standing alone. So this clause would be interpreted to mean that an invention would be patentable only if a computer program is one of its elements. If the invention as a whole includes something more than the computer program that is eligible for patent protection.

3 TRADE SECRET PROTECTION

The origin of the trade secret law is from the common law concept of tort liability and confidentiality in employment relationships. It is a saying that a secret known by more than one person is no longer a "secret", and a trade secret that cannot be sold or otherwise exploited is useless. The owner of a trade secret can exploit his trade secret through confidentiality agreements, both with his employees and with his customers in order to

protect the confidentiality of the trade secret. It is not necessary that the owner of the trade secret take steps to maintain absolute secrecy. But he should take reasonable steps to maintain secrecy, which will depend upon the circumstances. As a general proposition, the owner of the trade secret should limit access to the trade secret to those who have a need to know the secret in order to perform their duties and the persons those who have sign a confidentiality agreement where they agree that they will not disclose the secret to anyone and that they will also take steps to maintain secrecy of the trade secret. Trade secret protection is an important means of protecting computer software. Coupled with copyright protection, this is the most effective way to protect computer software. Some times trade secret protects the functional aspects of software. The main goal of trade secret law is the maintenance of standards of commercial ethics.

Generally, trade secret law protects ideas, facts, and know-how, whether in tangible form or not. A trade secret can be defined as any formula, pattern, device, machine, process, technique, compilation of information, or program. Hidden aspects of web sites and software can certainly be protected by trade secret law.

Trade Secret law has also been relied upon to partially fill the void left when software was denied patent protection by the courts. Patent protection may coexist with trade secret protection. Trade secret protection will be important during the pendency of a patent application, and may even protect undisclosed details of an invention during the term of, or after the expiration of, the patent. Trade secret law protects confidential business information against unauthorized use or disclosure and is based on statutory and common law and contractual provisions.

4. PROTECTION AS TRADE MARK

Trademarks are commercial source indicators, distinctive signs that identify certain goods or services produced or provided by a specific person or enterprise. In other words a trademark is a word, name, symbol, or device that is used in trade with goods to indicate the source of the goods and to distinguish them from the goods of others. A service mark is the same as a trademark except that it identifies and distinguishes the source of a service rather than a product. The terms “trademark” and “mark” are commonly used to refer to trademarks and service marks. A trade mark connects particular goods in the minds of people to particular manufacturer.

Computer and computer related products are also get protection as trade Mark. The software products can also have trademark that will distinguish the products from the other manufacturers and can be identified by the consumer to be coming from particular manufacturer. E.g. *MS WORD, Acrobat, Work share* are all trademarks of their respective manufacturers. Trademark rights may be used to prevent others from using a confusingly similar mark, but not to prevent others from making the same goods or from selling the same goods or services under a clearly different mark.

CONCLUSION

There are a variety of ways to provide security for computer objects. Apart from all these no means of security is fail safe, and therefore additional precautions must be taken to assure the highest possible protection.

From the above discussion it is clear that probably patent is the most appropriate form of intellectual property protection for computer software and hardware. Unlike copyright, which protects final works, software patents, which protect against the imitation of features, allows the protection of these elementary ideas, and thus prevent whoever to réalise a program implementing a protected idea. Software patents, by allowing their holders to claim elemenary ideas, thus constitutes an extremely powerful monopoly-building tool, because the holder of a single patent can prevent the selling of all software implementing this idea, whatever their application domains can be.

Copyright protection is the other protection, which is available for shielding computer software. It could be considered as the most appropriate means of software protection. But copyright protects only the expression of an idea that has to be in a tangible and permanent form. The novelty aspect of patent law need not be considered in copyright.
