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## **Emerging Issue in Intellectual Property with Reference to Computer Software and the Indian Patent Regime**

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### **Abstract**

With the advancement in science and technology one would find him amidst new inventions and ideas. Historically it is evident that with the growth of human ideas there have been growths in the inventions. Patents are granted for processes as well as products. Grant of patent provides the exclusive rights of use and exploitation of the invention by the inventor. During the existence of the patent term anyone who uses or exploits the patent without the express consent or license of the patentee would be liable for infringement of the same. Over the last few decades, the computer software industry has grown quickly; but so, unfortunately, has the controversy surrounding the patentability of computer programs. Traditionally, 'algorithms', or sets of instructions, have been treated as abstract ideas, and not patentable inventions. But the case of computer programs, which essentially consist of algorithms, has compelled Courts to re-examine the meaning and rationale of this exclusion.

**Key Words:** Technology, Algorithm, Computer Programme, Exclusive Rights Inventor, Patent.

### **Introduction**

The patent system of protecting new inventions, to encourage disclosure and promote innovation, is intended to have a wide reach. Typically, this is reflected in the language that patent laws employ to define the scope of patentable discovery. But although it is true that its thrust is to protect "anything under the sun that is made by man" the nature of patent protection- exclusive exploitation rights, for a specified period- can tend, if conferred indiscriminately, to subvert rather than promote its social objective. Not only, therefore, are the tests of novelty and non-obviousness applied to assess the patentability of inventions, but more fundamentally, the notion of an invention is itself used to separate what is patentable subject-matter from what is not. In the nature of things, however, this cannot be a static notion; the emergence of new forms of technology- like computer technology- is occasion for its renewed consideration.

Over the last three decades, the computer software industry has grown quickly; but so, unfortunately, has the controversy surrounding the patentability of computer programs. Traditionally, 'algorithms', or sets of instructions, have been treated as abstract ideas, and not patentable inventions. But the case of computer programs, which essentially consist of algorithms, has compelled Courts to re-examine the meaning and rationale of this exclusion. This has resulted in a series of (often conflicting) decisions in India. Moreover, although the conceptual objection is, appropriately, the only one that the Courts have been concerned with, software patents have also been opposed on other, policy grounds, as being unhelpful to the growth of the industry. The validity of these objections is a matter that the Indian patent system has yet to deal with, although academic and political debate concerning them is current. How, then, should our patent system treat computer programs? The first statutory form of protection to attract the attention of software developers was copyright since the writing of code was similar to any other form of writing, computer languages being regarded as just one other form of language. Moreover, in the 1970's the case law in the patent field was showing some doubts as

to whether computer programs could constitute patentable inventions. The early application of copyright law to computer software gave fairly broad protection. However, as the copyright case law developed, the application of traditional copyright limitations on the scope of protection to the new field of protection for computer programs led to a narrowing of the scope of protection afforded by copyright. The courts pointed out that the purpose of copyright was to protect particular expressions of an idea not the idea itself. Any broader protection had to meet the standards of novelty and nonobviousness required by the patent law.

At about the time that these decisions started to come down, case law relating to patentability of software-related inventions also started to change, this time in a liberalizing direction opening up the way to patent protection for software-related inventions. Part of the focus for protection therefore started to shift to patents, although the simplicity of securing copyright protection as compared with patent protection and the fact that for copyright protection there is no need to establish the inventivity of the work in question means that copyright protection remains of major importance in this field. Indeed, although it has become clear that traditional inhibitions on the grant of software related inventions have now been jettisoned in respect of inventions relating to business methods as well, as the Patent and Trademark Office develops its expertise in examining patent applications relating to software and business methods, it may become more difficult to obtain patents in this field and the focus may swing back to copyright protection.

### **Understanding computer program**

“Computer program” is a term that may describe a wide range of phenomena, from basic algorithms capable of application in an indefinite number of more specific uses<sup>4</sup> to detailed instructions for the solution of a particular problem. Software is the invisible, encoded, electrical instruction stored inside a computer. Software ratiocinates a computer to perform different operations.

Title 17 of the United States Code defines computer software as a “set of statements or instructions used directly or indirectly in a computer to bring a certain result”. The World Intellectual Property Organisation defines computer software as “any or several of the items which follow: computer program, program description, and supporting material”

Computer programmes may be classified into following main categories (i) microcode also known as firmware; (ii) operating system program also known as system software; and (iii) application program.

(i) Microcode: A set of elementary instructions in a complex instruction set computer (CISC). It is a permanent basic commands built into a computer that enable its electronic circuits to perform operations. By manipulating the microcode the original manufacture or the end user can make a change in the foundational function of a computer.

(ii) Operating system program: an operating system program maintains interrelation between hardware and application program. It keeps the operating device informed of what is happening. It is also responsible for interactive communication with the user.

(iii) Application software: application software performs specific tasks for the user

A computer program is essentially considered a work of creative art, comprised of an object code and a source code. The source code is the actual work as written by the programmer; the object code is the compiled form which is read by the computer to execute the instructions laid down in the source code. Primarily computer programs are protected by copyrights. Copyrights however protect merely the form of expression and not the idea itself. The closest to protecting ideas in the prevalent intellectual property regime is the patent system.

Patent protection excludes abstract ideas, it seeks to protect ideas which concretely translate into useful art, capable of utility and promote progress in society. Thus by very nature patent protection would exclude scientific

principles, laws of nature and other such abstract truths. Patent protection also excludes prior art, that is what is known, part of existing field of knowledge or public domain (prior art) and can be ascertained from these by an ordinary person of reasonable skill in that particular field. The fundamental requirements for a patent are pegged on a troika of novelty, non-obviousness and usefulness. The first two address the issue of prior art. A fourth element legally manufactures, to convert troika to a quartet is patentability. The invention must only make use of or be based on patentable subject-matter, the idea must be substantially innovative and original (i.e. non-obvious and novel). Further, the inventor must disclose the idea in sufficient detail that other people can apply it when the patent protection expires, and that the exact boundaries of the new idea, the “claims” of the patent be spelt out.

### **Legislative framework for software patenting in India**

Is software patentable in India? There is not clarity under the Indian Patent law about the patentability requirements for Computer Related Inventions (CRI). In addition to the basic requirement of patentability viz, novelty, inventive step and industrial applicability the Computer Related Invention must demonstrate “technical effect” and the relevant claims must have “machine limitation”. There exists a legislative mandate as well as an official interpretation of it, which warrants consideration. Very much like the European Convention, the Patents Act of 1970 specifically excludes “a computer program per se” from patentability

It is not clear whether India is under an international obligation to include computer programs within the category of patentable invention. TRIPS lays down that patent protection should be available for all areas of technology, but it does not specifically make computer program patentable.

In *Yahoo Inc. (Formerly Overture Service Inc.) vs. Assistant Controller of Patents and Designs the One Overture Services Inc.* (original patent applicant) applied on 14.05.2004 for patent of its invention titled in respect of “System and method for influencing a position on a search result listing generated by a computer network search engine” which was later amended to “A method of operating a computer network search apparatus. The patent office invalidated the business method patent claim to Yahoo. This decision clearly provided that business method cannot be patented in India as per bar ok Sec 3(K).

It is generally assumed that computer programs that computer programs having technical application are entitled for patent protection, the next issue arise is whether a computer program that executes a business method should fall within the purview of patent protection? There are two possible ways of dealing with such situation. One approach could be that of assessing the result of the computer program. The focus is on the effect of the patent and not on its subject matter. This is known as the whole content approach.

Provision Under sec 3 (K) and the decision of the Yahoo case has made clear that business methods cannot be granted patent protection in India. But despite of the above facts after studying the few decisions of the patent office we will find that many patents have granted of computer related inventions. Despite of the statutory provisions there have been various cases where patent relating to computer software have been granted. Following are some of the examples of the patent being granted.

After a series of decisions the Indian Patent Office has published draft guidelines for the examination of computer related inventions. These guidelines were aimed for consistency and uniformity in the examination of application of Computer related inventions.

### **Guidelines for examination of Computer Related Inventions (CRIs)**

The Indian Patent office has issued draft guidelines for the examination of Computer Related Inventions (CRI). The guidelines incorporate various provisions of the patentability of computer related inventions. It discusses the procedure to be adopted by the examiners while examining such applications and jurisprudence evolved in

granting/rejecting Patents in these fields of technology. However, these guidelines do not constitute rule making. In case of any conflict between these guidelines and the provisions of the Patents Act, 1970 and the rules made thereunder, the said provisions of the Act and rules will prevail over these guidelines. The guidelines are subject to revision from time to time based on interpretations by a court of law, statutory amendments and valuable inputs from the stakeholders.

The guidelines provide definition of important terminologies used while dealing with the computer related inventions:

#### **Computer**

a) The term “computer” is defined in The Information Technology Act, 2000 (No. 21 of 2000) as “any electronic magnetic, optical or other high-speed data processing device or system which performs logical, arithmetic, and memory functions by manipulations of electronic, magnetic or optical impulses, and includes all input, output, processing, storage, computer software, or communication facilities which are connected or related to the computer in a computer system or computer network.”

#### **Computer Network**

The term “computer network” is defined in The Information Technology Act, 2000 (No. 21 of 2000) as “the interconnection of one or more computers through -

- (i) the use of satellite, microwave, terrestrial line or other communication media; and
- (ii) terminals or a complex consisting of two or more interconnected computers whether or not the interconnection is continuously maintained;”

#### **Computer System**

The term “computer system” is defined in The Information Technology Act, 2000 (No. 21 of 2000) as “a device or collection of devices, including input and output support devices and excluding calculators which are not programmable and capable of being used in conjunction with external files, which contain computer programmes, electronic instructions, input data and output data, that performs logic, arithmetic, data storage and retrieval, communication control and other functions;”

#### **Computer related inventions**

This phraseology has not been defined in any of the Indian statutes and it is construed to mean for the purpose of these guidelines as any invention which involves the use of computers, computer networks or other programmable apparatus and includes such inventions, one or more features of which are realized wholly or partially by means of a computer programme /programmes.

#### **Classification of claims concerning CRIs**

The draft guidelines have categorized the claims of the CRI in to four categories

- a) Method/process
- b) Apparatus/system
- c) Computer program product

#### **a) Method/process**

Computer related inventions often carry claims with preamble as “method/process for.....” Whether the claims are relating to “mathematical method or business method or computer programme per se or algorithm or mental act; they are claimed in ‘method/process’ format. The role of examiner becomes very critical in ascertaining whether the invention belongs to one of such categories and hence falls under excluded subject matter. The following are some examples showing the claims orienting towards ‘method’ that relate to different excluded categories:

**b) Apparatus/system**

The other main preamble of patent claims relating to CRIs relates to “Apparatus/system for.....”. These claims are often crafted to appear in “means + function” format. It requires the examiners’ attention to properly construe whether the claimed subject matter indeed relate to any apparatus which is novel, inventive, having industrial applicability or is just formatted to appear so. The apparatus claim should clearly define the inventive constructional/ hardware features. The claim for an apparatus may incorporate a “process limitation” for an apparatus, where “limitation” means defining the specific application and not the general application.

**(c) Computer program product**

The claims relating to computer program product are nothing but computer program per se simply expressed on a computer readable storage medium (CD, DVD, Signal etc.) and as such are not allowable.

**Conclusion**

The protection is given to the patent is the strongest form of protection granted to any type of Intellectual Property, where the owner of a patent may prevent all others from making, using, or selling the patented inventions. In connection with software, an issued patent may prevent others from utilizing a certain algorithm without permission, or may prevent others from creating software programs that perform a function in a certain way. The primary benefit of protecting computer software through the patent system is the strength of protection provided by the patent laws. An owner of a patent may prevent all others from making, using, or selling the patented inventions. In connection with software, an issued patent may prevent others from utilizing a certain algorithm without permission, or may prevent others from creating software programs that perform a function in a certain way. There is still a great deal of confusion in the software industry over the exact status of the patenting of computer software. The overall scope of patent protection for software related invention is still not clear. Moreover whether algorithms are patentable or not is a debatable question. While one will likely not get a patent for a program per se, a patent may be issued to the extent that the program is an embodiment of a statutory process otherwise patentable. The issue of statutory subject matter for computer programs is inextricably entangled with the problem of defining the scope of the patentable invention. Technically, it is not possible to patent a computer program in the sense of instructions on a disk or on a listing, in the same sense that one cannot patent the information in a book. That is why you may hear it said that "software per se is unpatentable." The operation of a computer when it exercises the instructions in software is, however, patentable. Under the patent law, software inventions are viewed either as a computer process, or as a programmed computer which has a unique set of functionality. Moving from a copyright regime to software patenting one, makes the cost of developing new software many times higher. Copyright is virtually automatic, there are no costs associated with copyrights; as noted earlier patents filing imposes fairly high costs.

Clearly the existing model of patent protection is proving inadequate to address the concern of intellectual property rights protection in software. The present intellectual property systems have the theoretical soundness to afford effective protection to the creativity and investment in developing computer program. As with any new technological advance, judicial, and legislative bodies have been slow in adapting the law to meet the needs of these advances. Examining software patent applications is not an easy task as involves technical and complex nature of software.

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