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ABOUT US

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PATENTABILITY OF COMPUTER SOFTWARE IN US

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Brief:

Until the end of the 20th century, the functionality of the most innovative products, especially semiconductor-based products, was primarily embedded in hardware. There was no doubt about their patentability. But today, increasingly sophisticated semiconductor technologies and design tools mean that physical objects are no longer the only foundation of innovation. In other words, technical functionality is increasingly moving from hardware to software. Still, in many jurisdictions, software-related inventions are either unpatentable or have very limited scope of protection.The tremendous economic growth and innovation potential of technology companies developing products that combine hardware and software, and the general software industry, is the time to rethink IP laws and adapt them to today's commercial reality. Suggests that has come.

Introduction

Doubt as to whether computer what programs are properly patentable subject under section 101 have existed since the earliest days of computer science. It is unclear whether it will be possible to overcome the crucial question that have continued to be raised with the birth of the computer programs. It is questionable whether computer program is violating the functioning of the human brain. It is questionable whether the existing patent law was broad enough to recognize a program as a patent. There are questions about the meaning of the court's ruling as to whether the program is patentable. There is also the question of whether it is reasonable to protect computer programs under patent law.

Patentability Of Computer Software In Us

35 U. S. C. §101 :"**Whoever invents or discovers** any new and **useful process, machine, manufacture, or composition of matter,** or any new and useful improvement thereof, may obtain **a patent** therefor, subject to the conditions and requirements of the Act.[1]"

Four main requirement of Section 101 are:

- **"A" patent** – means only one patent granted for each invention. Basis for statutory double patenting rejections.
- **"Useful"** – the invention must have a specific, substantial, and credible utility.
- **"Methods, Machinery, Manufacturing, Material Composition"** "Subject **Compatibility" These categories separate patentable subjects** as interpreted by the **courts.**
- **"Whoever invents or discovers" -** A patent may only be obtained by the person who engages in the act of inventing.

[1]https://www.uspto.gov/web/offices/pac/mpep/s2106.html

From the main requirement we want to understand what is process, machine and composition of matters and also in which computer software is included:

- **Process** – "an act, or series of acts or steps"
- **Machine** – "a concrete thing, consisting of parts, or of certain devices and combination of devices"
- **Manufacture** – "an article produced from raw or prepared materials by giving these materials new forms, qualities, properties, or combinations, whether by hand labor or by machinery"
- **Material** Composition – **"Any** of two or more substances and **any compound object,** whether **as a result** of chemical **association** or mechanical **mixing,** or whether **it is, for example, a gas, liquid, powder** or **solid. Composition.**

From the meaning of manufacture we can understand the computer software comes under that meaning.

Is Computer Software Or Program Is Protected Under Patent Law In Us?

In the United States **software is patentable**. Software patents are typically referred to as **computer implemented processes.** Software can be protected in the U.S. if it is **unique**[2] and **tied to a machine**[3]**.** Most importantly, for software to be patentable, **the software needs to offer some kind of identifiable improvement**[4]. It is very unlikely that only what is known on the computer (such as adding numbers) will be patented. For example, US patent law excludes "abstract ideas," which are used to reject some patent applications, including software.

While **source code**[5]may **not** be patentable, it does not mean that a software invention

[2] Unique means it should be Novel

[3]Tied to a machine means it is capable of Industrial Application.

[4]the software needs to offer some kind of identifiable improvement means that should possessan inventive step.

[5]**Source code** is a set of instructions and statements written by a programmer using a computer programming language.

may not be patented. One way of determining whether a software invention will be considered patentable subject matter or not, is by trying to judge **whetherthe software invention offers a technical solution to a technical problem.** The invention may be considered patentable subject matter if the **software invention offers a technical solution to a technical problem.**

Judicial Exceptions

There are two criteria for the subject mattereligibility for Patent. Subject matter eligibility can be two types:

A. Statutory categories of subject matter.
B. Judicial exceptions.

If the patent claims fall within one of the four categories of patentable subject matter that is statutory categories of subject matter and that are process, manufacture, machine or composition of matters then it falls within the statutory exceptions or statutory categories of subject matter. If the patient claim does not fall within these four categories, then another exclusion is judicial exception. The judicial exception is considered by judiciary. The claimed invention must also qualify as Patent eligible subject matter that is the claimed invention must not be directed to a judicial exception unless the claim as whole includes additional limitations amounting to significantly more than exception that is judicial exception. The judicial exceptions also known as **judicially recognized exceptions** or simply **exceptions.** The judicial exception are the subject matter that the court has found to be outside of or exception to the four categories of inventions add that are limited to **abstract ideas**, **laws of nature** and **natural phenomena** which may include the **product of nature**.

The abstract ideas, laws of nature, and natural phenomena are exempted from the claim of patent is because they are the basic tools of scientific and technological works. Here the court have expressly concerned about the monopolizing these tools

by granting Patent rights may impede innovation rather than promote it. Other than **abstract ideas**, **laws of nature** and **natural phenomena** and other terms also be included **physical phenomena**,**product of nature**,**scientific principles**, **systems that depend on human intelligence alone,disembodied concept**,**mental process**and **mathematical algorithm and formulas**.

- Groupings of abstract ideas are defined as:

- 1) **Mathematical concepts** – mathematical relationships, mathematical formulas or equations, mathematical calculations;
- 2) **Certain methods of organizing human activity** – fundamental economic principles or practices or commercial or legal interactions or managing personal behavior or relationships or interactions between people; and
- 3) **Mental processes** – concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

Cases

1. Bilski v. Kappos[6]:

Fact.

The petitioner has developed a method for hedging price fluctuations in the energy market. This included a simple mathematical concept and a well-known statistical approach. The applicant applied for a patent for the claimed invention, but the examiner dismissed the application, claiming that it contained an abstract idea and was not implemented on a particular device. The petitioner appealed, and the Federal Circuit Court of Appeals upheld the appeal.

The Federal Circuit has determined that the §101 test for patentability is a machine or conversion test.

(1) The claimed method was associated with a particular machine.

[6]561 U.S. 593, 130 S. Ct. 3218 (2010)

(2) Or (2) the process converted the item to something else.

One of the dissenting judges claimed that it failed because it was the way to do business. The second dissenting judge argued that the invention was an abstract idea and therefore unpatentable. The third opponent would have been in pretrial detention to determine patentability under other provisions. The petitioner has filed an appeal, and the US Supreme Court has granted a discretionary appeal.

Judgement:

Machine or conversion tests are not limited to patentability tests under Section 101. Section 101 of the Patent Act defines the eligibility of a patent, except for natural law, physical phenomena, and abstract ideas. Section 101 is a threshold test and the claimed invention must also be new, not trivial, and fully described. The invention is claimed here as the method of § 101. The procedure is defined in the patent law of § 101 (b). The Federal Circuit Court of Appeals has adopted the machine or conversion test as the only test of what constitutes the process. Section 100 (b) specifically defines the procedure and does not require further definition or limitation of the Federal Circuit Court of Appeals and is not applicable here. Adopting such exclusion rules creates uncertainty about the patentability of computer software and other emerging technologies. Similarly, process definitions do not exclude business methods. Federal law specifically envisions at least some business method patents as a process that can be patented under Section 101. Novelty, non-obviousness, and restrictions on full description protect against unjustified patents. However, the applicant's procedure must not be based on Article 101, as it asserts an abstract idea. Case law upholds this limitation. approved.

2. Gottschalk v. Benson[7]:

Fact.

Benson (plaintiff) has filed a claim on how to convert binary coded decimal (BCD) numbers to pure binary numbers. Claims were not limited to any particular art

[7]409 U.S. 63, 93 S. Ct. 253 (1972)

or technique, equipment or machine, or end use. They claimed to cover all uses of this method in all types of general-purpose digital computers. Defendant has filed a proceeding against the refusal of the patent claim.

Judgement:

Formulas without important practical exceptions related to digital computers are not patentable. Ideas cannot be patented. In this case, the formula that converts the binary code to pure binary is the result of a patent. The method of solving a particular type of mathematical problem is called an "algorithm". The method presented in the claims is a generalized formulation for a program to solve a mathematical problem that transforms a number in one form into another. A patent on a mathematical formula leads to a patent on the algorithm itself. This will cause serious problems that only parliamentary committees can handle. looked back.

3. Parker v. Flook[8]:

Fact:

Respondents have filed patents for alarm systems related to catalytic processes. The patent examiner rejected the application, stating that the formula was the only difference between the respondent's allegations and the prior art. The examiner concluded that the claim did not explain the patented findings. The petitioner, the Deputy Commissioner of the Patent and Trademark Office, upheld the examiner's refusal, and the novelty of the method claimed by the petitioner is the expression described in the claim, which is the subject of non-patentability. Or concluded that it is in the algorithm. The lower court has reversed. The applicant requested a review of the decision.

Judgement:

The court found that without other new or invention concepts in an individual's patent application, the activity resulting from the resolution of the formula or algorithm cannot convert the formula from a non-patentable principle to a patentable

[8]584, 98 S. Ct. 2522 (1978)

process. Judge Potter Stewart wrote a dissenting opinion arguing that the method of updating the alarm limit would not lose its patentability simply because thesteps of the method were not patentable. Judge Warren E. Burger and Judge William H. Rehnquist agreed with the dissenting opinion.

4. Alice Corp. Pty. Ltd. v. CLS Bank Int'l[9]:

Fact:

Alice Corporation (Alice) is an Australian company with patents for '479, '510, '720 and '375. All of this is related to a computerized trading platform where third parties settle debts between two people to settle financial transactions to eliminate risk. In reconciliation. Settlement risk is the risk that each party on an exchange will only fulfill its obligations. Alice's patent addresses this risk by using a third party as a guarantor.

On May 24, 2007, CLS Bank International (CLS) sued Alice in a non-infringement and invalidity confirmation decision for the '479, '510, and '720 patents. Alice argued for infringement and argued. CLS sought summary judgment, arguing that there was no possibility of infringement in the United States, and that Alice's allegations were based on prohibited items. Alice filed an objection and the district court dismissed both motions. Meanwhile, the '375 patent was processed and Alice amended her case to include this patent. Both parties have updated their opposition movement. For the purposes of these allegations, the district court issued summary judgment to CLS, assuming that all alleged patent claims require electronic enforcement. The district court said that Alice's patents are invalid because they deal with abstract ideas, and these claims preempt the use of abstract concepts by neutral agents to facilitate exchange and eliminate risk. I have ruled that there is a possibility of doing so. This has been confirmed by the United States. Federal Circuit Court of Appeals.

[9]573 U.S. 208, 134 S. Ct. 2347 (2014)

Judgement:

Judge Clarence Thomas wrote his opinion in a unanimous court. The court ruled that patent law should not limit abstract ideas that are "components of human ingenuity," and that all of Alice's allegations are non-patentable. It is essentially a component of the modern economy, as the use of third parties to eliminate settlement risk is a basic and widespread practice. The court said that Alice's allegation only requires a general computer to implement this abstract idea of interim billing by performing common computer functions, and patents the abstract idea. We have found that it is not enough to convert to a certain invention.

Judge Sonia M. Sotomayor wrote a consensus, arguing that claims that merely explain business methods should not be patented. In this case, Judge Soto Mayor agreed that the assertion of the method in question was related to the abstract idea. Judge Ruth Bader Ginsburg and Judge Stephen G. Breyer agreed to the approval.

Alice test:

Alice case was determined by two step tests and they are:

1. Determine whether the claim as whole is directed to a patent ineligible concept.
2. Determine whether the claim element considered have both individually and reduce combination transform the nature of claim independent eligible application.

Conclusion

But like other new technological advances, the judiciary and legislature took time to adapt the law to meet the needs of these advances. Still, both state and federal software vendors are becoming more and more successful in recovering products that have spent a great deal of time and money developing. Despite this fact, owners must be aware of potential obstacles to the legal protection of their products and take independent steps to prevent copyright infringement by others.