

Intellectual Property Protection for e-Business Methods

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Abstract

Business methods (BMs) deserve intellectual property law protection. National laws, however, are divergent on whether BMs are patentable. U.S. is a leading country in granting patent to BMs, while Europe and China retain BMs exclusion but allow patent when BMs possess "technicality". Unification of laws on BM patenting is much needed, but the feasibility is in great doubt.

1. Introduction

Developing new methods of doing business is crucial for a company's success, particularly in an Internet environment. Protecting these methods from being stolen by competitor is even more important. It has been heatedly disputed, however, on what legal regime is most appropriate and effective to protect BMs. Traditionally, BMs were mainly protected under trade secrets, unfair competition and other common law schemes. Since 1998 when the U.S. Court of Appeals for Federal Circuit (CAFC) decided to uphold a patent for an Internet business method, all kind of BMs such as Internet search methods, Internet server access control and monitoring systems, electronic shopping carts, Internet auctions, Internet keyword search service, and delivery of postage started to receive patent protection, first in the U.S. and later in a number of other countries.

2. BMs Defined

There are generally three ways of conducting businesses: (1) pure manual way, e.g. book-keeping; (2) translating manual way to a technical system, e.g. calculator; (3) a new invention with technical effect, characteristic and contribution. Although the existing definitions are not unified, most of them tend to define BMs as computer-related technology, or "Internet BMs". For example, the U.S. Business Method Patent Improvement Act of 2000 defines BMs as: (1) a method of (a) administering, managing, or otherwise operating an enterprise or organization, including a technique used in doing or conducting

business; or (b) processing financial data; (2) any technique used in athletics, instruction, or personal skills; (3) any computer-assisted implementation of a method described in para.(1) or a technique described in para. (2). This definition has been criticized as imprecise and covers virtually every computer-related device.

Japanese Patent Office defines BMs as a type of computer software invention that realizes ways of doing business by using computer or network technology.

Because most of BMs are computer or Internet assisted inventions, using patent to protect them seems to be sensible and appropriate because what patent protects is new and useful technology with inventiveness. The problem is then whether the BMs can pass the threshold of patentability and qualify to be patentable subject matter; whether it is beneficial to the advancement of sciences and technologies to grant monopoly right to BMs; and whether the current patent law is outdated in accommodating a subject matter associated closely with Internet technology and ought to be reformed.

3. Pros and cons of BM patenting

Professor Lawrence Lessig of Stanford Law School criticizes that the proliferation of BMs patent "terrorize" the Internet, and believes that those non-novel and non-obvious BMs are the "space debris of cyberspace." He suggests that US Congress should consider a moratorium on granting BM patents because BMs are in some way different from other technology fields and "this special class must be limited until proven worthy." Other conventional criticisms of BM patenting include: patenting "obvious things" such as BMs causes "a chilling effect on e-commerce"; most of BM patenting are over-simplified and over-broad; BM patenting impedes innovation and monopolizes the entire sectors of the Internet economy; the costs of filing applications and engaging in long and complicated litigation outweigh the benefits of the system.

outweigh the costs of the issued patents as a whole. They insist that BMs patenting, like patents in other technology fields, provides incentive to innovate. They believe that BM patenting provides

financial resources to an Internet startup company whose sole assets may be its BM patents. They point out, for example, 70% of US economy is based on information and knowledge, and companies are measured by their knowledge and business methods. The information and knowledge based economy was created by the patent system, it would hence be ironical to exclude patent from this economy. Regarding filing and litigation costs on BM patents, they argue that an emerging field of technology always tends to be more litigated than older fields; and filings of BM patents were only 1% of the total USPTO filings in 1999. About obviousness, proponents claim that there have not been many prior arts to prove that the patented-BMs are so obvious.

3. BM patenting in Comparative perspective

3.1. U. S. position

U.S. is a leading country in granting patents to BMs. Prior to 1998, however, US Patent and Trademark Office (USPTO) generally rejected BM patents under the “business method exception” to statutory subject matter established in *Hotel Security Checking Co. v. Lorraine Co.*, 160 F. 467 (2d Cir. 1908) (involving a system of financial accounting to prevent fraud by restaurant waiters and cashiers) and in *Loew’s Drive-In Theatres v. Park-In Theatres, Inc.*, 174 F. 2d. 547 (1st Cir. 1949) (involving a system for arranging and designing a drive-in movie theater parking lot).

The case of *Diamond v. Chakrabarty*, 447 U.S. 303 (1980) substantially extended patentable subject to “include anything under the sun that is made by man”. Subsequently, a series of cases on software related inventions such as *Diamond v. Diehr*, 450 U.S. 175 (1981), *In re Alappat*, 33 F. 3d 1526 (Fed. Cir. 1994) and *In re Lowry*, 32 F. 3d 1579 (Fed. Cir. 1994) opened the door for BM patents. 1996 Examination Guideline for Computer-Related Inventions instructed patent examiners to treat BM claims as any other process claims. Under the U.S. Patent Act section 101, “whoever invents or discovers any new and useful process...may obtain a patent...” Section 100 defines “process” to include an “art or method”.

Finally in 1998, CAFC in the case of *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F. 3d. 1368 (1998) upheld a patent of a software program that facilitated the management of allocating gains and losses in mutual fund accounts, thereby formally recognized the patentability of BMs. The court held, “We take this opportunity to lay this ill-conceived exception

to rest... business methods... should have been, subject to the same legal requirements for patentability as applied to any other process or method.” Following the State Street, many BMs patents have been granted or upheld as long as they produce “useful, concrete and tangible results.” *Priceline.com v. Microsoft* (1999); *AT&T v. Excel Communications* 172 F. 3rd 1352 (1999); *Interactive Gift express, Inc. v. CompuServe, Inc.*, 95 Cir. 6871 (1998); *Overture Services Inc. v. Google* (2002); *Fantasysports.com v. Yahoo and others* are some of the examples. As a result, the patenting of business methods has grown 700% in 1999. The USPTO created a new classification for application to accommodate the new development: data processing for financial, business practice, management or cost/price determination. USPTO also added additional “layer of review” to BMs and hired technical specialists to aid examiners in the areas of finance, e-commerce, insurance and Internet infrastructure.

In *Amazon.com v. Barnesandnoble.com*, 239 F 3d (2001), however, CAFC vacated the preliminary injunction favoring Amazon and remanded the case for further proceedings. The patent involved a method for a network service allowing purchasers to move directly to the virtual checkout with “one-click”. CAFC held that the existence of a prior art, CompuServe Trend System which allowed subscribers to use a single-action ordering technology to purchase stock charts, raised a substantial question of validity of Amazon’s patent. This ruling may not signal a reversal of trend in granting BM patents, but it does show that U.S. is narrowing the door to the BM patents. In fact, USPTO’s granting BM patents in the period of March to December 2000 declined from 56 percent to 36 percent of the applications.

3.2. European position

UK has been reluctant to grant patents to BMs. In 2001, UK Government concluded in its Conclusions on BM Patents concluded that BMs should remain unpatentable “unless and until” there is evidence that the patentability “would be to increase innovation”. UK Patent Court decided in *Merrill Lynch Inc.’s Application* that a computer program causing a computer to calculate numbers to provide pricing information did not involve a technical step and was therefore unpatentable.

European Patent Convention article 52 (2) explicitly provides that “schemes, rules and methods for...doing business” shall not be regarded as inventions and therefore be protected

by patent. In practice, however, European Patent Office (EPO) is more flexible in recognizing patentability of BMs. Under EPO's criteria, patentable invention must be "susceptible of industrial application" and be of "technical character". In *"Improved Pension Benefits System"* case, EPO held that "methods only involving economic concepts and practices of doing business are not patentable", but "the apparatus constituting a physical entity for carrying out such method" was patentable. Specifically, method that has technical characteristics such as involving the use of technical equipment (e.g., the bagging apparatus) or to achieve a technical effect (e.g. the production of sealed, weighted bags of the shipping material) is patentable. In addition, an invention comprising functional features implemented by software is patentable if technical consideration exists, e.g., a financial and inventory management computer system and the method of operating the system.

3.3. China/Hong Kong's position

The position of China on BM patenting is similar to that of EPO in that BMs are excluded as rules and mental activities under Patent Law article 25, but may be patentable in practice if they possess "technicality". According to 2001 Patent Examination Guidelines Part II, cap 1 of s.3.2, inventions involving pure business methods are not patentable. These include rules or regulations relating to the management of organization, production, commercial exploitation. However, under the Guideline Part II, cap. 9, s. 2, when these methods are executed through network or computer, the patent office is required to determine whether the method "adopts technical means, resolves a technical problem and creates a technical effect". If so, a patent should be granted.

Some sources suggest that Chinese Patent Office (CPO) now does not reject BMs as "rules and methods for mental activities", but on the basis of lacking inventiveness. On December 18, 2002, Citibank Ltd. (Germany) obtained a Chinese patent for its "electronic currency system", and on January 1, 2003, it obtained second patent in China for its "system and method for data management". Although these two patents were attacked as overbroad, no validity challenge has been launched.

As an international financial center, Hong Kong strangely has been lagging behind in BMs patenting. The patent law remains the same as the old UK Patent Act in respect to BMs. Under Patent Ordinance s93(2)(c) and (3), BMs are excluded as "a ..., rule or method for performing a mental act,or doing business.....to the extent to which

a patent or patent application relates to such subject matter or activities as such". There are no other rules, examination guidelines or judicial decisions to interpret what are the "methods of doing business...as such", and what constitutes "technical effect and contribution" as under European cases or China's examination guidelines.

Some argue that BM patenting is not beneficial for China because the purpose of PRC patent law is to advance science and technology, not to promote business interests. They argue that the driving force for business method patenting is market competition, not innovation, and suggest other laws such as copyright law, antitrust law and computer software protection rules to be used to protect BMs.

The reality is, since 1998, BMs application in China has been on the rise. According to a statistic, the business method applications received and published by the China State Intellectual Property Office (SIPO) are about 7,000, of which 577 in 1998, 1,176 in 2000 and 1,800 in 2002, covering areas of finance, management, insurance and banking, etc. These figures indicate a strong trend toward BM patenting in China, although the government may not wish to open the door for multinational business firms to use BM patents to compete with China's domestic companies which are in a weaker position.

4. Solutions to BM patenting "crisis"

Due to the increasing use of computer technology in conducting businesses, BM patenting has become a trend in the world and may be accepted by more countries. The development, however, may cause "crisis" to the business world due to the growing number of "trash patents" which are invalid and "kitchen-sink patents" which claim ownership of everything.

The US Patent Improvement Act of 2000 proposed to do four things to solve the "crisis": (1) automatic publication 18 months after filing; (2) establishing a public protest proceeding; (3) requiring applicants to disclose the prior art search history; and (4) lowering the burden to prove invalidity from "clear and convincing evidence" to "preponderance of the evidence". These measures may help to raise the bar for granting BM patents.

Scholars also suggest to establish a central database of "prior art" evidence so that "trash patents" and "kitchen-sink patents" can be eliminated during their applications. Higher qualifications of patent examiners are also essential in limiting these patents to be issued. Other suggestions to solve BM patent crisis include: treating BM as a separate class in patent law; using "industrial technology in definition; and

adopting copyright principles. However, these options add more problems rather than solving them. For example, treating BMs differently in patent law may contravene the Agreement for Trade-Related Intellectual Property Rights (TRIPs) principle of non-discrimination as to all field technology; what is “industrial technology” in information and Internet environment will be hard to define,; and copyright principles are themselves evolving and incorporating them into patent law will be a disaster.

5. Internationalization of BM patenting?

The effect of the State Street decision has been felt in the U.S. and elsewhere. U.S. companies are filing significantly more applications for BM patents with the patent offices of other countries. In a long run, companies of other countries may also follow the U.S. suit to file BM patents in foreign countries. This will cause a wave for internationalization of BM patenting. Because national patent laws differ greatly, U.S. companies cannot receive the same protection for its BMs elsewhere as in the U.S. They will therefore push for a stronger protection worldwide, through bilateral negotiations and changing international treaties.

Currently, TRIPs does not explicitly exclude computer program and BMs from the patentable subject matter. It requires instead that “patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.” One may argue that this indicates that it is national obligation under TRIPs to protect computer assisted BMs as “a field of technology”. However, some people argue that it is questionable whether BMs are capable of “industrial application”. Although TRIPs does not define “industrial application”, EPC article LVII defines it as an invention that “can be made or used in any kind of industry, including agriculture.” Clearly, BMs are used mostly in commerce, not traditional industry. This definition is much narrower than the “usefulness” criteria under U.S. patent law. In any event, TRIPs is not very helpful in solving national inconsistency regarding BM patenting. In fact, TRIPs only aimed “to reduce distortions and impediments to international trade”, and purposefully left some room for national government to design their IP laws to suit their domestic situations.

Although some scholars advocate unification of international rule regarding computer based

BMs because these methods are mostly Internet related and are capable of cross-border operation. The disparities between national laws may create “pirate haven or choke point for data flow in the network”. I doubt very much the international unification can be achieved. Not because it is not worthy, but because it is infeasible. So long as IP law remains territorial, national governments are bound to find their own ways to solve inconsistency and disputes with other nations. This also applies to BM patenting. I predict that U.S. will work hard to push other countries to adopt a protection level for BMs complementary to that of U.S., and eventually, more and more countries will amend their patent laws to allow stronger protection for BMs.

References:

- [1] “Electronic Commerce Patents” in Michael Geist, *Internet Law in Canada 3d* (Concord: Captus Press, 2002).
- [2] *Amazon.com, Inc. v. Barnesandnoble.com, Inc* (2001)
- [3] Matthew G. Wells, “Internet Business Method Patent Policy”, 87 *Va. L. Rev.* 729.
- [4] Jeffrey R. Kuester and Lawrence E. Thompson, “Risks Associated With Restricting Business Method and E-Commerce Patents”, 17 *Ga. St. U. L. Rev.* 657.
- [5] Jason Taketa, “The Future of Business Method Software Patents in the International Intellectual Property System”, 75 *S. Cal. L. Rev.* 943.
- [6] Joy Y. Xiang, “How Wide Should the Gate of “Technology” Be? Patentability of Business Methods in China, 11 *Pac. Rim L. & Pol’y J.* 795
- [7] www.patent.gov.uk/about/consultations/conclusions.htm
- [8] http://www.sipo.gov.cn/sipo_English/gftx_e/zyhd_e/20031225_22943.htm
- [9] http://www.sipo.gov.cn/sipo/zlsc/sczn/sqzn_2/t20011025_1683.htm
- [10] TRIPs Agreement, article 27.
- [11] Convention on the Grant of European Patents, Oct. 5, 1973 (amended 1978)