INTERNATIONAL LAW AND POLICY WITH RESPECT TO BUSINESS METHODS PATENTS: OPENING OF PANDORA'S BOX?

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CERTIFICATE

This is to certify that the dissertation entitled **INTERNATIONAL LAW AND POLICY WITH RESPECT TO BUSINESS METHODS PATENTS: OPENING OF PANDORA'S BOX?** submitted by **RABIN MAJUMDER** is in partial fulfillment of the requirement for the degree of ***Master of Philosophy*** (M.Phil.) of this university. It is his original work and may be placed before the examiners for evaluation. This dissertation has not been submitted for the award of any other degree of this university or of any other university.

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CHAPTER 1

INTRODUCTION

This Chapter starts with an introductory note on Business Methods Patents, its evolution, economic and legal impact of such patenting; arguments and counter-arguments involved and issues evolving therefrom. Current international legal regime is also focussed. The discussion ends with a statement preparing ground for immediately following Chapter.

["Now I'll give you something to believe" the White Queen re-marked. "I'm just one hundred and one, five months and a day."

"I can't believe that!" said Alice.

"Can't you?" the Queen said in a pitying tone. "Try again, draw a long breath and shut your eyes."

Alice laughed. "There's no use trying," she said, "one can't believe impossible things."

"I daresay you haven't had much practice," said the Queen. "When I was your age, I always did it for half-an-hour a day. Why sometimes I've believed as many as six impossible things before breakfast."][1]

1.1 GENERAL DISCUSSION

A patent is a government-granted monopoly - an exclusive right backed by the power of the state. Generally speaking, a patent may be regarded as a contract between an inventor and the government. In return for full and public disclosure of a previously unknown development, the inventor is granted certain exclusive rights in the invention for a limited period of time. As a result, rapid and continuous technological progress is encouraged. Article 7 of Trade-related Aspects of Intellectual Property Rights (TRIPS)[2] lays down that the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation. It should also promote the transfer

[1] LEWIS CARROLL, THE ANNOTATED ALICE 250-51(Martin Gardner, ed. 1960). This passage comes by way of political scientist Don Herzog. *See* Don Herzog, *As Many as Six Impossible Things Before Breakfast*, 75 CALIF. L. REV. 609 (1987) (critiquing "Critical Legal Studies"), quoting from LEWIS CARROLL, THROUGH THE LOOKING GLASS (1871) cited in http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf ,
"As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform", Robert Merges, 1999, p. 578, vol. 14:577, under subheading "I. INTRODUCTION"

[2] Source: First published in June 1994 by the GATT Secretariat, Reprinted in 1995 by the WTO, Centre William rappard, Rue de Laussene 154, CH – 1211 Geneva 21, Switzerland.

and dissemination of technology, to the mutual advantage of the producers and users, in a manner conducive to social and economic welfare. Therefore the idea is to reward the innovators for their years of hard work and costs incurred.

The US Constitution, which directly provides at Article I, Section 8, Clause 8[3]: speaks of promoting the progress of science, etc. through granting patent. The "environment of progress in America, stimulated by the patent system, introduced the world to innovation more rapidly than at any time in history. Some of the many significant inventions that have been patented include the cotton gin, the telephone, the airplane, the transistor, and the photocopier".[4]

There is growing skepticism also among academics about whether such state-imposed monopolies help a rapidly evolving market such as the Internet. What is "novel," "non-obvious" or "useful" is hard enough to know in a relatively stable field of technology. In a transforming market, it's nearly impossible for anyone, they allege.

Until not very long ago, most of those involved in commerce, knew very little about patents and had even less interest in finding out about them. Then came the 1970's with their almost all-pervaded tide of software related inventions. It seemed that overnight the (then) new technology spawned a virtual tidal wave of software patents. As with most innovations which are not particularly well understood when they first make their appearance, concerns abounded from the onset with respect to the patentability of the software systems and computer programs related inventions. And rather typically, when a subject is not fully appreciated or held in awe, the prohibitions rolled in.

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[3] It says: "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries". Available at http://www.house.gov/Constitution/Constitution.html, last visited July 7, 2002.

First software, once thought too purely mathematical, and now business "methods", also once thought too abstract, have acquired centre stage to becoming *perfectly* acceptable subject matter for patents. For better or for worse, whole new landscapes have been opened to the possibility of patents. The granting of patents to business methods and computer software has attracted considerable criticism overseas, particularly in the United States. The criticism has largely centred around the alleged inability of patent offices to adequately examine such applications rather than whether it is appropriate to grant patents at all for business methods and software. It is contended that this has led to the granting of patents for business methods and software which are neither new nor inventive.

The persistence with this belief stultified the patent system in United States, Australia, Japan and elsewhere including India, although partly. Though it must be admitted that a great many patent controlling authorities around the world, including the US and Australia, also expressed reservations about the patent-worthiness of software.

It is difficult to find anyone involved in commercial applications of the Internet these days that doesn't have a strongly held view on the subject of business method patents. At one extreme are those who predict that "allowing patents on such processes will surely stifle innovation on the Internet"[5], at the other are

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[4] Ingersoll, Buchanan, ATTORNEYS, available at http://www.bipc.com/practice/pdf/intel/patent.pdf., last visited November 31, 2001.

[5] Thurm, *A Flood of Web Patents Stirs Dispute Over Tactics*, Wall Street Journal, October 9, 1998 at B1 ("The fear: Companies with new-fangled Web patents will demand license fees from other Web merchants for aspects of everyday business."); Lawrence Lessig, *The Problem With Patents*, The Industry Standard, May 3, 1999, at 20 ("There is growing skepticism among academics about whether such state-imposed monopolies help a rapidly evolving market such as the Internet."); Dan Gillmor, *Absurdity can be patented - U.S. Office proves it*, San Jose Mercury News, August 17, 1999 at 1C; Kurt Kleiner, *Patently Silly*, New Scientist, October 16, 1999, at 22 ("Fierce battles over intellectual property rights...are now the main threat to the Net.") cited in Laurie, Ron and Beyers, Robert, "*The Patentability of Internet "Business*

those that bear personal witness to the fact that a successful e-commerce company "would never have attracted the investment capital which gave it life were it not for the existence, or at least the possibility, of a strong proprietary position based in large part on the exclusionary rights provided by patent protection"[6].

But the real problem found is the incentives such a system creates. Awarding patents of this type siphons off resources, as some allege, from technologists to lawyers - from people making real products to people applying for regulatory privilege and protection. An increasingly significant cost of Net startups involves both defensive and offensive lawyering - making sure one doesn't "steal" someone else's "idea" and quickly claiming as former's every "idea" he/she can describe in a patent application, critics further complains.

Lawmakers often find it difficult with the inability of old laws to deal adequately with issues presented by new technology. "Unique jurisdictional and constitutional challenges posed by technology such as the Internet contribute to the confusion. Presented with a general lack of legislative guidance, administrative agencies and the judicial systems worldwide are confronting these types of issues independently. These trends are taking shape in several different areas of law and the results have been particularly dramatic in the area of patent law"[7] in respect of business methods patent.

"The patent system thus induces a lot of lose-lose situations for everyone, even for those who otherwise want to play fair. The purpose of law in

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Methods: A Systematic Approach to Evaluating Obviousness", available at http://www.bustpatents.com/laurie.htm, last visited July 5, 2002.

[6] Laurie, Ron and Beyers, Robert, "*The Patentability of Internet "Business Methods: A Systematic Approach to Evaluating Obviousness*", available at http://www.bustpatents.com/laurie.htm, last visited July 5, 2002.

[7] Chris Holt, "Patentability of Internet Business Models", *Cyberspace Law,* Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html last visited April 26, 2002.

general is to reduce conflicts within society. Here, we have laws that create artificial conflicts that wouldn't otherwise exist; companies resort to private contracts so as to eliminate these conflicts, but even then, the mere potentiality of these conflicts is detrimental to all".[8]

"Patents can also reduce innovation when one patent builds upon another. This is especially possible with business method patents. (Note the author refers to "Internet patents" while actually internet patents are merely the most obvious example of the larger class of "business method" patents.) Consider why ideas such as Newton's law of gravity are not patentable, one reason is that such ideas generate a host of other secondary implications, ideas and inventions which would certainly be reduced in number should the primary idea be patentable. Business method patents may be more like ideas than specific inventions. More could be said on this".[9]

The emergence of a new technology is often accompanied by questions of how that technology should be treated in view of existing laws. Sometimes, debate arises over "whether the current laws are sufficient, in need of modification, or whether they are simply inappropriate to deal with the new technology".[10]

The controversial situations arising out of software related inventions and the litigation resorted to resolve those situations naturally took a fair bit of time, several years in fact. However, technology did not lie dormant for all that

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[8] http://fare.tunes.org/articles/patents.html#pointers, visited 23 November 2001 Patents Are An Economic Absurdity

[9] See Bessen and Maskin, "Sequential Innovation, Patents and Imitation" Working Paper available at http://www.researchoninnovation.org/patent.pdf , and the short version at http://ksgwww.harvard.edu/iip/econ/bessen.html

[10] Scott M. Alter, Esq, Hale and Dorr, "The Future of Business Method Patents" avalable at http:\\www.gsu.edu/~ecojxm/internet/articles/w1003002.html, last visited September 25, 2001

time. On the contrary, with its appetite whetted on software developments, technology continued to advance and flourish and the late eighties and nineties saw the development of internet and a veritable explosion of electronic commerce. Business lobbies argued that given the very large investment made in the researching of new products and bringing them to market, clearly a stronger form of protection for such developments was essential. The conclusion they reached was not difficult to forecast. Only by recourse to the monopolies granted by patents system could such large scale of investment have any hope of recoupment.

Intellectual property does not grip the public imagination in quite the same way today, "yet something similar to those great patent wars seems to be happening. The pace of patenting is accelerating. Business is heading for the courts again. And criticism of the recent award of patents on wide areas of Internet business is growing. Academics and Internet activists are concerned that the government is turning the Internet over to private monopolies. Patents are becoming political once more".[11]

On general parlance, the importance of e-commerce in the context of economic activity in this arena continues to experience phenomenal growth.[12] Commerce over the Internet is expected to reach as much as 7.64 trillion EUR[13] in 2004, worldwide,[14]. In addition, the number of users is rapidly

[11] "Patent Wars, Better get yourself armed, everybody else is", Economist, April 8 - 14, 2000.

[12] Reports have signalled a slow down in that growth since the events of September 11, 2001, however, surveys suggest that the lack of consumer confidence was temporary and the e-commerce industry continues to grow. *See* Keenan Vision Research, E-Merchant 2001: Accelerating Free Trade, Nov. 7, 2001 *at* http://www.keenanvision.com/doc/em01/em01-7.asp.

[13] Approximately 6.8 trillion (USD). This Note when referring to a "trillion" is referencing the United States "trillion", which is equal to a thousand billion, and not the traditional British "trillion".

[14] Forecast by Forrester Research, reported in Matthew R. Sanders, *Global eCommerce Approaches Hypergrowth*, April 18, 2000 *available at* http://www.forrester.com/ER/Reseach/Brief/Excerpt/ 0,1317,9229,00.html (last visited November 14, 2001). This estimate includes both business to business (B2B) and business to consumer (B2C) transactions, however it should be noted that B2B transactions account for more that four-fifths of all transactions conducted on-line. *See* Organization for Economic Co-

increasing with a corresponding increase in the number of purchases made on-line. Since 1992 the number of computers with access to the Internet increased from 1.3 million[15] to 625 million in 2001,[16] with approximately 40% of all Internet users having made at least one on-line purchase.[17]

For few years from now, there has been considerable focus on business patents and it is an inescapable fact that there have been some profound changes in approaches followed, generally and specifically, amongst the lawmakers, academics and practitioners world-wide.

Such concern abounded both from the angle of international law and economics. In particular there was thought to be a substantial risk that patents on business methods would be improperly granted, since an Examiner reviewing business method-related patent applications might not know of basic methods of doing business practiced for years or described in textbooks decades old. Software patents implementing methods for doing business seemed to be of particular concern, since commonly used software techniques may never have been patented or discussed in technical literature and, therefore, could be unavailable for consideration during examination. This is probably the serious flaw in the whole examination procedure any of the patent offices, critic fear.

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operation and Development (OECD), *Business-To-Consumer E-commerce Statistics* 14 (Mar. 2001) *available at* http://www.oecd.org/oecd/pages/home/displaygeneral/0,3380,EN-statistics-44-1-no-no-no-44--no-,FF.html.

[15] *Towards Digital eQuality,* U.S. Government Working Group on Electronic Commerce, 2nd Annual Report, 1999 (citing the Internet Software Consortium-Domain Survey *at* http://www.isc.org).

[16] Computer Industry Almanac, Press Release: There will be 625 Million Computers-in-Use Year End 2001-July 2001 *at* http://www.c-i-a.com/200107cu.htm (last visited November 15, 2001). Different surveys quote different numbers, but the trend is clear. For example, NUA Internet Surveys reports over 500 million users world-wide as of August 2001. NUA Internet Surveys, *available at* http://www.nua.ie/ surveys/how_many_online/.

[17] OECD, *Business-To-Consumer E-commerce Statistics* 3 (Mar. 2001) (citing Angus Reid, 2000).

And on yet plane, it is evident that innovative ideas emerged as the most decisive factor that have influenced the corporate competitiveness. Irrespective of the relative size of a company, at current regime of globalisation of competitiveness, companies do battle over the superiority of ideas. For the very reason that these ideas can now be protected by patents, their importance as the decisive factor in the corporate battle has considerably increased. It is believed (or feared?) that the "patenting world is clearly in the middle of the second patent revolution".[18]

1.2 WHAT IS THE MAIN QUESTION THAT NEEDS TO BE ANSWERED?

The goal of the patent system is to promote progress. Whether business methods should be patentable is therefore a question of whether business methods patents promote progress. The economic interpretation of this question is whether granting business methods benefits the economy by making the internet e-commerce industry more efficient.

Because it is relatively straightforward to determine novelty, the key legal inquiry becomes, how should obviousness be evaluated for business method patents?

The ensuing surge in patent applications for business methods led to "high-profile patent litigation cases and fueled a debate over whether business methods should be patentable at all, and, if so, whether business methods that are merely computerized versions of known business techniques or do not involve hard technology should be patentable. Behind these questions lurked

[18] "Business Patent (Business Method Patent)", (C)1999 Hideo FURUTANI, Japanese, available at www.furutani.co.jp/office/ronbuss/BPBasic_e.html, last visited September 20,

the perennial disagreement over whether these patents in particular, help or hurt innovation."[19]

They say the need has arisen to seek advice here not only from those directly affected, but also those best equipped to answer the question: economists and international IPR-related lawyers especially familiar with the software industry .

1.3 PATENTS: A GENERAL CRITIC

Critics allege that there is a serious threat that ill-considered government support for expanding legal means of controlling access to information for the purpose of extracting private economic rents is resulting in the "*over-fencing of the public knowledge commons* in science and engineering. They also fear that such a new *tragedy of the commons* would bring adverse long-run consequences for future welfare gains through technological progress, and re-distributional effects further disadvantaging the present economically less advanced countries of the world".[20]

Some argue vehemently that business methods patent laws may well serve the short term profit goals of people and organisations today, but, as it expected, they will complicate and stifle the development of what may be *by far* the most important and profound technological development in human history.

2001.

[19] "*International Patenting of Internet-Related Business Methods*", last visited July 14, 2002 http://www.nsf.gov/sbe/srs/seind02/c6/c6s5.htm#c6s5l2

[20] Paul A. David, "The Digital Technology Boomerang: New Intellectual Property Rights Threaten Global 'Open Science", October 2000, available at http://www-econ.stanford.edu/faculty/workp/swp00016.pdf, last visited November 23, 2001.

As it is evident that the power of monopolies has tended to encourage inventors to turn to the patent system for support - often controversially. One hundred years ago critics questioned whether agricultural inventions could be protected, on the grounds that agriculture was not an industry. Some twenty plus years ago it was argued that granting pharmaceutical patents would be unethical. And today the biotechnology industry finds itself at the centre of the so-called 'patenting of life' debate. Now the GM food's affair with patent. From these developments one could rightfully argue as to why a big no to business methods?

1.4 PATENTING THE WHEEL?

There is an excellent story[21] line up goes revealing anyway, the story behind the story. In 1993, Vermont eye surgeon Jack Singer got a letter so annoying that he wanted to slam his fist through his office counter. A lawyer representing one Dr. Pallin of Phoenix informed Singer that every time he removed a patient's cataracts using a certain self-sealing eye incision, he was infringing on Pallin's patent on that incision, and therefore had to drop the technique or pay Pallin royalties of $2,000 to $10,000 a year. Having learned of the incision by reading medical literature and talking to colleagues, Singer was so incensed at this proprietary grab of what he considered communally developed knowledge that he spent much of the next three years fighting the patent.

Ultimately he prevailed, proving that Pallin had falsely claimed credit for an existing technique with hundreds of blossoming new technologies, come

[21] David Dobbs, "Patenting the Wheel" (1999), *Harvard Magazine,* available at http://www.harvard-magazine.com/issues/ja99/right.patent.html, last visited November 13, 2001.

complex legal issues. This volatile mix of technology and law has created a flurry of judicial activity, legislative reforms, and world-wide initiatives.

Critics argue many of the Internet business method patents are particularly troubling both because of the apparent obviousness of their claimed "invention" and because of the breadth of their claims. Two of the better known Internet business method patents, Amazon.com's vaunted *"1-click"* patent and Priceline.com's famed reverse *Dutch auction* patent.[22]

1.5 WHAT IS BUSINESS METHODS PATENTS

All this discussion on the business methods could beg the question "what are these business methods that have stirred such controversy?" The fact is that legal commentators have found it difficult to provide meaning for the term. For example, the American Inventors Protection Act[23], which gives the public certain prior use rights with regard to business methods, indicates that the term is to be construed "broadly" and loosely defines a business method as meaning "a method for doing or conducting business[24]" Despite this, the US Congress has never defined precisely which patents it intended the law to include.

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[22] See generally Daniel Amor, The E-Business Revolution 1 (2000) (exploring e-commerce and noting that "[o]ver the last few years the Internet has evolved from being a scientific network only, to a platform that is enabling a new generation of businesses. The first wave of electronic business was fundamentally the exchange of information. But, with time, more and more types of businesses have become available electronically. Nowadays we can buy goods online, book holidays or have texts translated over the Internet in an instant."); Carl Shapiro and Hal Varian, Information Rules (1999), as cited in Michael J. Kasdan, "How Courts Should Do Their Business Regarding Business Methods After State Street Bank v. Signature Financial Group, Inc.", *Bright Ideas*, Winter 2000, Vol. 9, No. 3, available at http://www.nysba.org/sections/ipl/kasdan.pdf., last visited November 16, 2001.

[23] AIPA of 1999. For detail provision, please visit: http://www.uspto.gov/web/offices/dcom/olia/aipa/, last visited January 31, 2001

[24] Ibid.. please see Subtitle C – First Inventor Defense, SEC. 4301. SHORT TITLE., Chapter 28 of title 35, USC section: "§ 273.(a)(3)

Perhaps, because of this, a Bill was introduced into 106th Session of Congress (of United States) entitled "Business Methods Patents Improvement Act of 2000"[25]. This Bill attempted to provide a definition[26] for business methods patents.

Patents law experts observe that the said definition is very broad. Arguably, every computer-related device would be included because virtually every electronic device today is a "computer-assisted implementation of a technique used in doing or conducting business." And the experts question in any event, what do techniques used in "personal skills" have to do with business methods?[27]

Broadly speaking, on the basis of the application, that business methods ordinarily incorporate:

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[25] For the relevant provision of the Act, please visit http://www.techlawjournal.com/cong106/patent/bus_method/berman.asp, last visited January 31, 2002.

[26] Ibid. of SEC. 2. DEFINITIONS, Section 100 (as sought to amend) of title 35, United States Code

".....(f) The term 'business method' means-

(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; and

(3) any computer-assisted implementation of a method described in paragraph (1) or a technique described in paragraph (2).

(g) The term 'business method invention' means-

(1) any invention which is a business method (including any software or other apparatus); and

(2) any invention which is comprised of any claim that is a business method."

[27] an online commentary as appeared : "Congress Takes Another Aim at Business Method Patents by Jeffrey R. Kuester, Mr. Kuester (jeff@kuesterlaw.com) is a partner with the patent, copyright and trademark law firm of Thomas, Kayden, Horstemeyer & Risley, LLP (www.tkhr.com) in Atlanta, Georgia. This article was originally published in the October 2000 issue of Patent Strategy & Management.

(i) Internet sales and purchasing; (ii) Advertising and Marketing ; (iii) Auction on Internet; (iv) Securities Trading and Mortgage evaluation; (v) Robotic laser brain surgery, and (vi) Treatment of Brain Tumors through Internet (onsite testing).[28]

Where do all this leave India? Because of its historical association with the United Kingdom, India has always felt closer and more comfortable with British law and practice . As far as patents are concerned, therefore, Indian thinking has always been more influenced by the law and practice prevalent in the Great Britain. Unfortunately, as patent attorneys argue, the insistence of the 1970 Act which states that to qualify as an invention, any art, process, method or manner must be for a manufacture has given rise to the interpretation by the Indian Patent authorities that, in order to be allowable, it should create something which was not there to start with. If there was no *something* created, the method or process was not an invention. To add further, tangibility / vendibility requirements in respect of for any invention to be patentable, is, *inter alia*, a must in India.

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[28] The exponential growth of the Internet has opened up a networked world of information, has enabled people to better communicate with one another, and has fuelled a rocketing New Economy: e-commerce. Examples of this phenomenon abound in contemporary life.
1. Amazon.com's online store has led to a mini-renaissance in book sales; 2. E-Toys delivers millions of Furbies and Pokemon cards to gleeful children each holiday season; 3. eBay has made attics and garages virtual goldmines; 4. Priceline.com allows consumers to name their own price for purchases ranging from groceries to airline tickets and 5. If we feel like some ice cream and a movie but are too lazy to go out shopping, we can hop on the Internet, and Kozmo.com will deliver it to our door by bicycle messenger.
See also [e.g., U.S. Patent No. 5,794,207 (issued Aug. 11, 1998) ("Method and apparatus for a cryptographically assisted commercial network system designed to facilitate buyer-driven conditional purchase offers"), U.S. Patent No. 6,049,778 (issued Apr. 11, 2000)
("Method and apparatus for administering a reward program"), U.S. Patent No. 5,948,061 (issued Sept. 7, 1999) ("Method of delivery, targeting, and measuring advertising over net-works"), U.S. Patent No. 6,029,141 (issued Feb. 22, 2000) ("Internet-based customer referral system"), U.S. Patent No. 5,800,268 (issued Sept. 1, 1998)("Method of participating in a live casino game from a remote location"), U.S. Patent No. 5,999,596 (issued Dec. 7, 1999) ("Method and system for controlling authorization of credit card transactions")] , Bagley, Margo A., "Internet Business Model Patents: Obvious By Analogy", Mich. Telecomm. Tech. L. Rev. 253 (2001) http://www.mttlr.org/articles/baglely/BaglelyNEWTYPE.pdf., last visited November 13, 2001.

In compliance with the TRIPS Agreement, India has initiated action by promulgating the Patents (Second Amendment) Bill, 1999[29]. What is of great interest, however, is the proposal contained in the Bill for the definition of the term "invention".

1.6 CURRENT DEVELOPMENTS: ARGUMENTS FOR AND AGAINST BUSINESS METHODS PATENTS

The rise of e-commerce has produced a flood of Internet-related patents that make infringement as easy as a single click of the mouse. *Barnesandnoble.com* Inc. learned that the hard way when *Amazon.com Inc.* slapped[30] the company with a lawsuit claiming infringement on *Amazon*'s patent for single-click technology, which lets repeat customers shop the site without having to re-enter personal and credit-card information.

On the other plane, it is observed that past few years have witnessed dynamic changes in the intellectual property policy and operational environment which have brought intellectual property to the forefront of international and national policy debate and agenda. At least four main factors have contributed to this center staging of intellectual property. These factors are: the convergence of digital and telecommunications revolutions, rapid technological advances, globalization and the interaction between several important global issues and intellectual property[31].

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[29] This Bill has been assented by the President of India in early July 2002.

[30] For more, please visit: http://lpf.ai.mit.edu/Patents/amazon-vs-bn.html, last visited June 12, 2002

[31] Sabharwal, Narendra K., Director, Cooperation for Development Bureau for Asia and the Pacific World Intellectual Property Organization at the Opening Ceremony, "WIPO Asia-Pacific Regional Forum on Policy Development, Institution Building and Demystification of Intellectual Property", August 29 to 31, 2001, New Delhi, available at http://www.ficci.com/ficci/aug-WIPO.htm, last visited November 14, 2001.

Another factor which has contributed to this development is that intellectual property has become a global issue because of its salience to key and critical policy fields such as trade, investment, technology development and transfer, health, environment, biodiversity, food security, human rights, traditional knowledge, culture and heritage. Nowhere is the relevance of intellectual property as a global issue more noticeable than the adoption of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS Agreement), which has brought intellectual property to the center stage of global trade negotiations.

In short, "the fundamental and radical transformation that the global economy has been undergoing through advancement in information and other technologies, and the inter play between global policy issues and intellectual property has brought the critical role of intellectual property in sharp focus in the present day knowledge-based economies. Knowledge technology and innovative ways of managing businesses increasingly determine market success. Competitiveness is contingent on the ability to generate ideas and to exploit these for commercial benefit".[32]

These developments have led to a heightened awareness on the part of the developing countries that intellectual property protection and management has profound implications for promoting international trade, foreign direct

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[32] Now few well known business methods patents can be cited as easy reference for the ongoing discussion:
1. The State Street Bank patent, which covered a new type of financial instrument.
2. The AT&T patent, which covered a method for producing a message record for a long distance telephone call.
3. The Amazon.com "one-click" patent, which covered a method of entering all of information required to complete an online purchase, including credit card and shipping information, by a single click of the mouse, using a combination of a cookie on the customer's system and a comprehensive database of customers on the vendor's system.
4. The Priceline.com patent regarding a "reverse auction" method for purchasing airline tickets over the Internet.

investment, technology transfer and social and cultural development. Concomitantly, this has led to increased attention by the developing countries for *establishing modem and efficient* intellectual property systems and creating a *culture* where intellectual property is promoted and used for creative wealth, jobs and welfare.

Since 1999, the countries of Asia and the Pacific region and World Intellectual Property Organisation (WIPO) considered it opportune to take stock of the fast evolving intellectual property environment and identify the main components of a viable intellectual property policy and strategy at regional and sub-regional levels brought together legislators, policymakers, intellectual property experts and the user community together.[33]

The bottom-line is that, on a different plane, some of the companies, not accustomed to the patent system such as marketing, banking, financial services, insurance, travel, and retail sales have tested the reach of patent law and found that the law covers not only computer software but also business methods implemented using computers – witness the United States' Court of Appeals for Federal Circuit's (CAFC) ruling in *State Street Bank v. Signature Financial*[34]. Consequently, the Patent and Trademark Offices around the world are experiencing unprecedented growth in the filing of the applications for business method patents.[35]

For more on this, see Ron C. Ben-Yehuda of Los Angeles office of Sidley & Austin, "Business Method Patents, June 2000", available at please visit: http://www.sidley.com/cyberlaw/features/bm.asp, last visited November 07, 2001.

[33] Sabharwal, Narendra K., Director, Cooperation for Development Bureau for Asia and the Pacific World Intellectual Property Organization at the Opening Ceremony, "WIPO Asia-Pacific Regional Forum on Policy Development, Institution Building and Demystification of Intellectual Property", August 29 to 31, 2001, New Delhi, available at http://www.ficci.com/ficci/aug-WIPO.htm, last visited November 14, 2001.

[34] please visit www.ll.georgetown.edu/Fed-Ct/circuit/fed/opinions/97.1327.html last visited October 2, 2001

[35] *"Business Methods Patent Practice Workshop"*, Washington DC Program, Dates: August 16 - 18, 2001, available at www.patentresources.com/advanced/adv_busmt.html, last visited October 28, 2001.

A serious argument goes that the conventional answer is dictated by the logic of patent principles and current practices. It holds that "there is no sound reason *not* to protect business methods. The history, logic, and accepted practices of our method of granting patents essentially compels us to allow patents on business concepts, because there is no principled basis on which to distinguish this "industry" from the myriad other industries that routinely obtain patents. Further, we should all have faith that this wave of patenting will unleash an Edisonian tidal wave of inventiveness—that, if we thought entrepreneurs rapidly introduced new ideas such as overnight package delivery and 1-800-Flowers *without patents*, then Watch Out!, because we haven't seen *anything* yet in this field!"[36]

Principle of "anything under the sun made by the man" has stirred controversies a lot. The globalization of economies continues to fuel the need for internationally accepted norms and procedures for the protection and enforcement of intellectual property rights across national boundaries. The need to be globally competitive for products and services and to explore new market niches have also necessitated much greater reliance on intellectual property assets such as patents generally, and business methods in particular.

It is in this background, we have, by now, come to learn what generality and specificity of business methods patents are all about and also the necessary implications as manifested at international legal and economic level. Issues arising therefrom and arguments and counter-arguments put forward by different interests groups are noteworthy, which could not, at length, be discussed in this chapter due to less scope. From here we shall switch to next chapter to investigate what the requirements are for an invention to be patentable. We shall concentrate only on business methods patents for the matter of bringing specificity in the discussion in following chapter.

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[36] Robert Merges, *"As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform"*, , 1999, p. 582, vol. 14:577, under subheading "II. BACKGROUND: THE "IMPOSSIBLE" IS NOW POSSIBLE", available at

CHAPTER 2

PATENTABILITY CRITERIA

Discussion herein locates and examines the sequence of difficulties arising out of patents in respect of business methods. A short list would comprise those very elementary yet ever-substantial pre-qualifications which otherwise any alleged invention ought to be embodied with. For discussion of patenting of any inventions, especially if it covers any alleged new technology concentrates only on patenting of business methods. An endeavour shall also be made to measure all this by adopting more than a mere "photographic approach". The findings end with a statement preparing ground for immediately following Chapter.

2.1 GENERAL DISCUSSION

The development of information technologies and the recognition of their value, the movement in favour of patentability of software and the TRIPS treaty, which provides for the possibility of patenting any type of invention related to technology, has re-launched interest in the issue of patenting methods, particularly methods of conducting business or business methods.

Prior to the recent Federal Circuit decision in *State Street Bank & Trust Co. v. Signature Financial Group* [37], companies relied upon trade secrets to protect their business methods. Today, companies are able to receive patents on their business methods, and "several are reaping the benefits".[38]

Of course, not all business patents are internet related inventions but it could arguably be said that many of those which have been subject to public acclaim do involve the internet in some measure.[39]

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[37] 149 F.3d 1368 (Fed. Cir. 1998), for detail of the case, please visit www.ll.georgetown.edu/Fed-Ct/circuit/fed/opinions/97.1327.html last visited October 2, 2001. (To be discussed later)

[38] For example: Priceline.com has patented an electronic version of an ancient bazaar. Its dozens of issued patents have given it an exclusive niche in the booming field of e-commerce, including airline ticket auctions (U.S. Patent No. 5,797,127). It has filed numerous patent applications on a wide array of business practices.
A recent (7/26/99) article in the New York Times describes one of Priceline's latest patents covering point-of-sale magazine subscriptions (U.S. Patent No. 5,926,796).
The electronic gadfly publication, Salon.com, recently estimated that these patents and the business built around them have made Priceline's founder and inventor, Jay Walker, a billionaire, 4 times over. Available at www.cblhlaw.com/art_4.htm, last visited September 27, 2001.

[39] For example: Open Market's patents for electronic trading (USP5,724,424; USP5.715.314; and USP 5,708,780); Netcentive's bonus gifts marketing (USP5,774,870); Cyber Gold's Attention Brokerage patent (USP5,794,210); Price Line's patent (USP5,794,207); Map advertising method (Mapion Patent) (Japanese patent 2,756,488); Double Click's web advertising method patent (USP5,948,061); Amazon. Com's one click patent (USP5,960,411); WWW scheduling control patent (USP5,960,406), "Business Patent (Business Method Patent)",

2.2 PATENTABILITY: THE REQUIREMENTS DILEMMA

Controversies center on the following issues:

1) the expansion of patentable subject matter to include software, business methods;

2) an apparent shrinking of the size of inventive step requirements;

3) inadequate prior art search; and

4) excessive claims breadth and failure to supply enough information for someone skilled in the art to reproduce the patentable product or process.[40]

This chapter discusses at length the various requirements for the purpose of deciding the patentability of alleged inventions in respect of business methods. For the benefit of this discussion, it is made known that such foregoing requirements are more or less the same, both in substance and legal parlance at different patent laws world over. The flexibility or strictness in such patentability criteria may vary across countries and over time. The correct interpretation and application of the said criteria are crucial for balancing public and private interests, and also to help avoid excesses that undermine the credibility of the patent system. Such are invariably backed by independent national patentability requirements; and guided by the TRIPS Agreement under WTO. Generally speaking, to qualify for a patent, an inventor must show that

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Beta Version -(C)1999 Hideo FURUTANI, available at www.furutani.co.jp/office/ronbuss/BPBasic_e.html, last visited 20 September 2001.

[40] See Merges (1999), Hunt (2001), Heller and Eisenberg (1998), among others. Some of these developments can be traced to recent and not-so-recent court decisions which have then been incorporated into patent office practice. See Quillen (2001) as cited in Bronwyn H. Hall, "The Global Nature of Intellectual Property: Discussion", University of California at Berkeley and Oxford University, http://emlab.berkeley.edu/users/bhhall/bhhdisc_toronto501.pdf., last visited November 13, 2001.

his or her invention is novel, manifests an "inventive step" (i.e., that the invention was nonobvious) and is industrially applicable.

2.2.1 NOVELTY

The criteria used to define what is new are key determinants of the scope of possible limitations to the free access and use of technical knowledge and products in the public domain. The novelty requirement in modern patent laws is generally based on an assessment of the prior art on a universal basis, that is, anywhere in the world. Generally, novelty is destroyed by previous written publication, prior use or other form of public communication of the invention.

Within this framework, the legal definition and application of the novelty requirement significantly differs among countries. In some jurisdictions a flexible standard is applied, thus permitting the granting of a great number of patents. For instance, in the United States, disclosure that has taken place outside the United States is only destructive of novelty when made in a written form. In India, it adds further if prior use is found.

Analyzing novelty merely requires determining if the claim is "anticipated" by the "prior art", i.e., the claimed subject matter is identical to a previously used or described business method.

National legislation and practice differ on numerous other important questions:

The United States, for instance, requires complete disclosure in a single publication to destroy novelty, despite the fact that a skilled person may have

been able to derive the invention without effort from a combination of publications.[41]

In some cases, disclosure may not have been made expressis verbis in a prior writing, but may be implicit therein. If a "photographic" approach to novelty (i.e. only based on explicitly disclosed information) is applied, equivalents to an invention implicitly disclosed in the prior art may not be sufficient to deny patentability. The result, in these instances, can be the patenting of pieces of existing knowledge (prior art). This result can be avoided by following the European Patent Office's (EPO)[42] practice of considering implicit teachings to be disclosed and part of prior art, they argue.

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[41] section 102 of 35 USC can better be analysed from law position by interpretation of section 102 of the Code which can be had from: http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf
The section 102 novelty requirement applies to Internet-business models in the same manner as it does to every other type of invention. In other words, the novelty requirement seems to be neutral in its effects on the patentability of Internet-business models. A piece of prior art will trigger a 102 rejection and hinder the patenting of an invention only if it includes each and every element of the claimed invention. Accordingly, a non-Internet business practice poses no section 102 novelty threat to the patentability of Internet-business models. Due to the novelty of cyberspace itself, the current body of prior art that encompasses the Internet, while growing at a tremendous rate, is relatively limited in size. As the amount of Internet-based prior art increases, the strength of the novelty requirement will also increase, thereby placing more limitations on all types of Internet-related inventions. This system of limitation is the basic function and purpose of the novelty requirement and finds no special application to the patentability of Internet-business models.
To complicate matters further, section 102 also includes geographic locations and time frames in which each act must occur. When analysis is complete, all the acts that satisfy the specific elements of section 102 join together to form the "prior art." While the intricacies of the statutorily imposed requirement of section 102 are complex, the general principle is that each invention must include at least one feature that does not exist within any single reference taken from the body of prior art. The inventive feature may be a unique combination of parts that, by themselves, already existed in the prior art. The novelty requirement operates under a "single source rule." In other words, each reference taken from the prior art must stand on its own. Under section 102, it is not allowable to combine multiple pieces of prior art to render an invention unpatentable. (for more discussion, please visit: Chris Holt, "Patentability of Internet Business Models", *Cyberspace Law,* Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html

[42] *"Appendix 6: Examination of "business method" applications (EPO)",* http://www.uspto.gov/web/tws/appendix6.pdf, last visited June 28, 2002.

Another aspect left to national legislation is to establish whether novelty would only be destroyed when the anticipation enabled the execution of the invention, or whether a mere disclosure of the prior art would be sufficient.

2.2.2 INVENTIVE STEP

Even if novel, an invention in respect of business methods is not patentable if its technical teaching would or could have been discovered in due course by a person with average skills in the respective field. In United States practice, for example, courts applying the non-obviousness standard (the U.S., equivalent to inventive step) undertake a three-step factual inquiry, examining:

(1) the scope and content of the prior art to which the invention pertains;

(2) the differences between the prior art and the claims at issue;

(3) the level of ordinary skill in the pertinent art.

Patent Offices and Courts, if need arises, then make a final determination of non-obviousness by deciding whether a person of ordinary skill could bridge the differences between the prior art and the claims at issue given the relevant prior art. Though sometimes difficult to apply, the inventive step or non-obviousness requirement is critical to prevent the granting of patents on trivial developments.

As in the case of novelty, national laws may be more or less stringent in evaluating inventive step or "non-obviousness". Moreover, in any domestic legal system, courts may elevate or relax the inventive step standard at different intervals in response to either prevailing attitudes towards competition,

the perception of a need to protect new technologies (such as computer programmes and biotechnological inventions).

In establishing the existence of inventive step, it is generally necessary to consider not only the knowledge derived from a single prior document, but also the combined knowledge of existing literature, patent documents and other prior art.

The EPO, for instance, has taken the view that the fact that certain advantages were predictable made it obvious to prepare a new compound. In the United States, by contrast, the presence of a predictable advantage is not deemed sufficient to exclude patentability.

The TRIPs Agreement is not specific with respect to the issue of inventive step. Article 27.1 establishes that patents shall be granted to protect inventions which "involve an inventive step" and, it allows Member countries to interpret "inventive step" as synonymous with "non-obvious".

However, inventive step criteria cannot be so strict as to undermine the duty to grant patents in all fields of technology under Article 27.1 of the TRIPs Agreement. Coordination among the patent offices of developing countries could help to establish sound State practices and to avoid disputes.

2.2.3 INDUSTRIAL APPLICABILITY

The third criterion for patentability relates to the industrial applicability of the invention. Patent law around the world aims to protect technical solutions to a given problem, not abstract knowledge. And this an undisputed practice followed over the years by different patent offices.

2.2.3.1 INDUSTRIAL APPLICABILITY IN COMPARATIVE LAW

Countries differ in their treatment of industrial applicability standard. Under US law, certain developments that do not lead to an industrial product may be patented: an invention only needs to be *operable and capable of satisfying some function* of benefit to humanity ("useful"). This usefulness concept is broader than the "industrial applicability" concept required in Europe and other countries. The U.S. rule permits the patentability of purely experimental inventions that cannot be made or used in an industry, or that do not produce a technical effect, as illustrated by the large number of patents granted in the United States on "methods of doing business".

Indian patent law does not describe definition of industrial applicability. Its meaning can therby be construed from the practices of the Indian Patent Offices. Usefulness is the crieterion for an invention in order to be patentable to needs be always associated with.

The TRIPs Agreement too does not define the concept of industrial applicability and, therefore, leaves countries with considerable flexibility.

2.2.4 THE DUTY OF DISCLOSURE

The patent laws, irrespective of any national barriers, impose a strict duty to disclose to the Patent Office anywhere in the world any information that may be material to the patentability of the invention. Such material information may include relevant prior art as well as information concerning possible publication, use, etc. Thus, any prior art information discovered during the pendency of the application should be acknowledged to the respective office(s) within a specified period as prescribed by such law. Any patent obtained in

violation of the duty of disclosure shall be invalid and unenforceable.[43] This strict requirements is a matter of utmost duty on the inventor/applicant to let know the general public to further the innovation and research process on the related matters.

"The policy rationale" underlying the enablement requirement is two-fold: *Firstly*, "it ensures that the inventor truly discloses the invention to the public. *Secondly*, it acts to control the scope of the patented claims by narrowing the coverage of the claims to only those parts that are adequately disclosed. Rather than restricting the domain of patentable inventions, as the obviousness requirement does, the statutory enablement provision restricts the scope of the patent claims. Simply stated, enablement requires that the inventor describe the invention sufficiently in the patent disclosure so that a person skilled in the art can understand it well enough to make it and use it, without undue experimentation."[44]

2.2.5 PRIOR ART SYNDROME

There are persistent reports that patents in the software area, and perhaps especially, patents for "business methods" implemented in software, are of extremely poor quality.[45] People familiar with the technology involved

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[43] Ingersoll, Buchanan, ATTORNEYS, available at http://www.bipc.com/practice/pdf/intel/patent.pdf., last visited November 31, 2001.

[44] Kasdan, Michael J., "How Courts Should Do Their Business Regarding Business Methods After State Street Bank v. Signature Financial Group, Inc.", *Bright Ideas*, Winter 2000, Vol. 9, No. 3, available at http://www.nysba.org/sections/ipl/kasdan.pdf., visited 16 November 16, 2001.

[45] Brenda Sandburg, "Patent Applications Flow Freely", *LEGAL TIMES*, Feb. 22, 1999, at 12; Kenneth W. Dam, *Some Economic Considerations* "In The Intellectual Property Protection Of Software", 24 *J. LEGAL STUD.* 321, 369-71 (1995) (discussing many of the problems with patent quality that had been identified with respect to software patents, and voicing optimism that problems can be addressed) as cited in Merges, Robert, "As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform", 1999, p. 589, vol. 14:577, under subheading "A. Why Is Patent Quality So Poor?" of IV. EVALUATING THE PATENT EXAMINATION SYSTEM, available at http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf , last visited June 10, 2002.

and the history of various developments in it report that patents in this area are routinely issued which overlook clearly anticipating prior art.[46] The average number of prior art references cited in software-implemented business concept patents has been said to be fewer than five.[47] Three out of the five, on average, are citations to other U.S. patents, leaving an average of two non-patent citations per patent. What is disturbing about this figure is that patents have only recently become available for this technology.

Another concern is that there may have been a lowering of standards, especially non-obviousness and utility, in reviewing and issuing patents, with the result that many more patents of "low quality" and broad scope are being issued. Are there ways to measure empirically changes in the application of these standards over time?[48]

Recent case law supports this expansive definition of technology. In particular, the court in *State Street Bank*[49] stated that the question of whether a

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[46] Andrew M. Riddles & Brenda Pomerance, "Software Patentee Must Conduct Own Search: Prior-Art Searches Made By The Patent Office Often Are Not Thorough Enough To Be Trusted", *NAT'L L.J.*, Jan. 26, 1998, at C19. (accusing PTO of being little better than a "registration process" for some kinds of software patents), as cited in Robert Merges, As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform, 1999, p. 589, vol. 14:577, under subheading "A. Why Is Patent Quality So Poor?" of IV. EVALUATING THE PATENT EXAMINATION SYSTEM, available at http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf , last visited June 10, 2002.

[47] *See* Greg Aharonian, *17,500 software patents to issue in 1998*, INTERNET PATENT NEWS SERVICE (Oct. 18, 1998), *available at* http://lpf.ai.mit.edu/Patents/ipns/-ipns-19981018.txt, as cited in Robert Merges, As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform, 1999, p. 589, vol. 14:577, under subheading "A. Why Is Patent Quality So Poor?" of IV. EVALUATING THE PATENT EXAMINATION SYSTEM, available at http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf , last visited June 10, 2002.

[48] How are these measures related if at all to the way economists measure patent importance or value - i.e., by the frequency of citations in subsequent patents? Has there been a demonstrable change over time across technologies or in particular sectors? What are the economic implications of more patents of poor quality and broad scope?
For more discussion, please visit: www.nationalacademies.org/step, The National Academies, Board on Science, Technology and Economic Policy, Project Summary on Intellectual Property in the Knowledge-Based Economy.

[49] Available at www.ll.georgetown.edu/Fed-Ct/circuit/fed/opinions/97.1327.html, last visited October 2, 2001, (to be discussed in following Chapter 3).

patent claim encompasses statutory subject matter should not focus on which of the four §101 (35 USC)[50] categories of subject matter a claim is directed to (i.e., a process, machine, article of manufacture, or composition of matter), but rather on the practical utility of the subject matter, i.e., whether the claimed subject matter produces a "useful, concrete, and tangible result."[51]

2.2.6 OBVIOUSNESS

Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. This legal construction is akin to the "reasonable person" used as a reference in negligence determinations. The legal construct also presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan.

Virtually all inventions are combinations of old elements. Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were "sufficient to negate patentability, very few patents would ever issue". Furthermore, the writer continues, "rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be an illogical and inappropriate process by which to determine patentability.[52]

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[50] For detail of this provision, please visit: http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[51] Ron Laurie and Robert Beyers, Ph.D., "The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness", available at: www.gcwf.com/articles/journals/jil_may01_1.html, visited October 14, 2001.

[52] Ibid.

The statutory basis for the nonobviousness requirement is 35 U.S.C. Section 103(a)[53], which states: A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102[54] of this title [i.e., the invention is novel], if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.2.6.1 THE TRADITIONAL FRAMEWORK FOR DETERMINING OBVIOUSNESS

At some point, the US Court in *In re Rouffet*[55] explained:

an applicant may specifically challenge an obviousness rejection by showing that the Board reached an incorrect conclusion of obviousness or that the Board based its obviousness determination on incorrect factual predicates. The factual predicates underlying an obviousness determination include:

> "*the scope and content of the prior art, the differences between the prior art and the claimed invention, and the level of ordinary skill in the art*".[56]

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[53] http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[54] Ibid..

[55] Ron Laurie and Robert Beyers, Ph.D., "The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness", available at: www.gcwf.com/articles/journals/jil_may01_1.html, visited October 14, 2001.

[56] The non-obviousness requirement would seem to pose problems for the patentability of many Internet-business models. Problems are particularly apparent when the alleged invention involves the transfer of non-Internet business methods into Internet-based electronic applications. An example can best explain the problems that arise. Let's return for a moment to the car manufacturer who was the first to sell cars on the Internet and who filed a patent

"Regardless of whether a single prior art reference or multiple references are being used to challenge the patentability of an invention, it must usually satisfy three basic criteria of obviousness. The first criterion is that there must be some suggestion or motivation, either in the prior art references themselves or in the knowledge generally available to one of ordinary skill in the involved technology, to modify the reference or to combine the teachings of multiple references[57]. Second, there must be a reasonable expectation that the improvement or combination will succeed[58]. Finally, the "prior art reference (or references when combined) must teach or suggest all the elements of the invention".[59]

This prior art, when combined with common non-Internet business methods and with the knowledge of those skilled in the area of Internet applications, would seem to obviate most any real world-to-Internet type invention. It would seem, at the very least, that meeting the three criteria of obviousness would not be a problem in most of these types of cases.

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application to protect this practice. The concept of selling cars was certainly not a brand new idea when the patent application was filed and certainly existed within the body of section 102 prior art. We are assuming, however, that no single prior art reference, at the time of the invention, disclosed an Internet-based car sales system. This transition of a business practice performed on a daily basis in a non-Internet environment to a format involving an Internet-based computer program would appear to have made this invention novel under section 102. It is at this point in the process that the section 103 non-obviousness requirement comes into play. Is this transformation from the real world to the Internet a section 103 non-obvious improvement? At this time, judging by the content of patents that the USPTO has issued, the answer to this question would appear to be "YES." Will the USPTO consider the conversion of a non-Internet business model to Internet-format a section 103 non-obvious improvement in all cases? The answer to this question remains to be seen. What we do know so far is that the USPTO has granted patent protection to inventions, such as an "Internet-based shopping cart," that would seem to have a strong foundation in the non-Internet related world, cited in Chris Holt, "Patentability of Internet Business Models", Cyberspace Law Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html, last visited June 10, 2002.

[57] U.S. Department of Commerce Patent and Trademark Office, *Manual of Patent Examining Procedure*, Original Seventh Edition, Section 2143 (July, 1998), as cited in Chris Holt, "Patentability of Internet Business Models", Cyberspace Law Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html, last visited June 10, 2002.

[58] Ibid.

[59] Ibid..

Not all the Internet-business model related patents granted by the USPTO seem as obvious as simply transferring business practices from the real world to the Internet. Priceline.com's "*name your price auction*" patent is a good example.[60] It would seem that inventions of this type, ones that seem to be tailored to the specific structure of the Internet, would be more likely to be found non-obvious than inventions that simply transfer a non-Internet method to a format involving the Internet. At the very least, a better non-obvious argument exists for these inventions that seem specially tailored for the Internet. At this point in time, the United States Patents and Trademarks Office (USPTO) "doesn't seem to determine patentability based on the distinction between Internet-business model inventions that do and do not find particularly special application in an Internet environment".[61]

Further argument in US goes, "if the difference between the prior art and the claimed invention is limited to descriptive material stored on or employed by a machine, Office personnel must determine whether the descriptive material is functional descriptive material or non-functional descriptive material. Functional descriptive material is a limitation in the claim and must be considered and addressed in assessing patentability under § 103. Thus, a rejection of the claim as a whole under § 103 is inappropriate unless the functional descriptive material would have been suggested by the prior art"[62].

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[60] United States Patent Number 5,794,207 as cited in Chris Holt, "Patentability of Internet Business Models", Cyberspace Law Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html, last visited June 10, 2002.

[61] Chris Holt, "Patentability of Internet Business Models", Cyberspace Law Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html, last visited June 10, 2002.

[62] *"Examination Guidelines for Computer-Related Inventions"*, Final Version, Patent and Trademark Office, United States Department of Commerce. As appeared in page xxiv of the cited document, visit http://www.uspto.gov/web/offices/com/hearings/software/analysis/files/guides.doc, last visited July 5, 2002.

Therefore, even when the level of skill in the art is high, the Patent Offices around the world must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, these agencies must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious, some contend.

Some favours that the analytical framework described in *In re Rouffet*[63] (i.e., three factual predicates + secondary considerations + motivation to combine) can be applied to any invention, including a new method of doing business. However, before describing its application specifically to business method patents, it is useful to develop a claims taxonomy for such patents and to consider the problem solving process itself, i.e., the creation of "technology", and its relation to the Graham framework.[64]

2.3 WHAT IS TECHNICAL?

There is currently no universally accepted definition of what constitutes *technology* for either legal purposes or general understanding.

Another aspect of the determining the patentability of any invention including the one in respect of business methods is involvement of and resulting in technical features. This should invariably be characterised in novel features deriving out of such technical nature of the invention. Foregoing discussion herein shall see how the "technical" requirement has stirred controversies amongst the patent offices around the world.

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[63] see note 55
[64] Ibid..

For example, the *Manual of Patent Examining Procedure*[65] states, "The definition of "technology" is the 'application of science and engineering to the developments of machines and procedures in order to enhance or improve human conditions, or at least to improve human efficiency in some respect." Limiting the scope of technology to the practical application of scientific and engineering principles reflects states industrial past, i.e., a manufacturing-based economy that was primarily focused on making better "widgets."

However, as international economy becomes more information-based, a broader definition of technology may be more appropriate. For example, combining the Webster's Dictionary definitions for "technology" and "technical" suggests the following definition for technology: a method, process, etc. for handling a specific technical problem, i.e., a method for solving a specific problem in the practical, industrial, or mechanical arts or the applied sciences. This broader definition encompasses traditional industrial inventions (i.e., making better widgets). It also maintains the US Supreme Court's prohibitions on patents for laws of nature, natural phenomena and abstract ideas by requiring that a specific problem be solved. At the same time, it also broadens the scope of "technology" to cover the practical arts. Note that the industrial arts, mechanical arts, and applied science are just particular examples of the practical arts. Thus, at the highest level of generality, technology is just a solution to a specific practical problem.

Recent case law developed especially in the US particularly supports this expansive definition of technology. In particular, the US Court of Appeal for the Federal Circuit (CAFC) in *State Street Bank*[66] stated that the question of

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[65] U.S. Department of Commerce Patent and Trademark Office, Manual of Patent Examining Procedure, Original Seventh Edition, Section 2144.08 (July, 1998), cited in Chris Holt, *Cyberspace Law*, Fall 1999, "Patentability of Internet Business Models", http://www.ukans.edu/~cybermom/CLJ/holt/holt.html

[66] visit www.ll.georgetown.edu/Fed-Ct/circuit/fed/opinions/97.1327.html

whether a patent claim encompasses statutory subject matter should not focus on which of the four Sec 101[67] categories of subject matter a claim is directed to (i.e., a process, machine, article of manufacture, or composition of matter), but rather on the practical utility of the subject matter, i.e., whether the claimed subject matter produces a "useful, concrete, and tangible result."

In a flurry of recent announcements out of European governments (EPO, UK), the Europeans are taking the position that software patents, for the most part, should be permitted, but not business method patents, mostly, as some comment, for political reasons (i.e. that most big and small companies want software patents but not business method patents). They argue that some software ideas and all business method ideas are not "technical", and therefore not patentable, mostly deferring to a September 2000 decision of the EPO Board of Appeals that ruled that an American company's patent for a business method (on a *pension benefits*[68] calculation system) is not "technical" and therefore not patentable. Article 52(2)[69] also excludes patenting methods of doing business "as such", the "as such" being political language for "we don't know what we are talking about, and too lazy to investigate further".[70]

Greg Aharonian continues "that their use, and the decision's use, of the word "technical" is unnecessarily ill-defined (partly using their own comments). More objective, specific definitions are obtained by viewing "business methods" as the technology (i.e. useful application) of the science of "economics" (which

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last visited October 2, 2001.

[67] http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[68] this case is discussed later in this chapter.

[69] The European Patent Convention, Text available at <http://www.european-patent-office.org/legal/epc/e/ma1.html>

[70] Aharonian, Greg, "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", available at http://www.bustpatents.com/aharonian/technical.htm last visited November 16, 2001.

as discussed below does partially concern itself with controllable physical forces)."[71]

Thus the question "are business methods technical?" reduces to the question "is economics a science?". If the answer to the latter is 'yes', then business methods should be patentable, and the EPO's decision should be challenged."[72]

2.3.1 AN EPO PERSPECTIVE: "THE PENSION BENEFIT" DECISION

The EPO Board of Appeals[73] decided the issue of business method patents, in this case, a pension benefit analysis system for which an EPO patent was sought. The decision, while it briefly talks about novelty and obviousness/inventive aspects, the main issue is whether or not business methods are "technical". The patent had both method and apparatus claims.

The apparatus claims were ruled to be technical (that is, inherently as an apparatus, getting over the "technical effect" hurdle) and thus potentially patentable, but rejected for not having an inventive step. This "inventive step" analysis is not unlike the American "new and novel" requirement. This inventive step rejection of the apparatus claims was because the "technical contribution" (the new & novel piece or "solution to the technical problem") was in the field of economics and therefore deemed to be not technical.

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[71] Ibid.
[72] Ibid.
[73] T 0931/95-3.5.1, available at http://www.european-patent-office.org/dg3/pdf/t950931eu1.pdf

Japanese patent law also makes a fundamental use of the word "technical", as used in section 2(1)[74] of the Japanese Patent Law in defining an invention as:

> *"... means the highly advanced creation of technical ideas by which a law of nature is utilized ..." which as well reduces down to an invention being a new "technical" idea.*

So it is clear - some software ideas and all business methods are not "technical" in Europe. The question is, what does "technical" mean? After repeatedly using the word, one would hope that they then define "technical", so the definition can be used to consider the patentability of business methods.[75]

EPO decision do they confess the intellectual inadequacy of the decision:[76]

> *'It may very well be that, as put forward by the appellant, the meaning of the term "technical" or "technical character" is not particularly clear. However, this also applies to the term "invention". In the Board's view the fact that the exact meaning of a term may be disputed does in itself not necessarily constitute a good reason for not using the term as a criterion, certainly not in the absence of a better term; case law may clarify thus issue.'*

and they try to find support for this position in an equally inadequate German court decision:

> *'Having regard to the desirable harmonization of patent law it seems appropriate to mention here the decision of the German Federal Court of Justice (BGH) in case XZB 15/98, "Sprachanalyseeinrichtung", dated 11.05.00, which, although it points out that "technical character" as a*

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[74] for detail provision of the Japan Patent Law, please visit: http://www.jpo.go.jp/shoukaie/patent.htm, Japan Patent Law, Law No. 121 of April 13, 1959 as amended by Law No. 220 of December 22, 1999, entry into force: January 6, 2001. Last visited July 01, 2002.

[75] See note 70.

[76] Ibid.

distinctive criterion between patentable and non-patentable subject-matter is a rather vague notion, applies it itself. '

Foregoing discussion can only elaborate the interpretative scope of "technical" requirements in deciding the patentablity of business methods throughout the world.[77]

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[77] Ibid.

Furthering of the discussion is reproduced as follows:

"Other confusion is confessed in European commentary. For example, the EPO guidelines for examination of "business method" applications (seen at www.european-patent-office.org/tws/appendix6.pdf" state in an end note:

> *There will undoubtedly continue to be debate as to what constitutes a technical problem and what does not. This is exactly the same debate as we had under the "technical contribution" scheme, we have merely transferred it to a different stage of the examination. .... This scheme makes no mention of the "further technical effect" discussed in T1173/97. There is no need to consider this concept in examination, and it is preferred not to do so for the following reasons: firstly, it is confusing to both examiners and applicants; ....*

with similar language in the March 2001 UK Patent Office paper "Should patents be granted for computer software or ways of doing business?":

> *'However, the Government agrees with those respondents who said that at present the law is not clear enough, and that this is damaging. Clarification is needed. This raises complex and technical questions, but the central difficulty can be expressed simply: how to define the boundary determining when software is, and is not, part of a technological innovation, so that what is patentable will be clear in specific cases in the future.'*

with similar use of "technical" without clarification in the 2001 Activities Report of the President of the European Patent Office:

> *.... However, it has to be stressed that an invention - in the strict interpretation of patent law - must overcome an objective technical problem in a non-obvious way. In other words it is the technical invention which a "business machine" may relate to which makes it patentable, not simply its commercial ingenuity.*

or a nice bit of circular reasoning (not) offering a definition of "technical" from an EPO Board of Appeals judge:

> *The useful but imprecise adjective "technical" is a thread which runs through the European and much national case law. What does this mean? The short answer is that if the inventions is taken as a whole and is in sum technical; makes a technical contribution in a field not excluded from patentability; is the solution to a problem involving technical considerations; or produces a technical effect going beyond the normal interaction of a computer and a program, then it is likely to be patentable subject-matter.*

or a similar use of technical with no definition from a statement by Dr. Roland Grossenbacher, Chairman of the Administrative Council of the European Patent Organisation, made in Munich on 29 November 2000:

One can argue that the EPO Board decision is a boring repeat of a twenty-year-old American argument. The recent US decision, *AT&T v. Excel*[78], which further validated business method patents in the United States, cited a 1970 case, *In re Musgrave*[79], which decided that some steps in a process don't have to be physical acts applied to physical things. There was one dissenter, Judge Baldwin, who amongst other things wondered:

> *'First and foremost will be the problem of interpreting the meaning of "technological arts". Is this term intended to be synonymous with the "industrial technology" mentioned by Judge Smith? It sounds broader to me. Necessarily, this will have to be considered a question of law and decided on a case-by-case basis. Promulgation of any all-encompassing definition has to be impossible. This task is before us.'*

As they contend "much time could be saved if Europe realizes one flaw in Judge Baldwin's lament - interpreting and/or defining the meaning of "technological arts" or "technical" is not a question of law to be decided on a

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> *As before, computer-implemented inventions can be patented if they involve a new and inventive technical contribution to the state of the art. Technical solutions for use in data processing or for carrying out methods of doing business therefore remain patentable.*

This follows from the concept of invention itself, which draws a clear distinction between technical solutions and non-technical methods. On this basis, patents cannot be granted for computer programs or business methods which are not of a technical nature.

In short, too many European judges and lawyers are saying that they don't know what the word "technical" means, but are applying it to legal decisions anyway, even though as the EPO Board Pension ruling concedes on page 7 that such application of the word has little EPC precedent:

> *'In addition, relying on the "technical character" of inventions was not justified, since a criterion was not set up by the European Patent Convention as a requirement for patentability.'*

[78] For verbatim download and discussion, please visit: www.law.emory.edu/fedcircuit/apr99/98-1338.wp.html, last visited 12 June, 2002

[79] (431 F.2d 882), cited in Aharonian, Greg, "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", available at http://www.bustpatents.com/aharonian/technical.htm last visited November 16, 2001.

case-by-case basis, but rather one of science, and indeed a question of science that leads to much more precise definitions than the fuzzy and vague definitions of these European decisions. Of course, one can look back much further in time, to 1888 U.S. Supreme Court decision, the Telephone Cases, as a precedent for both software and business method patents, both classes of processes, that escape 'technical' concerns"[80].

An art - a process which is useful, is as patentable as a machine, manufacture, or composition of matter. Descriptions of means in the patent is only necessary to show that the process can be used. (In 2001, a bill was introduced in Congress, HR5364 Business Method Patent Improvement Act of 2000[81], which defined "business method" as "administering, managing or otherwise operating an enterprise or organization, including a technique use in doing or conducting business", i.e. a business method is a technique for doing, ..., business.)[82]

"However, as pointed out in a 1998 article by Mark Schar (a former member of EPO's Technical Board of Appeal), "what is 'Technical'?", in the Journal of World Intellectual Property, and by a variety of US court decisions and law review articles, clauses (iii) and (vi) dealing with 'forces of nature' reflect European patenting philosophies shaped when information processing was not considered to be an industry (as opposed to today where it is one of the top 20 global industries), and thus too archaic to be used as a basis for rejecting software or business method patents".[83]

Assuming then that "technical" is "scientific", how can we define and characterize the set labelled "business methods" in a way to assess the set's

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[80] The following are a verbatim discussion in respect of the requirements of "technical" as appeared Aharonian, Greg, "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", available at http://www.bustpatents.com/aharonian/technical.htm last visited November 16, 2001.

[81] for verbatim reference, please visit: http://www.house.gov/berman/HR5364.pdf

[82] see note 80.

scientific nature (since if the class is scientific, so is any member of the set), to provide less fuzzy definitions? It helps to examine how people talk about economics and business".[84]

"In short, even with having to deal with uncertain humans in their models (fortunately elementary particles have no personalities), economists have made their field of knowledge a science in the sense that a vast majority of what they do is verifiable, repeatable, measurable mathematics with a consistent basis (no Kuhnian criticisms, please). Economics is a science - the mathematics of social choice and utility functions".[85]

On a different plane, it is queried what are business methods but applied economics? And what is an applied science? Business methods are technical, achieve technical effects, have technical considerations with technical definitions, "all stated without the need for fuzzy definitions. But as US court cases and the Japanese Patent Office have both explicitly stated, you can't get a patent on the systemization of existing human transactions - there has to be some invention. As the ever growing body of economic literature demonstrates, there is still ample room for innovation in the science of economics, and therefore with applied economics - business methods. But this is a prior art problem".[86]

"That the patent world grew out of a world solely "physical" does not mean that patent laws forever have to remain solely in the "physical" world. The US courts and American industry have repeatedly chosen not to remain solely in the "physical" world, implicitly or explicitly arguing that business methods

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[83] Ibid..
[84] Ibid.
[85] Ibid.
[86] Ibid.

(and software) are useful and industrial applications of the science of economics - and thus a patentable technology".[87]

For almost a century, a generally accepted principle of patent law viewed "methods of doing business" as not falling within the scope of subject matter eligible for patent protection. This negative view as to the patentability of business methods dated at least as far back as the 1908 case of *Hotel Security Checking Co. v. Lorraine Co.*[88], in which the Second Circuit Court of Appeals in New York held that a patent covering a bookkeeping system was invalid since "a system of transacting business disconnected from the means for carrying out the system" was not within the categories of "arts" that were patentable.

The first step in the erosion of the business methods exception occurred in *In re Schrader*[89], in which a majority of judges on the Federal Circuit (United States) panel upheld a decision of unpatentability by the Board of Patent Appeals. The *Schrader* application related to a method for competitive bidding on a number of related items such as continuous tracts of land. Judge Pauline Newman's dissent to the majority opinion stated: "I discern no purpose in perpetuating a poorly defined, redundant, and unnecessary 'business methods' exception, indeed enlarging (and enhancing the fuzziness of) that exception by applying it in this case."[90]

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[87] Laurie, Ron and Beyers, Robert "The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness", www.bustpatents.com/laurie.htm, visited November 16, 2001.

[88] 160 F. 467 (2d Cir. 1908) cited in The following are a verbatim discussion in respect of the requirements of "technical" as appeared Aharonian, Greg, "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", available at http://www.bustpatents.com/aharonian/technical.htm last visited November 16, 2001.

[89] 22 F.3d 290 (Fed. Cir. 1994), cited in The following are a verbatim discussion in respect of the requirements of "technical" as appeared Aharonian, Greg, "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", available at http://www.bustpatents.com/aharonian/technical.htm last visited November 16, 2001.

[90] for detail discussion on this issue, please visit : www.cblhlaw.com/art_4.htm, last visited September 27, 2001.

Judge Newman's dissent in *Schrader* influenced on the drafters of the "Examination Guidelines for Computer-Related Inventions"[91] of the USPTO. Citing Judge Newman's dissent several times, the Guidelines subscribe to a broad definition of "technological usefulness" and provide some practical advice as to how to draft allowable patent applications covering "business methods." Section I of the Guidelines states that "[C]laims should not be categorized as methods of doing business ... [but rather] such claims should be treated like any other process claims pursuant to [the] Guidelines."[92]

The Guidelines recognize that patent claims to computer-related inventions may fall within the certain categories of statutory subject matter: (1) a process: a series of steps of specific operational steps to be performed on or with the aid of a computer; (2) a machine: a computer or other programmable apparatus whose actions are directed by a computer program or other form of software; and (3) an article of manufacture: a computer-readable memory that can be used to direct a computer to function in a particular manner when used by the computer.[93]

Now, however, during the short span of the Internet revolution, the patent system has begun to disintegrate by growing out of control. The United States is issuing patents at a torrential pace, establishing new records each year, and it is expanding the universe of things that can be patented. Patents began in a world of machines and chemical processes - a substantial, tangible, nuts-and-bolts world - but now they have spread across a crucial boundary, into the realm of thought and abstraction. Software and algorithms used to be

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[91] http://www.uspto.gov/web/offices/com/hearings/software/analysis/files/guides.doc Examination Guidelines for Computer-Related Inventions, Final Version, Patent and Trademark Office, United States Department of Commerce

[92] The Guidelines thus provide more lenient standards for determining the patentability of computer-related inventions, including methods of doing business. For detail, please visit: www.cblhlaw.com/art_4.htm, visited 27 September 01

[93] Ibid..

unpatentable. Recent court decisions and patent-office rule-making has made software the fastest growing patent category, and companies are rushing to patent the most basic methods of doing business. "This is a disaster," says Lawrence Lessig[94]. This is a major change that occurred without anybody thinking through the consequences.

Technology, commerce and the law rarely coincide in a single case. When it does happen, the results can be dramatic. This exact convergence occurred in *State Street Bank & Trust Co. v. Signature Financial Group*[95] where the CAFC of the US held that if the requirements of the Patent Act are otherwise met, business methods are patentable. Now, the opportunity exists for capitalizing on the business method patent wave and excluding competitors from using a business method. Put another way, businesses can now patent the methods by which they operate, thereby creating a barrier to market entry for potential competitors.[96]

2.3.2 AUSTRALIAN PERSPECTIVE

An Australian Court has considered for the first time the US decision in *State Street Bank v Signature Financial Group* (1998), which held that there was no exception to preclude the granting of patents for business methods. The Australian Federal Court in *Welcome Real-Time v Catuity Inc*,[97] found for the patentee on validity and infringement in relation to a patent for processing

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[94] a Harvard law professor and cyberspace expert

[95] for verbatim download, please visitwww.ll.georgetown.edu/Fed-Ct/circuit/fed/opinions/97.1327.html, last visited October 2, 2001.

[96] Tucker, Todd R., "Methods of Doing Business: Patenting The New Business Model (September 2000)", www.arterhadden.com/publications/other/sbn04.asp, last visited October 10, 2001.

[97] *Welcome Real-Time SA v Catuity Inc* (No 2) [2001] FCA 785 (24 July 2001), Last Updated: 24 July 2001, available at http://www.austlii.edu.au/cgi-bin/disp.pl/au/cases/cth/federal%5fct/2001/785.html?query=%7e+catuity, last visited September 25, 2001,

information on a smart card to maintain a loyalty program. The Court considered the State Street decision to be persuasive and said the social needs the law has to serve in the US are the same as in Australia.

In considering arguments that the invention did not relate to patentable subject matter according to the concept of 'manner of manufacture' developed under Australian law the Court reviewed the relevant Australian and UK decisions. The High Court decision in *National Research Development Corporation v Commissioner of Patents*[98] *("NRDC")* was considered to be the leading authority and has been described as being a watershed decision that changed not only the direction of case law in Australia but also that in the UK. The decision has been held to require a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour, and cautions against any attempt to circumscribe what constitutes a manner of manufacture. The principles established by NRDC were applied in the Federal Court's decisions in *International Business Machines Corporation v Commissioner of Patents* (*"IBM"*)[99] for a curve display method *and CCOM Pty Ltd v Jiejing Pty Ltd* (*"CCOM"*)[100] for a word processing system.[101]

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[98] National Research Development Corporation V. Commissioner Of Patents (1959) 102 Clr 252, available at http://Www.Austlii.Edu.Au/Au/Cases/Cth/High_Ct/102clr252.Html, last visited September 29, 2001.

[99] Re: INTERNATIONAL BUSINESS MACHINES CORPORATION And: PATRICK ANSELM SMITH, COMMISSIONER OF PATENTS No. G40 of 1990 FED No. 811 Patents (1992) AIPC 90-853 (1991) 105 ALR 388, (1991) 22 IPR 417 (1991) 33 FCR 218, Federal Court of Australia For detail materials, please visit: http://www.austlii.edu.au/au/cases/cth/federal%5fct/unrep5261.html

[100] Federal Court of Australia, CCOM PTY LTD and RONALD HOWARD THOMAS v. JIEJING PTY LTD, PARAVET INSTRUMENTS PTY LTD, JEFFREY JOHN YATES and ERIC RUSSELL CHAPPELL No. QG13 of 1994 FED No. 396/94 Patents (1994) 122 ALR 417, (1994) AIPC 91-079 (1994) 51 FCR 260. For detail materials, please visit: http://www.austlii.edu.au/au/cases/cth/federal_ct/unrep6887.html, last visited September 12, 2001

[101] for detail discussion, please visit: Australia - Patent Protection for Business Methods http://www.ladas.com/BULLETINS/2002/0202Bulletin/AustraliaBusinessMethods.html Last visited July 3, 2002 :: As a defense to a charge of infringement, the defendants argued that such a claim did not define a patentable invention under the Australian Patent Statute. The

The invention was summarised as being the ability to dynamically store on a card each merchant's loyalty program in a separate record of a file referred to as a 'behaviour file'. The Court considered the claimed method produced an artificial state of affairs in that cards could be issued making available to consumers many different loyalty programs of different traders as well as different programs offered by the same trader. This was considered not to be just an abstract idea or method of calculation. The result was also considered to be beneficial in a field of economic endeavour, namely retail trading, because it enabled many traders (including small traders) to use loyalty programs and thereby compete more effectively for business.

The said court felt that the patent did not relate to a business method, in the sense of a particular method or scheme for carrying on a business. A number of examples were given as to what the Court felt was a business method in this sense and included a manufacturer appointing wholesalers to deal with particular categories of retailers rather than all retailers in particular geographical areas. Another example was Henry Ford's idea of stipulating that suppliers deliver goods in packing cases with timbers of particular dimensions which could then be used for the floor boards in the Model T. The Court considered that it was unable to distinguish the present case from the *IBM* and *CCOM* decisions.

Australian definition of an invention is that the invention must be a "manner of manufacture" as set out in the English Statute of Monopolies if 1623. The court noted that in National Research and Development Corporation v. Commissioner of Patents the High Court of Australia had stated that:

> the point is that a process, to fall within the limits of patentability which the context of the Statute of Monopolies has satisfied, must be one that offers some advantage which is material in the sense that the process belongs to a useful art as distinct from a fine art - that its value to the country is in the field of economic endeavour.

This decision had been built upon by the Full Court in CCOM Pty Ltd. v. Jieing Pty Ltd, a case about a patent relating to a Chinese language word processor, where it had been stated,

> The NRDC case ... requires a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour.

In finding the State Street decision was persuasive, the Court felt that not only were the social needs in the US and Australia the same, but that both countries also had similar commercial and technological environments and that the law had to strike a balance between on the one hand the encouragement of true innovation by the grant of monopoly and, on the other, freedom of competition.

The Court also briefly considered arguments that the invention could be considered to be 'generally inconvenient' under the concept of 'manner of manufacture'. The arguments were rejected because it was considered that if an invention satisfies the patentability requirements it can hardly be a complaint that others in the relevant field will be restricted in their trade because they cannot lawfully infringe the patent. It was considered that the whole purpose of patent law is the granting of monopoly.

The decision is important in that it confirms once again the approval of software patents given in the IBM and CCOM decisions, and also effectively sanctions the Australian Patent Office practice of granting patents to business method processes, provided the patent is restricted to a method, means or system to put the business method into effect which gives rise to an 'artificially created state of affairs'[102]

The next development which has stirred a lot of concern amongst the Patent Office, legal practitioners (in IPR) and the business houses within Australia is the promulgation of Patents Amendment Act 2001[103] in Australia.

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[102] See note 97.

[103] came into force April 1, 2002. For detail of the provisions please visit: http://scaletext.law.gov.au/html/comact/11/6457/top.htm, last visited July 14, 2002

To some this development shows a "comprehensive overhaul"[104] of intellectual property law in respect of patent. They reason out this as due to number of factors, not least a growing awareness amongst policy makers of the importance of IP rights to Australian industry and the "continuing global push for the harmonisation of patent laws"[105].

Patents for methods of doing business have existed in small numbers at least since the early 1980's, but only in the mid- 90's did they suddenly begin to loom large in the economy. It was then that electronic commerce created a new arena for traditional business practices and several patents were granted that appeared to give exclusivity for such practices to some Web-only companies[106]. As people sat up and took notice of the trend, some did not like what they saw.

2.3.3 AN INDIAN PERSPECTIVE: VENDIBILITY TEST

A test mooted in deciding patentability of an alleged invention. Its meaning being "the significance of the product is economic", and "be one that offers some advantage which is material, in the sense that the process belongs to a useful art as distinct from a fine art - that its value to the country is in the filed of economic endeavour." If ever there was a decision which had perhaps the worst possible effect on Indian patent thinking on how

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[104] *"Raising the Bar in Australia: The Patents Amendment Act 2001"* by Christopher Bird, an article published in The CIPA (Chartered Institute of Patents Agents) Journal, October 2001, vol. 30 No. 10.

[105] Ibid..

[106] There are number of reasons why some companies are reluctant to file patent application for business method inventions. For example, a company may prefer to keep its business models secret. This is fine providing secrecy can be ensured but in many cases, especially where their turnover of employees, it can not and once a secret escapes there may be nothing to prevent adoption of the model by other companies. A patent can provide protection not only

"manufacture" ought to be interpreted, it was the eponymous Morton's Rules[107]. With their "added emphasis on the prerequisite of vendibility for a product which had to produced, improved or restored to pristine quality by a method, the Rules provided the framers of the new law with just the right lever for justification of their thinking"[108].

2.4 WILL AN IMPROVED PRIOR ART DATABASE SOLVE THE PROBLEM?

"It is virtually impossible[109] to prove prior art, particularly in business methods inventions because so much software has been written and lost. Even conducting a search of all the existing software is a near-impossible task".[110]

It is famously difficult to figure out whether a software patent application describes an invention that is new or novel. Under Section 102[111] of the 35 USC, the word "novel" has an exact legal definition.[112]

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against direct copying but also against another company using the patented invention even where they came up with the idea independently.

[107] In G.E.C.'s Appln. (1943) 60 RPC 1. At 4 , Morton, J, referring to the line to be drawn between a method or process which is a manner of manufacture and a methods or process which is not a manner of new manufacture stated: "In my view a method or process is manner or manufacture if it (a) results in the production of some vendible product or (b) improves or restores to former condition a vendible product product or (c) has the effect of preserving from deterioration some vendible product to which it is applied. In saying this I am not attempting to cover every case which may arise by a hard and fast rule"

[108] Francis S. Groser, Esq. of Groser & Groser, a *patented* class by himself with forty-five plus years of distinguished practice in IPR in India.

[109] "*Software Patents: An Economic Perspective*", First Supplementary Submission, By The League for Programming Freedom, To The Patent and Trademark Office, On Patent Protection for Software-Related Inventions , (by Gordon Irlam and Paul Rubin). This document is the League for Programming Freedom's response to issues raised by the San Jose hearings of January 26-27, 1994. http://lpf.ai.mit.edu/Patents/economic-perspective.html, last visited November 13, 2001.

[110] Ibid.

[111] http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[112]

"The fact that aspects of the `411[113] patent claims may be specific to the web are relevant for purposes of anticipation, but not for obviousness, if the web-related and non-web-related aspects were all in the prior art and a motivation or suggestion from the prior art exists to combine the varied references".[114]

Garfinkel, Simson L., "Patently Absurd: How could the Patent Office ever grant a patent to Compton'son its claim to have invented multimedia? This is how", available at http://www.wired.com/wired/archive/2.07/patents_pr.html visited November 23, 2001.
"One thing is certain about prior art: there's a lot of it. In the In re Hall case (decided in 1986), a PhD dissertation on the shelf of an obscure European university library was deemed to be part of the prior art, and a patent application was thrown out on appeal by the Federal Circuit Court. A catalog sent by one French company to a few hundred customers in Germany was found by a court to be part of the prior art. Indeed, the courts have intentionally stayed away from deciding whether prior art is "good" or "bad." No matter whether it appears on the front page of The New York Times or in a Russian technical journal that's never been translated into English, if the prior art describes an invention, then the invention is not patentable.
In almost every field that the US Patent Office covers, examiners determine whether an invention is new by searching two kinds of computerized databases: the Patent Office's own Automated Patent System, which tracks more than five million patents extending back to the 1790s, and commercially available databases of scientific literature. Got a patent application for a new drug? Check the databank. If the drug's not there, it's probably patentable. This approach is fine for tangible things like drugs. But what if we enter the Alice-in-Wonderland of software patents and try to figure out, say, if the search techniques used by the Patent Office database program itself are patentable? Good luck".

[113] For elaborate case contain, please visit: http://lpf.ai.mit.edu/Patents/amazon-vs-bn.html, visited June 12, 2002.

[114] commenting on prior art allegedly anticipating the Amazon.com "1-Click" patent cites in Bagley, Margo A., "Internet Business Model Patents: Obvious By Analogy", Mich. Telecomm. Tech. L. Rev. 253 (2001), available at http://www.mttlr.org/articles/baglely/BaglelyNEWTYPE.pdf. last visited November 13, 2001.

CHAPTER 3

INTERNATIONAL RESPONSES TO BUSINESS METHODS PATENTS

This Chapter examines Laws and practices in respect of Patents in general and business methods in particular in different jurisdictions viz. Australia, EPO, India, Japan, UK and US. Case laws supports the discussion to enlighten the laws and practices in such jurisdictions. TRIPS Agreement is taken into consideration to measure such discussion. An end-statement prepares ground for analysis to be attempted in the following Chapter.

3.1 GENERAL DISCUSSION

At the world level, as of yet, there is no world patent system whereby a single patent could be obtained to grant enforceable rights in all countries. The territorial extent of the patent grant is limited to the jurisdiction of the particular government that grants the patent. Because an analysis of the particular patent laws of each country would be an enormous undertaking, the discussion in this dissertation is limited to the patent laws of the India, United States, United Kingdom, Australia, Japan and EPO.

3.2 AN UNITED STATES PERSPECTIVES: "ANYTHING UNDER THE SUN MADE BY MAN"

Arguments in favor of the continued granting of software patents made reference to the following quote on patentable subject matter used by the US Supreme Court in Diamond v. Chakrabarty, 447 U.S. 303.

... anything under the Sun that is made by man ...

The US Supreme Court used the quote with regard to how to interpret the current patent law. Notwithstanding these words, some subject areas remain unpatentable under current law: mathematical algorithms, methods of doing business, and so forth. But when it is asked what the law should be -- whether the granting of software patents constitutes sound economic policy -- reference to the law as it currently stands doesn't help answer the question.[115]

3.2.1 DIAMOND v. DIEHR

The US CAFC held that a computerized process for curing synthetic rubber, which contained a mathematical algorithm, was patent-eligible subject matter, since it was tied directly to the underlying physical process itself.

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[115] "SOFTWARE PATENTS: AN ECONOMIC PERSPECTIVE", First Supplementary Submission, By The League for Programming Freedom, To The Patent and Trademark Office, On Patent Protection for Software-Related Inventions , (by Gordon Irlam and Paul Rubin), available at http://lpf.ai.mit.edu/Patents/economic-perspective.html last visited November 13, 2001.

Again, the fact that computerized elements were applied to a physical transformation was emphasized.

Diehr[116] was, however, an important turning point, as it allowed for the general patent-eligibility of computer software. The Federal Circuit liberalized and extended the patent-eligibility test for computer software in cases such as *Arrhythmia Research Technology Inc. v. Corazonix Corp.* and *In Re Alappat.*

This case to a large extent became a watershed since it identified a distinction between individual mathematical equations and patentable subject matter arising from the implementation of such equations. Many other cases have contributed to the law in respect of these issues throughout the 1980's and early 1990's. for example, the Freeman Test was modified as case law developed to become the "Freeman-Walter-Abele Test". Nonetheless, until *State Street*, the subject matter eligibility of software-related patents remained in doubt because of an unwieldy mechanical test that was used by the Federal Circuit to determine subject matter eligibility in computer software cases. From early cases that focused on the application of computerized method to physical elements, the Federal Circuit created a two-part test, which became known as the *Freeman-Walter-Abele*[117] test.

Under this test, the court (1) inquired whether the patent claims recites a mathematical algorithm, and (2) if a mathematical algorithm is found, whether

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[116] http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=case&court=US&vol=450&invol=175 last visited July 06, 2002

[117] *"Examination Guidelines for Computer-Related Inventions"*, Final Version, Patent and Trademark Office, United States Department of Commerce. As referred *In re Abele*, 684 F.2d 902, 905-07, 214 USPQ 682, 685-87 (CCPA 1982); *In re Walter*, 618 F.2d 758, 767, 205 USPQ 397, 406-07 (CCPA 1980); *In re Freeman*, 573 F.2d 1237, 1245, 197 USPQ 464, 471 (CCPA 1978), available at http://www.uspto.gov/web/offices/com/hearings/software/analysis/files/guides.doc, last visited July 05, 2002.

that algorithm is applied in any manner to physical elements or process steps. If the algorithm is applied in this manner, then the claim is valid § 101[118] subject matter.

The Federal Circuit did not strictly adhere to this test because, in practice, both steps were difficult to apply. First, it was difficult to define clearly what a "mathematical algorithm" is, within the meaning of the first step. Second, it was difficult to say how much physical activity would satisfy the second step.

However, arguably none have had same impact as *Diehr*. Thus, on the eve of *State Street*, the law regarding the patent eligibility of computer software inventions was muddled and inconsistent.

Early courts that rejected patents under what had come to be called the "business method exception" actually based their opinions on the fact that patentable and phenomena of nature-these must be left in the public domain as the building blocks of future technological innovation.[119]

3.2.2 "FREEMAN-WALTER-ABELE" TEST: A PREMIER

A number of decisions by courts in the United States on software related inventions followed in the 1970's but the first decision which clearly influenced practice, both at the Patent Office and at the practitioner level, was that of *In Re Freeman*.[120] This decision was thereafter resolved by the USPTO into a

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[118] 35 USC: http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[119] Kasdan, Michael J., *Bright Ideas*, Winter 2000, Vol. 9, No. 3, How Courts Should Do Their Business Regarding Business Methods After State Street Bank v. Signature Financial Group, Inc., http://www.nysba.org/sections/ipl/kasdan.pdf., last visited 16 November 16, 2001.

[120] (1978) 197 USPQ 464

practice determination thereafter known as "Freeman Test". The Freeman Test tested patentability under Section 101 of 35 USC and asked two questions:

1. Does the claim either directly or indirectly recite an algorithm? and
2. If it does, does the claim wholly pre-empt such algorithm?

If the answers to both questions were in the affirmative, the claim was considered non-statutory.

3.2.3 THE BENSON BLUNDER

The US Patent Act's language, dating back to 1790, enumerated patentable subject matter in the following terms: "any new or useful art, machine, manufacture, or process of nature". In place of "art", the Giles-led commission recommended that Congress use the word "process" instead. This was no insignificant updating.

In the 1972 Benson decision[121], the computer-illiterate judges tried to deal with a program that converted decimal numbers into binary numbers. Doing its job as charged, the Court attempted to determine whether the patent seeker was attempting to win a patent, not only on the specific application of the underlying idea, but on the idea itself. In its analysis, the Court determined that the underlying idea was the program's algorithm, which it defined as "a procedure for solving a mathematical problem".[122] The Court rejected the patent, pointing out that granting patent protection to this "mathematical

[121] Gottschalk V. Benson, 409 U.S. 63 (1972), 409 U.S. 63, Gottschalk, Acting Commissioner Of Patents V. Benson Et Al., Certiorari To The United States Court Of Customs And Patent Appeals, available at http://caselaw.lp.findlaw.com/scripts/getcase.pl?court=us&vol=409&invol=63

[122] Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", available at http://www2.linuxjournal.com/articles/currents/014.html, last visited November 13, 2001.

algorithm" would be tantamount to granting a state-guaranteed monopoly on a scientific truth. Scientific truths are not subject to patent protection, the Court affirmed.[123]

The Benson decision paved the way for the patentability of virtually all software algorithms. Almost immediately, the lower courts (and subsequently, the Patent Office) interpreted the Benson decision to mean that only "mathematical algorithms", those that solve an equation for numerical purposes, are excluded from patentability. All other algorithms became subject to patent protection, even if they appeared to use mathematics. The key determining factor in an algorithm's patentability, the lower courts concluded, was whether the algorithm was intended to perform a numerical computation rather than control or supervise a practical process.[124]

"What's wrong with the Benson decision is immediately obvious to anyone with a modicum of computer literacy. As Turing proved in 1937, there is no defensible boundary that separates mathematical from non-mathematical algorithms. Such that the mathematical algorithms constitute a program developer's stock in trade of abstract concepts. On the contrary, the programmer's stock in trade consists of algorithms, most of which are used for purposes other than solving equations".[125]

"To restrict the abstract conceptual knowledge of programmers and software engineers to mathematical algorithms is not only theoretically indefensible, but flies in the face of everyday professional practice. To accomplish this, programmers use paper-and-pencil techniques such as

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[123] Ibid.
[124] Ibid.
[125] Ibid.

pseudo-code or flow charts, or programs that emulate these paper-and-pencil techniques".[126]

The US Supreme Court has held that mathematical algorithms should not be patentable insofar as they are merely abstract ideas[127]. This requirement has traditionally been referred to as the mathematical algorithm exception. Because Internet-business model patents involve computer programs they also involve mathematical algorithms. The mathematical algorithm exception can be traced back to even earlier US Supreme Court decisions that identify "laws of nature, natural phenomena, and abstract ideas" as categories of unpatentable subject matter. In response to these Supreme Court decisions, the Federal Circuit adopted the Freeman-Walter-Able test to identify unpatentable mathematical algorithms.[128] Following is a summary of the test:

First, the claims of a patent must be analyzed "to determine whether a mathematical algorithm is directly or indirectly cited. Next, if a mathematical algorithm is found, the claim as a whole is further analyzed to determine whether the algorithm is applied in any manner to physical elements or process steps, and if it is, it passes muster under section 101."[129]

In recent years, the CAFC (US) has taken several opportunities to chip away at the "physical elements or process" requirement of the Freeman-Walter-Able test[130]. This broadened the patentability of mathematical algorithms and

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[126] Ibid..

[127] Ibid., Parker v. Flook, 437 U.S. 584 (1978, Gottshalk v. Bensen, 409 U.S. 63 (1972). Cited in Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", available at http://www2.linuxjournal.com/articles/currents/014.html, last visited November 13, 2001.

[128] Ibid.

[129] In re Alappat, 33 F.3d 1526 (Fed.Cir) 1994. Cited in Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", available at http://www2.linuxjournal.com/articles/currents/014.html, last visited November 13, 2001.

[130] 33 F.3d at 1537-39., cited Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", available at http://www2.linuxjournal.com/articles/currents/014.html, last visited November 13, 2001.

set the stage for recent the said Circuit decisions that have placed drastic limitations on the mathematical algorithm exception.

3.2.4 THE BURGEONING LANDMARK: *STATE STREET*

At issue in the State Street case was a patent directed to a data processing system for implementing an investment structure identified by the proprietary name "Hub and Spoke," in which mutual funds (Spokes) pool their assets in an investment portfolio (Hub) organized as a partnership. This investment structure was designed to provide the administrator of a mutual fund with the advantageous combination of economies of scale in administering investments coupled with the tax advantages of a partnership.[131]

3.2.4.1 BACKGROUND: THE STATE STREET CASE

[131] Flores, Victor, of LaRiviere, Grubman & Payne, "Business Methods Without Computers: The New Patent Landscape", FACTS OF *State Street* case http://www.lgpatlaw.com/busmethart.html, last visited November 19, 2001.
A brief of the case: The patented system allowed an administrator to monitor and record the financial information flow and make all calculations necessary for maintaining a partner fund financial services configuration. In particular, the system provided means for a daily allocation of assets for two or more Spokes that are invested in the same Hub. It determined the percentage share that each Spoke maintained in the Hub, while taking into consideration daily changes both in the value of the Hub's investment securities and in the concomitant amount of each Spoke's assets. In determining daily changes, the system allowed for the allocation among the Spokes of the Hub's daily income, expenses and net realized and unrealized gain or loss, calculating each day's total investments based on the concept of a book capital account. This method enabled the determination of a true asset value of each Spoke and accurate calculation of allocation ratios between or among the Spokes. The system also tracked all the relevant data determined on a daily basis for the Hub and each Spoke so that aggregate year-end income, expenses and capital gain or loss could be determined for accounting and for tax purposes for the Hub and, as a result, for each publicly traded Spoke.

The business method exception[132] to patentable subject matter, as noted in the State Street decision, is generally understood to be derived from the holding in *Hotel Security Checking Co. v. Lorraine Co.*[133]

Hotel Security held that a method for maintaining restaurant records to prevent fraud by waiters was unpatentable. The rationale was that "A system of transacting business disconcerted from the means for carrying out the system is not an art (process)."[134]

Notwithstanding this stated rationale, *State Street* held that the business method exception to patentable subject matter was no longer valid; that business methods are subject "to the same legal requirements for patentability as applied to any other process or method."[135]

Central to its rationale was the fact that there was no judicial precedent to overrule. The CAFC explained that "the business method exception has never been invoked by this court to deem an invention unpatentable."[136] The CAFC stated that *Hotel Security* did not rely on the business method exception to strike the patent. Rather, the patent was invalid for lack of novelty and "invention," not because it was improper subject matter for patent.

Critical to this reasoning is the word "invention," which has been replaced with the legal requirement of "non-obviousness" in section 103 of the present patent statutes, based on the 1952 Patent Act. The CAFC in *State*

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[132] "Business Methods Without Computers: The New Patent Landscape", by Victor Flores, LaRiviere, Grubman & Payne, LLP, available at http://www.lgpatlaw.com/busmethart.html, last visited November 19, 2001.

[133] (2nd Cir. 1908) 160 F. 467., cited in "Business Methods Without Computers: The New Patent Landscape", by Victor Flores, LaRiviere, Grubman & Payne, LLP, available at http://www.lgpatlaw.com/busmethart.html, last visited November 19, 2001.

[134] Ibid.

[135] Ibid.

[136] Ibid.

Street clarified that, while seemingly applying the unpatentability of business methods in decisions in Maucorps and Meyer, the inventions there were rejected as being abstract ideas under the mathematical algorithm.[137]

Thus, the CAFC in its desire to lay to rest the "ill-conceived" business method exception based on "requirement for invention," concluded that since enactment of the 1952 Patent Act, business methods have not been subject to a special exception regarding patentable subject matter. Underscoring the Court's determination to eliminate the business method exception, the Court reaffirmed that it had "discarded the so-called "business method" exception..."[138] in *AT&T Corp. v. Excel Communications, Inc. et al.*[139]

3.2.4.2 THE IMPACT OF STATE STREET

"The [business method exception] is . . . an unwarranted encumbrance to the definition of statutory subject matter in section 101, that [should] be discarded as error-prone, redundant, and obsolete. . . . All of the _doing business' cases could have been decided using the clearer concepts of Title 35. Patentability does not turn on whether the claimed method does _business' instead of something else, but on whether the method, viewed as a whole, meets the requirements of patentability as set forth in Sections 102, 103, and 112 of the US Patent Act."[140]

In the burgeoning Internet economy, *State Street* has provided e-commerce companies with a method of protecting their Internet business

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[137] Ibid.

[138] http://www.lgpatlaw.com/busmethart.html visited 19 November 01, Business Methods Without Computers: The New Patent Landscape by Victor Flores , LaRiviere, Grubman & Payne, LLP

[139] For verbatim download and discussion, please visit: www.law.emory.edu/fedcircuit/apr99/98-1338.wp.html, last visited 12 June, 2002.

[140] http://www.lgpatlaw.com/busmethart.html visited 19 November 01, Business Methods Without Computers: The New Patent Landscape, by Victor Flores , LaRiviere, Grubman & Payne, LLP

method ideas that many had previously considered unpatentable. This larger question of whether courts will uphold many of these controversial patents as valid still remains unanswered.

While many of these criticisms are worthy, they do not mean that *State Street*, which was limited to allowing software and business methods as patentable subject matter, was wrong. Rather, the historical evolution of the treatment of both business methods and computer software show us that *State Street*'s determination that computer software and business methods, and hence computer-enabled business methods, are patent-eligible subject matter was not surprising. It is important to remember, however, that the *State Street* holding does not mean that all Internet business method patents are valid-only that business methods as a class are eligible for patent protection. The secondary question of whether each particular business method patent in question satisfies the other substantive requirements of the Patent Act must be determined on a case-by-case basis.

Thus, while *State Street* expanded the scope of eligible subject matter, it merely shifted the central validity inquiry away from subject matter to novelty, utility, non-obviousness, and enablement. The novelty and non-obviousness requirements ensure that the subject matter is indeed new and innovative and is not apparent, given the state of the art. The enablement requirement seeks to distinguish an idea from the embodiment of an idea by requiring that the inventor actually allow the public to benefit by adequately disclosing the details of the invention.

Only future litigation challenging the scope of business method patents will help shape the standards to be applied to patent claims involving this new subject matter and determine the role that these Internet business method patents will play in e-commerce.

Two of the main functions of these statutory requirements-restricting the ownership of ideas themselves and controlling the broad scope of patents squarely address the central concerns of many of *State Street*'s critics. Applying these requirements to the subject matter of Internet business methods is the challenge to courts in the post-*State Street* era.[141]

3.2.5 AT & T v. EXCEL COMM. INC.

In *AT&T*[142] involved were claims directed to a "method" or process embodied in an algorithm for billing interexchange telephone calls. The claims recited very little with respect to physical structure or transformations. One claim at issue recited "a method for use in a telecommunications system" comprising the steps of "generating a message record" and "including, in said message record, a primary inter-exchange carrier (PIC)." Although the claim recited structure in relation to the general system environment (originating and terminating subscribers and an inter-exchange carrier), no hardware or software components were recited for execution or involvement in the method. Furthermore, the only real "result" recited in the claimed method was insertion of a special data value into a PIC data field.

Given these more challenging facts, the Federal Circuit in *AT&T* attempted to harmonize case law that spanned a number of years. In the end, the court held that *AT&T*'s methods were patentable subject matter under §101[143]. The court reaffirmed the analysis applied in *State Street*, which looked

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[141] Kasdan, Michael J., "How Courts Should Do Their Business Regarding Business Methods After State Street Bank v. Signature Financial Group, Inc." Bright Ideas, Winter 2000, Vol. 9, No. 3, http://www.nysba.org/sections/ipl/kasdan.pdf., last visited 16 November 16, 2001.

[142] For verbatim download and discussion, please visit: www.law.emory.edu/fedcircuit/apr99/98-1338.wp.html, last visited 12 June, 2002

[143] http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

to "a practical application" that produced "a useful, concrete, and tangible result," and added that the claims must not preempt use of the general principles of the algorithm and "other applications" of those principles. The court explicitly rejected the use of an analysis that focused solely on whether or not physical structures or physical transformations were recited. Also, importantly, the court was "generous with respect to what constituted a "useful result": it decided that a mere PIC data value was a useful result since it could be used to facilitate telephone call billing."[144]

In summary, *AT&T* "went further than *State Street* in both its exposition of 35 USC § 101 and its application to a more abstract set of facts. *AT&T* makes clear that *State Street* really meant what it said, and more: algorithms are patentable as long as they are properly claimed in the context of a practical application that produces a useful, concrete, and tangible result, in such a way as to not preempt their use generally and in other applications".[145]

From these decisions, it is clear that patent claims for inventions embodied in software can be drafted more broadly for better patent protection with confidence that they will pass muster under 35 USC § 101. Thus, to the benefit of those who invest in patents for software-based products and services, the Federal Circuit continues to develop a view of 35 USC § 101 that is more "responsive to the needs of the modern world."

3.2.6 THE AMAZON.COM CONTROVERSY - PROBLEMS OF OBVIOUSNESS UNDER 35 U.S.C. § 103

[144] Oskorep, John J., "Anything Under the Sun" Looks Bright For Patenting —Especially Software", available at www.gcwf.com/articles/ipu/ipu_sum99_6.html
[145] Ibid

35 U.S.C. § 103(a) (Conditions for patentability; non-obvious subject matter)[146] states: "A patent may not be obtained ...if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."[147]

Amazon.com v. Barnesandnoble.com, 239 F.3d 1343 (Fed. Cir. 2001) was one of the first court decisions involving an Internet business method patent. This case illustrates that an Internet business method patent may, like any other patent, be found invalid based on obviousness grounds.[148] The case involved a patent infringement suit brought by Amazon.com against Barnesandnoble.com (BN), for BN's infringement of Amazon's "1-click" system in its "Express Lane."[149] Although the district court granted Amazon's motion for a preliminary injunction, this ruling has since been vacated and the case remanded on appeal.[150] The appellate court found that, although Amazon demonstrated a likelihood of infringement by BN, BN had raised substantial questions as to the validity of the Amazon patent that needed to be addressed before BN could be found to have infringed.[151] Thus, the appellate court determined that there was insufficient ground for granting the preliminary injunction and remanded the case for further review.

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[146] http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

[147] *"The Internet Business Method Patent"*, under sub-heading: "III. Discussion A. 35 U.S.C. § 101 - Patentable Subject Matter", last visited July 04, 2002, available at http://www.law.cornell.edu/bulletin/sp/bizmethod/disc.htm

[148] Amazon.com v. Barnesandnoble.com, 239 F.3d 1343, 1363 (Fed. Cir. 2001).

[149] Amazon.com v. Barnesandnoble.com, 239 F.3d 1343, 1363 (Fed. Cir. 2001). Cited in http://www.law.cornell.edu/bulletin/sp/bizmethod/disc.htm

[150] *Ibid.*, 239 F.3d at 1366., Cited in http://www.law.cornell.edu/bulletin/sp/bizmethod/disc.htm

[151] *Ibid.*, 239 F.3d.

Amazon's patent was on a "1-click" online ordering system, which stored a customer's identity, credit card, and billing/shipping information on the seller's website, ready for a later retrieval.[152] The goal of the patent was to reduce the number of interactions between a consumer and server system, while the consumer was placing an order. Specifically, the patent sought to reduce the amount of sensitive information (e.g. credit card information) transmitted and to make the consumer's online shopping experience easier and more convenient. BN had a similar ordering system, which it called the "Express Lane."[153] The federal appellate court affirmed the district court's conclusion that Amazon demonstrated likely literal infringement of at least four independent claims in their patent.[154] However, the appellate court also found that the district court erred in rejecting BN's defense that the Amazon patent was invalid on grounds of obviousness.[155] BN provided several examples of prior art, which the appellate court concluded were sufficient to raise substantial questions of validity that should be resolved at trial.[156] This case was being considered on remand as of February, 2001.

On February 14, 2001, the Federal Circuit decided a case involving perhaps the most-publicized business method patent, in *Amazon.com, Inc. v. Barnesandnoble.com, Inc.* The PTO granted a patent to *Amazon.com, Inc.* in 1999 for a "One-Click" or "single action" online ordering system, in which an item is ordered without using the "shopping cart" ordering model. The patent was severely criticized after Amazon.com obtained a preliminary injunction to prevent Barnesandnoble.com from using a similar online ordering system. In its February 14 opinion, however, the Federal Circuit vacated the injunction. The issue was whether Amazon.com had demonstrated the reasonable likelihood of success on the merits necessary for a preliminary injunction. The court

[152] *Ibid.*, 239 F.3d at 1347.
[153] *Ibid.*, 239 F.3d at 1349.
[154] *Ibid.*, 239 F.3d at 1358.
[155] *Ibid.*

examined five prior art items cited by Barnesandnoble.com that apparently were not considered by the PTO and concluded substantial questions were raised as to the novelty and nonobviousness of the patent, making a preliminary injunction inappropriate. One has no opinion on whether the Amazon.com's "1-Click" patent is valid or invalid, but the Federal Circuit decision serves as a reminder that PTO and lower court errors with respect to business method patents, as with other patents, can be corrected.[157]

In other words, argue critics, the US is using the mechanism of the WTO, along with the World Intellectual Property Organisation (WIPO), to hijack current harmonisation initiatives to forcefully export its IP system to the rest of the world.

3.3 AN EPO's PERSPECPECTIVE: PENSION BENEFIT SYSTEMS

The EPO is following the interpretation of the exclusion from the patentability of scheme, rules and methods for doing business according to Art. 52 (2) of the European Patent Convention (EPC) as outlined by the Board of Appeal in its decision T 0931/95[158] Improved Pension Benefit Systems. The patent application in that case was directed to a method and an apparatus for controlling a pension benefits program. The Board rejected the method claim

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[156] *Ibid.*, 239 F.3d at 1360.

[157] http://www.ipo.org/BusinessMethodTestimony.htm visited 16 November 01 , Summary of Statement, BY Ronald E. Myrick, President, Intellectual Property Owners Association (IPO), Before the House Judiciary Subcommittee, On Courts, the Internet, and Intellectual Property, April 4, 2001

[158] http://petition.eurolinux.org/index_html?LANG=en
http://www.germanpatent.de/News/200108_Business_Method_Patents.htm, visited 22 November 01
EPO not to search "Business Method Patents

on the basis that it was a method only involving economic concepts and practices of doing business and was therefore not an invention within the meaning of the EPC. The Board stated that "a feature of the method which concerns the use of technical means for a purely non-technical purpose and/or for processing purely non-technical information does not necessarily confer a technical character to such a method". Thus, the Board argued, the use of a general-purpose computer programmed to implement the method does not make the method patentable.

The Board did, however, state that the apparatus claim is not necessarily excluded from patentability if the computer system is suitably programmed for use in a particular field, even if that is the field of business and economy. However, the Board went on to reject this claim since the improvement envisaged by the invention according to the application is an "essentially economic one...which cannot contribute to inventive step".

3.3.1 CONFLICT BETWEEN EPO AND NATIONAL PATENT SYSTEMS

The existence of two different systems of granting patents in most European countries (the EPO system and the national patent system) inevitably leads to different interpretations of the same legal provisions – even if they are identically worded. As yet there is no "single" legal body – similar to the US CAFC - that can be called upon to resolve the different interpretations of the law. It currently appears that whereas the EPO may reject patents directed to business methods, the German system may well allow such patents. As far as can be seen, the UK Patent Office is also reluctant to grant protection to business methods. The Merrill Lynch decision of the UK Court of Appeal stated

that for a conventional computer system executing a novel program to be patentable, there must be a technical advance on the prior art in the form of a new result.[159]

Faced with the Court's ruling, patent attorneys simply bypassed the problem by framing the language of their patent applications so that software inventions seemed like hardware devices. For example, in July 1973, *AT&T* filed for a patent on the fundamental technique used by the Unix operating system to enforce computer security (this eventually came to be known as the SUID Patent). But instead of describing the invention as a software code, the invention was projected with a circuit diagram containing 11 chips connected by more than 40 wires.[160]

As a result of all the publicity and call for change, the USPTO on 30 March 2000 announced that it was changing its evaluation procedures to ensure that e-commerce patents cover true innovations. This is a significant step in answering the critics and ensuring that the patent system is keeping pace with change.[161]

Finally, the problems of the PTO are compounded on an international level. With the coming into force of the TRIPS Agreement all countries in the world must have the capacity to accept and process patent applications and to

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[159] *http://petition.eurolinux.org/index_html?LANG=en*
http://www.germanpatent.de/News/200108_Business_Method_Patents.htm 22 nov 01 EPO not to search "Business Method Patents" In a press release[1] dated 13 August 2001, the European Patent Office (EPO)

[160] The patent was granted in January 1979 but was dedicated to the public domain just ten months later. Garfinkel, Simson L., Patently Absurd, How could the Patent Office ever grant a patent to Compton'son its claim to have invented multimedia? This is how. Simson L. Garfinkel takes us inside the Patent Office
vaialable at http://www.wired.com/wired/archive/2.07/patents_pr.html visited 23 November 23, 2001.

[161] Master Of Laws , Legal Issues And The Internet , LWN 117 , ASSIGNMENT, Patenting And Electronic Commerce - The Impact of The *State Street Bank* CASE , 8 June 2000)

grant *effective* patent protection. A vivid illustration of the even greater problem in countries new to the patent system was a devastatingly critical front page article which appeared in the July 30 edition of The Washington Post. The article, entitled "Patent Claim Ferments Russian Controversy", described the Russian patent office's issuance of a patent covering the design of glass bottles – a technique known for millennia.12 The problems of Russia mirror similar problems in other large countries representing important markets for technology like India, Brazil, Indonesia, and Argentina.

3.3.2 EUROPEAN PATENT OFFICE: A MODERATOR OR REVOLUTIONARY

Methods of doing business are, according to Article 52(2) EPC, not to be considered to be inventions[162]. Although not explicitly stated, this exclusion is also considered to apply to a wide range of subject-matters which, while not literally methods of doing business, share the same quality of being concerned more with interpersonal, societal and financial relationships, than with the stuff of engineering - thus for example, valuation of assets, advertising, teaching, choosing among candidates for a job, etc.. The term "business methods" has become a generally used shorthand for all of these areas.

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http://www.lawnow.com/Products/LegalRegArticles/Regulation_Article_ASSIGN.DOC. last visited 17 November 2001,

[162] last visited 28 July 2002 http://www.uspto.gov/web/tws/appendix6.pdf
APPENDIX 6: *"Examination of "business method" applications (EPO)"*
Munich, 19.05.00
Subject : Examination of "business method" applications. Drawn up by : President of the European Patent Office. Addressees : The Trilateral Offices (for information)
Examination of "business method" applications.
Cover note:
"While the EPO did not take part in the comparative study, the following paper is provided to clarify its views on examination to promote further common understanding in this area.

Claims for business methods can be divided into three groups: (1) claims for a method of doing business in abstract, i.e. not specifying any apparatus used in carrying out the method; (2) claims which specify computers, computer networks or other conventional programmable digital apparatus for carrying out at least some of the steps of the business method ("computer-implemented business methods"); (3) claims which specify other apparatus (perhaps in addition to computers) e.g. mobile telephones. In the great majority of applications currently pending what is described would fall in the second of these groups. Thus while initial claims may sometimes fall in the first category, the applicant nearly always has the possibility to amend them to specify computer means for carrying out at least part of the method. Claims which fall in the third group are rare but by no means unheard of.

The following approaches to examination are to be applied in each of these cases:

(1) Claims to abstract business methods should be rejected on the grounds that they are excluded by Articles 52(2) and (3) EPC, since they are methods of doing business "as such".

(2) Claims for computer-implemented business methods should be treated in exactly the same way as any other computer-implemented invention (see below).

(3) Claims for other implementations of business methods should be treated using the same scheme for examination as for computer implementations.[163]

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[163] Ibid. see note 162 "Notes:
To (1): It would be possible to argue by analogy with the discussion of "programs for computers" in T1173/97 (OJ 1999, 609) that a claim directed to an abstract business method itself is not necessarily for a business method "as such". However, the reasoning in that decision was very special, and relied on the intimate relationship between program and an undeniably technical apparatus, the computer. Hence it was possible to argue that programs, even in abstract, can show a "technical effect". No such reasoning would appear to be applicable to abstract business methods.
To (2): This is in line with the "Sohei" decision T769/92 (OJ 1995, 525), in which the claim is for a data processing method used in a business context. It also enables us to have a coherent policy which is applicable to all the areas given in the list of Article 52(2) EPC (and the equivalent in PCT). Simply, as soon as a claim is for a computer implementation of an

The same approaches should be applied for PCT Chapter II, whereby (1) would lead to non-examination as to novelty, inventive step and industrial applicability according to Article 34(4)(a)(i) and Rule 67 PCT.

3.4 AUSTARLIA: ANOTHER DIMENSION

The guidelines adopted by the Australian patent Office for assessing computer program related inventions, in general and business methods inventions, in particular were as follows:

1. That the patentability of method or process claims should be assessed by the two part Freeman Test as developed in the US;
2. That "means for....." apparatus claims should be regarded as essentially the same as the corresponding method or process claim and should be assessed in the same way;
3. That there should be no change in policy for other types of apparatus claims such as computers capable of being programmed or programs recorded on a medium and characterised solely by the program itself. Such claims would be rejected as not being novel; and
4. That any claim to a program *per se* should continue to be refused.

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innovation which relates to any of those areas (e.g. games, aesthetic creations, presentations of information), it is to be examined according to the scheme for computer-implemented inventions.
To (3): It is arguable that since the scheme for examining computer-implemented inventions is based on BoA decisions (in particular T1173/97) concerned with that particular field, another approach could or should be used for "non-computer implementations", in particular the traditional approach of rejecting claims evincing no "technical contribution to the art" under Article 52(2) EPC. However, this would lead to confusion and undoubtedly also to accusations of lack of consistency from applicants. A change in approach in the course of the examination of a case should particularly be avoided. As noted above, cases falling in this group are relatively rare, and it would seem unprofitable and inadvisable to introduce a special examination scheme for them".

And in furtherance of strengthening such "comprehensive overhaul", the Act[164] extends the prior art base to include not only documentary publications from all the world, but also public oral disclosures and actions anywhere in the world. Previously, the relevant public oral disclosures and actions were limited to those in Australia. Thus, an *"absolute novelty"* test will replace the "relative novelty" test[165].

"In determining whether a new idea is obvious, combinations of more than one piece of relevant information will now be allowable, on the condition that all such information existed before the priority date and it would have been obvious to the skilled reader to combine the elements of that prior art information. At present different documents or other forms of knowledge can only be combined if the skilled reader would treat them as a single source of information, which is very difficult to show. Australian Courts have never really been at ease with applying the present test for inventive steps. The newly allowable mosaicing of information would appear similar to combination of prior art items permitted under the EPC in determing matters of obviousness"[166].

"Intereastingly", the writer continues "an amendment to provide that the information which may be used to test obviousness includes common general knowledge in the relevant field any where in the world has been deleted. The common general knowledge remains limited to that which existed in Australia before the priority date, limiting the categories of expert witness who might be heard before the Courts in determining such issues of validity"[167].

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[164] The Patents Amendment Act 2001, Australia.
available at http://scaletext.law.gov.au/html/comact/11/6457/top.htm, last visited July 14, 2002
[165] An article published in The CIPA (Chartered Institute of Patents Agents) Journal, October 2001, vol. 30 No. 10, *"Raising the Bar in Australia: The Patents Amendment Act 2001"* by Christopher Bird, under subheading "Raising the Bar (1) – Comparison of the invention against publicly available information".
[166] Ibid.
[167] Ibid..

These new tests are broadly consistent with international standards. Importantly-and not surprisingly-changes will not apply to existing patents or applications filed before the amendments commence, the writer does herein pause[168].

"Presently", comments the writer, "the Australian Patent Office must grant a patent request if it considers that there is 'no lawful ground of objection'. An application can only be refused when it is manifestly clear that a valid patent can not be granted. Giving the applicant the benefit of the doubt in this way is out of step with state practice. The provisions of the new Act maintain this benefit of the doubts on other grounds, but shift to 'balance of probabilties' approach to prior art objections during examination. In other words, an applicants must possibility demonstrate that the application clears the hurdles in relation to novelty and obviousness, this tougher test making it more likely that granted patents are valid"[169].

3.4.1 AUSTRALIAN PERSPECTIVE

An Australian Court has considered for the first time the US decision in *State Street Bank v Signature Financial Group* (1998), which held that there was no exception to preclude the granting of patents for business methods. The Australian Federal Court in *Welcome Real-Time v Catuity Inc*,[170] found for the patentee on validity and infringement in relation to a patent for processing

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[168] Ibid..

[169] An article published in The CIPA (Chartered Institute of Patents Agents) Journal, October 2001, vol. 30 No. 10, *"Raising the Bar in Australia: The Patents Amendment Act 2001"* by Christopher Bird, under subheading "Raising the Bar (2) – A more stringent standard".

[170] For detail material please visit:
http://www.austlii.edu.au/cgi-bin/disp.pl/au/cases/cth/federal%5fct/2001/785.html?query=%7e+catuity
last visited September 25, 2001, *Welcome Real-Time SA v Catuity Inc* (No 2) [2001] FCA 785 (24 July 2001), Last Updated: 24 July 2001

information on a smart card to maintain a loyalty program. The Court considered the State Street decision to be persuasive and said the social needs the law has to serve in the US are the same as in Australia.

In considering arguments that the invention did not relate to patentable subject matter according to the concept of 'manner of manufacture' developed under Australian law the Court reviewed the relevant Australian and UK decisions. The High Court decision in *National Research Development Corporation v Commissioner of Patents ("NRDC")* was considered to be the leading authority and has been described as being a watershed decision that changed not only the direction of case law in Australia but also that in the UK.

The decision has been held to require a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour, and cautions against any attempt to circumscribe what constitutes a manner of manufacture. The principles established by NRDC were applied in the Federal Court's decisions in *International Business Machines Corporation v Commissioner of Patents* ("*IBM*")[171] for a curve display method *and CCOM Pty Ltd v Jiejing Pty Ltd* ("*CCOM*")[172] for a word processing system.[173]

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[171] International Business Machines Corporation And: Patrick Anselm Smith, Commissioner Of Patents No. G40 of 1990 FED No. 811 Patents (1992) AIPC 90-853 (1991) 105 ALR 388, (1991) 22 IPR 417 (1991) 33 FCR 218, Federal Court of Australia
For detail materials, please visit: http://www.austlii.edu.au/au/cases/cth/federal%5fct/unrep5261.html

[172] CCOM Pty Ltd And Ronald Howard Thomas V. Jiejing Pty Ltd, Paravet Instruments Pty Ltd, Jeffrey John Yates And Eric Russell Chappell No. QG13 of 1994 FED No. 396/94 Patents (1994) 122 ALR 417, (1994) AIPC 91-079 (1994) 51 FCR 260. For detail materials, please visit: http://www.austlii.edu.au/au/cases/cth/federal_ct/unrep6887.html, last visited September 12, 2001

[173] for detail discussion, please visit: Australia - Patent Protection for Business Methods http://www.ladas.com/BULLETINS/2002/0202Bulletin/AustraliaBusinessMethods.html Last visited July 3, 2002 :: As a defense to a charge of infringement, the defendants argued that such a claim did not define a patentable invention under the Australian Patent Statute. The Australian definition of an invention is that the invention must be a "manner of manufacture" as

The invention was summarised as being the ability to dynamically store on a card each merchant's loyalty program in a separate record of a file referred to as a 'behaviour file'. The Court considered the claimed method produced an artificial state of affairs in that cards could be issued making available to consumers many different loyalty programs of different traders as well as different programs offered by the same trader. This was considered not to be just an abstract idea or method of calculation. The result was also considered to be beneficial in a field of economic endeavour, namely retail trading, because it enabled many traders (including small traders) to use loyalty programs and thereby compete more effectively for business.

The said court felt that the patent did not relate to a business method, in the sense of a particular method or scheme for carrying on a business. A number of examples were given as to what the Court felt was a business method in this sense and included a manufacturer appointing wholesalers to deal with particular categories of retailers rather than all retailers in particular geographical areas. Another example was Henry Ford's idea of stipulating that suppliers deliver goods in packing cases with timbers of particular dimension which could then be used for the floor boards in the Model T. The Court considered that it was unable to distinguish the present case from the *IBM* and *CCOM* decisions.

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set out in the English Statute of Monopolies if 1623. The court noted that in National Research and Development Corporation v. Commissioner of Patents the High Court of Australia had stated that:

> the point is that a process, to fall within the limits of patentability which the context of the Statute of Monopolies has satisfied, must be one that offers some advantage which is material in the sense that the process belongs to a useful art as distinct from a fine art - that its value to the country is in the field of economic endeavour.

This decision had been built upon by the Full Court in CCOM Pty Ltd. v. Jieing Pty Ltd, a case about a patent relating to a Chinese language word processor, where it had been stated,

> The NRDC case ... requires a mode or manner of achieving an end result which is an artificially created state of affairs of utility in the field of economic endeavour.

In finding the State Street decision as persuasive, the Court felt that not only were the social needs in the US and Australia the same, but that both countries also had similar commercial and technological environments and that the law had to strike a balance between on the one hand the encouragement of true innovation by the grant of monopoly and, on the other, freedom of competition. The Court also briefly considered arguments that the invention could be considered as 'generally inconvenient' under the concept of 'manner of manufacture'. The arguments were rejected because it was considered that if an invention satisfies the patentability requirements it can hardly be a complaint that others in the relevant field will be restricted in their trade because they cannot lawfully infringe the patent. It was considered that the whole purpose of patent law is the granting of monopoly.

The decision is important in that it confirms once again the approval of software patents given in the IBM and CCOM decisions, and also effectively sanctions the Australian Patent Office practice of granting patents to business method processes, provided the patent is restricted to a method, means or system to put the business method into effect which gives rise to an 'artificially created state of affairs'[174]

The next development which has stirred a lot of concern amongst the Patent Office, legal practitioners (in IPR) and the business houses within Australia is the promulgation of Patents Amendment Act 2001[175] in Australia.

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[174] For detail material please visit: http://www.austlii.edu.au/cgi-bin/disp.pl/au/cases/cth/federal%5fct/2001/785.html?query=%7e+catuity last visited September 25, 2001, Welcome Real-Time v Catuity Inc, May 17, 2001, Case Comment – Australia, Business Method Patents in Australia, This piece first appeared in , July 24, 2001

[175] came into force April 1, 2002. For details of the provisions please visit: http://scaletext.law.gov.au/html/comact/11/6457/top.htm, last visited July 14, 2002

To some this development shows a "comprehensive overhaul"[176] of intellectual property law in respect of patent. They reason out this as due to number of factors, not least a growing awareness amongst policy makers of the importance of IP rights to Australian industry and the "continuing global push for the harmonisation of patent laws"[177].

Patents for methods of doing business have existed in small numbers at least since the early 1980's, but only in the mid- 90's did they suddenly begin to loom large in the economy. It was then that electronic commerce created a new arena for traditional business practices and several patents were granted that appeared to give exclusivity for such practices to some Web-only companies[178]. As people sat up and took notice of the trend, some did not like what they saw.

Coming back to the already discussed Australian initiatives (by bringing in Patents Amendment Act 2001), "significant differences will still remain. Modified examination will still be option for those seeking patent protection in Australia. .... What is clear is that that the changes represent a major reform of patent law in this country....."[179].

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[176] *"Raising the Bar in Australia: The Patents Amendment Act 2001"* by Christopher Bird, an article published in The CIPA (Chartered Institute of Patents Agents) Journal, October 2001, vol. 30 No. 10

[177] Ibid..

[178] There are number of reasons why some companies are reluctant to file patent application for business method inventions. For example, a company may prefer to keep its business models secret. This is fine providing secrecy can be ensured but in many cases, especially where their turnover of employees, it can not and once a secret escapes there may be nothing to prevent adoption of the model by other companies. A patent can provide protection not only against direct copying but also against another company using the patented invention even where they came up with the idea independently.

[179] An article published in The CIPA (Chartered Institute of Patents Agents) Journal, October 2001, vol. 30 No. 10, *"Raising the Bar in Australia: The Patents Amendment Act 2001"* by Christopher Bird, under subheading "Raising the Bar (2) – A more stringent standard".

3.5 AN INDIAN SCENARIO

The period when software was making its presence felt more or less coincided with a transitional period in patent law in India when the former 1911 Patents Act was about to be repealed and replaced by a "new" law. Thus, despite every indication that new technology was pointing in a diagonally opposite direction, the narrow views of the 1911 Act were carried forward to and perpetuated in the 1970 legislation.

Thus, despite every indication that new technology was pointing in a diagonally opposite direction, the narrow views of the 1911 Act were carried forward to and perpetuated in the 1970 legislation. "Ingrained and imbued with the conviction that no method could be an invention unless it resulted in something dimensionable, something that could be measured in physical terms, the legislators were just unable to bring themselves to consider the possibility – let alone accept – that methods which did not fit the stereotype of their mindset could be patentable. To ensure that only familiar conforming methods and processes were candidates for patents, the framers of India's patents law of 1970 introduced into the new law specific prohibitions on the patenting of certain subject matter. The result was to construe an already narrow view of what qualified as patentable subject matter even more restrictedly. This thinking has continued to be applied to this day"[180].

In fact the new definition may create difficulties for interpreting other terms. In Section 25(1)(e) obvious and inventive step are treated as two separate grounds to be established in case of opposition. As such the present definition of "inventive step" runs counter to our present understanding. The term "obvious" has not yet been subjected to any judicial interpretation in India. The US courts in a number of cases interpreted the term and it is different from

inventive step, as we understand in India. The TRIPS Agreement Note 5 however helps us to treat the terms "inventive step" and "capable of industrial application" synonymous with the terms "non-obvious" and "useful" respectively. In this situation it may be better for us to maintain the status quo.[181]

The width of the proposed definition will not be lost on most persons and surely not on IP practitioners, even those who have practiced only moderately, in this area of law. Not only does the proposed definition remove the emphasis formerly laid on the "resultant manufacture" aspect, it has widened the scope of the term "invention" so that any method which involves an inventive step and is capable of industrial application can now qualify as invention. This "represents a great step forward in positive appreciation", as one of those Indian IP practitioners argues[182]. "In addition", he continues, "to facilitate the proper construction of the altered definition, the new Bill (now an Act in itself) also proposes the inclusion of definitions for the "inventive step"[183] and "capable of industrial application":

> *"inventive step" means a feature that makes the invention not obvious to a person skilled in the art.*
>
> *"capable of industrial application", in relation to an invention, means that the invention is capable of being made or used in any kind of industry.*

These definitions are more progressive than even those in the current Australian and US laws. The introduction thereof is precisely the shot in the arm which India needed for it to be considered by the rest of the world as really

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[180] Francis S. Groser, Esq. of Groser & Groser, a *patented* class by himself with forty-five plus years of distinguished practice in IPR in India.
[181] Last visited November 13, 2001 www.ebc-india.com/lawyer/articles2001v1a2.htm, "*The Patents (Second Amendment) Bill, 1999 - An Analysis*" , by Dr N.S. Gopalakrishnan
[182] see note 180
[183] Section 2(1)(ja) the new Patents Act of 2002, India (not in force as yet).

doing something to improve its outlook on patents. Unfortunately, the euphoric bubble that the proposed definition of "invention"[184] generates is deflated by the maintenance of conservative Indian views with respect to patentability. What is "hard to appreciate is the fact that having introduced a very liberal definition of "invention", the proposed law illogically takes several steps backward"[185] in declaring a number of inventions to be unpatentable, as some alleges. Among the inventions to be excluded from the sphere of patentability in India are computer programs and business methods.

3.6 PATENTABILITY OF BUSINESS PATENTS IN JAPAN

3.6.1. MUST BE AN INVENTION

Japanese Patent law[186] provides a legal framework in which patent rights are granted to offer protection to inventions. While in the many fields of technology, there is little incidence of doubt arising as to whether an idea constitutes an invention or not however, in software related inventions, principally inventions related to business models, there are considerably more.[187]

Based on Article 2[188] of the Patent Law, the Japanese Patent Office has made publicly available their examination guideline[189] and therein is stated the

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[184] Section 2(1)(j) the new Patents Act of 2002, India (not in force as yet).
[185] Ibid. F.S. Groser, Esq.
[186] Japan Patent Law, Law No. 121 Of April 13, 1959 As Amended By Law No. 220 Of December 22, 1999, Entry Into Force: January 6, 2001 , available at http://www.jpo.go.jp/shoukaie/patent.htm
[187] For more discussion:
(www.furutani.co.jp/office/ronbuss/BPBasic_e.html, dated 20 September 01
Business Patent (Business Method Patent)
@- Beta Version -(C)1999 Hideo FURUTANI, Japanese)
[188] for detail provision of the Japan Patent Law, please visit: http://www.jpo.go.jp/shoukaie/patent.htm, Japan Patent Law, Law No. 121 of April 13, 1959 as

degree in which a software related invention should be a creative work generated from technological thought employing natural laws. As business model inventions are considered to be in the same class as software related inventions, the statements concerning the examination policies made in the guideline for examination[190] are applicable.

According to these examination policies, ideas that exclusively use laws other than natural laws should not be considered as being eligible for patenting. For example, in the case shown below which depicts the middleman intervening in sales for airline tickets, the laws at work here are exclusively economic laws and as such, would not be eligible for patenting.

Therefore, "as business methods and business systems themselves are not inventions, the need to investigate their degree of novelty and inventive step is negated and the patent will not be granted."[191]

However, if computer use is given as a prerequisite in the above case, pursuant to the operation guidelines for examination, such a system would constitute an invention. Accordingly, business models that make use of the internet can be covered by patents.[192]

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amended by Law No. 220 of December 22, 1999, entry into force: January 6, 2001. Last visited July 01, 2002.

[189] http://www.jpo-miti.go.jp/info/sisin.htm

[190] Ibid. as appeared in footnote 1 " The examination guidelines have no legal binding power however it is an important document as it embodies the practices employed by the Patent Office in their examination".

[191] Ibid.

[192] Ibid. note: "The operation guideline for examination stipulates that it is not sufficient to simply use a computer, rather, the way in which it is used must be stated. It has been reported that the Japanese Patent Office is considering amending the operation guideline for examination and it is not certain whether there will be an alteration to the interpretation to the clause, "technological thought employing natural laws." It is thought however that they will release new operation guideline for examination in the near future".

The following system in which the internet is used for middleman sales of airline tickets would be subject to patent protection as an invention.[193] Although it satisfies the condition of being an invention, it does not provided novelty and inventive step and as such, could not be patented.

3.6.2. NOVELTY

Pursuant to Article 29 of the Japanese Patent Law, occurrence of any of the following would result in a non-novelty ruling in Japan:

> *1. Inventions publicly known both in Japan or foreign countries prior to application (Article 29, Paragraph 1, Item 1 of the Patent Law)*
>
> *2. Inventions publicly practiced both in Japan or foreign countries prior to application (Article 29, Paragraph 1, Item 2)*
>
> *3. Both in Japan or foreign countries, inventions stated in any publication or inventions that may be publicly used by means of electronic transmission circuitry (Article 29, Paragraph 1, Item 3)*

If the applicant or inventor himself/herself lost status of novelty due to making a written announcement, Article 30 of the Patent Law provides for exceptional relief in granting him non-loss of novelty status if he lodges the application within six months. It is stressed however that excessive reliance on this provision is dangerous and as a general rule, it is preferable to lodge the application prior to making announcements.

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[193] Ibid. note" In the case of ideas that are related to ordinary technologies, even if, computer or internet use is not presupposed, many do satisfy the condition of "technological thought employing natural laws." Note that if computer or internet usage is presupposed in the business

3.6.3. INVENTIVE STEP

Even if it is publicly known, a business model would be accredited with being novel if it uses the internet. However just simply using the internet does not imply that it is provided with inventive step and a patent would not be granted. The operation guideline for examination states that use of a computer to carry out already publicly known human acts does not represent inventive step. For example, if the pure business model which were publicly known, it is highly likely that the model would be judged as not having sufficient inventive step.

If a business model is enacted using the internet, and if it incorporates some kind of ingenious contrivance, it is probable that it could boast inventive step. Naturally, if the model itself is new, it would be provided with inventive step.

As mentioned above, if the business model discussed above which is publicly known, then the model discussed above would be likely to be rejected on the grounds that it is lacking in inventive step. However, if the web page is set up with a place for insertion of a credit card number which may be used to purchase one of the sales alternatives offered by the seller, business model would be likely to be seen as exhibiting inventive step.[194]

From the foregoing discussion, it can probably construed that "in the US so long as it is technically implemented then the invention does not have to have a technical contribution. In Europe, on the other hand, you have to have a technical justification for the invention: that, for instance, it speeds things up,

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model related ideas, generally the clause, "technological thought employing natural laws" could not be satisfied".

[194] Ibid.

provides a bridge, or manipulates data with less steps than were previously necessary and so on."[195]

From the foregoing discussion, it can probably construed that "in the US so long as it is technically implemented then the invention does not have to have a technical contribution. In Europe, on the other hand, you have to have a technical justification for the invention: that, for instance, it speeds things up, provides a bridge, or manipulates data with less steps than were previously necessary and so on."[196]

3.7. THE US INITIATIVE TO BREAK THE JINX

Various PTO search resources are relied on to augment the traditional review of published U.S. and non-U.S. patent literature during examination of business method patent applications. These search resources are part of a mandatory search specified for all applications in Class 705. The initiative was also to include a greater effort to obtain industry feedback on these search resources.

Additionally among the elements of initiative were plans to continue training partnerships with industry associations and corporate sponsors, and to pursue business practice specialists to serve as a resource for Examiners on alleged common or well known industry practices. Sponsors participating in training partnerships with the PTO in the fiscal year 2001 included the

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[195] see also for details www.ipmatters.net/webcaught/chapter1.html
Sunday, October 28, 2001 Searched this site:
Patents and the web: friends or foes? By Richard Poynder, freelance journalist.

[196] see also for details www.ipmatters.net/webcaught/chapter1.html
Sunday, October 28, 2001 Searched this site:
Patents and the web: friends or foes? By Richard Poynder, freelance journalist.

NASDAQ stock exchange, the American Bankers Association, and the American Council of Life Insurance. More sponsors to provide Examiner training in certain areas are being solicited.

Finally, the USPTO has revised the Examination guidelines for Computer-Related Inventions and the relevant training examples in light of the *State Street Bank* and *AT&T* decisions. It has also instituted a second-level of review of all allowed applications in Class 705, expanded the sampling size for quality review of allowed applications, and initiated an in-process review of Office Actions (in India, it is termed as "Examination Report").

Public concern that patents on business methods could be improperly granted also brought about a legislative reaction. H.R. 1332 (The Business Method Patent Improvement Act of 2001) was introduced in the House of Representatives on April 3, 2001. (H.R. 1332 is a slightly modified version of a Bill introduced the preceding year i.e. BMP Act of 2000).

Recent USPTO statistics show a drop in the number of Class 705 patents issued, from 899 in fiscal year 2000 to 433 in fiscal year 2001, despite the continuously and rapidly increasing numbers of Class 705 applications filed. It appears that the PTO initiative announced on March 29, 2000 has had at least some effect in producing this drop; no other drop in the number of Class 705 patents issued since 1995 is reflected.

Class 705 Application Filing and Patents Issued Data for FY 95-01[197]

[197] Last visited July 1, 2002 at http://www.uspto.gov/web/menu/pbmethod/applicationfiling.htm
* This data is based on information available as of 11/5/01 and will be updated annually. Patents have been associated with Class 705 based on their primary classification (called the ORIGINAL classification, in USPTO-specific terminology). Annual counts are based on the fiscal year which begins on October 1 and ends on September 30. Fiscal year 2001 data is an estimate.

Class 705	1995	1996	1997	199	1999	2000	2001
Applications Filed	330	584	927	1340	2821	7800	8200
Patents Issued	126	144	206	420	585	899	433

CHAPTER 4

A NEW IPR ORDER: A POSSIBLE WAY OUT?

This chapter discusses harmonisation of laws, *inter alia*, as a possible alternative, in respect of protection of software-enabled business methods related inventions, its implication both in economic and international law perspectives along with arguments and counter-arguments.

4.1 GENERAL DISCUSSION

It lives the proponents of business methods patents under the mistaken idea that stronger IP always means a stronger economy. To some extent this is undisputed that it means larger campaign contributions, but controversies remain whether it does also mean a better market is a tougher question.

The acceptance of business concept patents is not due simply to the underlying technology. As Merges argues, "another important cause is the shifting baseline in the intellectual property field. Beginning in the earliest days of the patent system, and extending until perhaps as late as the early 1980s, the legal system assumed that intellectual creations were *not* protectable *unless* (very) good cause was shown. Today, it often seems the opposite. We now ask: why not protect a new form of intellectual creation? We're protecting everything else like it."[198]

It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a "class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without

[198] in http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf ,
As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform, Robert Merges, 1999, p. 587, vol. 14:577, under subheading "III. HOW WE GOT TO WONDERLAND" as referred in supra note 25: *See generally* Robert P. Merges, *The Economic Impact of Intellectual Property Rights: An Overview and Guide*, 19 J. CULTURAL ECON. 103 (1995).

contributing anything to the real advancement of the arts. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities lawsuits and vexatious accountings for profits made in good faith."[199]

4.2 THE POLITICAL ECONOMY OF INTELLECTUAL PROPERTY PROTECTION

"The central intellectual property (IP) problem for most countries today is that IP laws are largely nationally-based, whereas competition and innovation is global.[200] The implication of this fact is that regulation is being carried out one level below where it ought to be. In this respect IP policy is similar to antitrust or competition policy. The TRIPS agreement on patent harmonization is an attempt to deal with the fact that competition in IP policies has something of a prisoner's dilemma nature: strengthening IP protection for its own inventors may benefit a single country (because it will attract innovative activity), but if all countries do it, there could be lower social welfare overall (if the strength of protection is greater than what is needed to achieve the "optimal" level of invention)".

"At the national level, the benefits and costs of stronger IP protection are at least conceptually simple: stronger IP rights provide stronger incentives for innovators and increases the potential for local (within country) spillovers from R&D. The costs are higher prices due to the monopoly power thus created and an

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[199] Atlantic Works v. Brady, 1017 U.S. 192, 200 (1882)
* (http:\\people.qualcomm.com/karn/patents/patents.html, visited September 26, 2001
The US Patent System Is Out of Control!

[200] Last visited October 28, 2001.
http://emlab.berkeley.edu/users/bhhall/bhhdisc_toronto501.pdf.
International patenting controversies respect business methods

Toronto IP Conference May 2001, The Global Nature of Intellectual Property: Discussion
Bronwyn H. Hall, University of California at Berkeley and Oxford University

increase in the cost of follow-on innovation, which may reduce local R&D due to the increasing transaction and other costs of acquiring prior technology".

"The optimal national policy that takes account of international consideration may therefore by quite different in different countries. Nevertheless, the collective view expressed in the TRIPS agreement is that harmonization in intellectual property protection is desirable. Although desirable in general, harmonization of patent laws has proved difficult to achieve, mostly for political reasons, and can sometimes be costly in terms of social welfare, both because of extreme differences among countries in the costs and benefits of IP protection and because harmonization generally proceeds by raising all countries up to the level of the country with the strongest IP laws.[201]

So [202], in these Internet business model patents, is what is being claimed really a "method" or just a well-disguised idea? This question implicates a classic software patent issue: identifying the appropriate "level of abstraction" at which to view a claimed invention. As described by Professors Lemley and Cohen: [S]oftware patents are not normally claimed or defined in terms of the actual code used by the patentee. Rather, the technological advance embodied in the code is described in the claim; interpretation proceeds according to standard canons of claim construction. Because all patents are ultimately defined by text, this linguistic problem exists for all kinds of patents. A patent claim that is written at a higher conceptual level will be interpreted differently than one written with more concrete detail. The problem is aggravated in the case of software patents, however. Many software patents, especially first-generation ones, give little or no

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[201] Visited 13 November 2001 at http://emlab.berkeley.edu/users/bhhall/bhhdisc_toronto501.pdf., Toronto IP Conference , May 2001, The Global Nature of Intellectual Property: Discussion, Bronwyn H. Hall, University of California at Berkeley and Oxford University.

[202] Robert P. Merges, Patent System Reform , 14 Berkeley Tech. L.J. 577, 580 (1999) (emphasis added).

information in the patent claim (or indeed in the specification) about the software program itself. Even a later generation software patent claim may tell the court very little about the software program in question, leading to greater variance in the level of abstraction selected. Software is in certain respects more malleable than other types of inventions (such as pharmaceuticals or mechanical devices). Two pieces of code may produce the same result and may even use very similar algorithms to do so, but may still operate differently, for example, by extracting output data from a memory array in a different manner. If the difference corresponds to limiting language in the patent claim(s), there can be no equivalence.[203]

4.3 TWO POLICY ARGUMENTS DISFAVORING PATENTABILITY OF INTERNET-BUSINESS MODELS

The USPTO and the federal courts occasionally consider public policy issues when interpreting the patent laws and formulating plans for the effective administration of the laws. Public policy plays a much more important role in Congress where the creation and amendment of the actual acts of legislation occur. Congress should amend laws that produce results contrary to sound public policy.

[203] Bagley, Margo A., "Internet Business Model Patents: Obvious By Analogy", Mich. Telecomm. Tech. L. Rev. 253 (2001). available at http://www.mttlr.org/articles/baglely/BaglelyNEWTYPE.pdf., last visited November 13, 2001.

4.3.1 INTERNET SECTOR ALREADY HAS AMPLE FUNDING TO SPUR INNOVATION

Internet-business model patents are unnecessary because the Internet sector does not suffer from a lack of funding incentive. According to a recent survey, more than 500 Internet deals received more than $3.5 billion dollars in funding in 1998.[204] This number increased 218 percent over 1997.[205] Internet investments continue to be the fastest-growing segment of venture capital. Since 1994, more than 212 Internet companies have filed to go public.[206] Fifty-nine Internet companies have gone public in 1999, up from 30 in all of 1998.[207]

It is true that many stocks surrounding the Internet sector seem unstable and experience tremendous ups and downs. Some analysts even suggest that the success surrounding the Internet stock sector is a fad that will soon be ending. If this is true, the market has yet to show it. The number of users going on-line continues to increase every month.[208] On-line spending is growing at a rate faster than off-line spending.[209] The Internet companies that will likely see their revenues and stock prices continue to rise are those that participate in active innovation.[210] These innovative Internet companies are the only companies who might qualify for patent protection. These companies receive sufficient economic incentive from the current market and economy without relying on patent protection.

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[204] Stills, Stephen, Patent Here, Patent There, Patent, Patent Everywhere, Above the Crowd, Published by J. William Gurley p. 2 (June 14, 1999).at 4., cited in Holt, Chris, "Patentability of Internet Business Models", *Cyberspace Law* , Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html

[205] Stills, Stephen, Patent Here, Patent There, Patent, Patent Everywhere, Above the Crowd, Published by J. William Gurley p. 2 (June 14, 1999), at 4, cited in Holt, Chris, "Patentability of Internet Business Models", *Cyberspace Law* , Fall 1999, available at http://www.ukans.edu/~cybermom/CLJ/holt/holt.html

[206] Ibid.

[207] Ibid.

[208] Ibid. Cyberspace Lawyer, Vol. 4 No. 3, p. 1 (May 1999).

[209] Ibid.

[210] Ibid.

In addition to public investment expenditures, on-line businesses are also gaining support from off-line companies hoping to take advantage of the Internet stock phenomenon.[211] Large off-line parent companies are funding new on-line divisions. In addition, many off-line companies in the entertainment and broadcasting industries are funding the establishment of on-line companies to revitalize tired franchises.[212] These types of funding schemes will continue to spur innovation on the Internet regardless of the status of on-line business patent protection.

4.3.2 INTERNET-BUSINESS MODEL PATENTS WILL DESTROY EFFICIENCY OF E-COMMERCE

One of the greatest benefits that the Internet has to offer is an extremely efficient economic system. It is this efficiency that has allowed many small start-up businesses to set up shop and locate the necessary venture capital to succeed in the on-line world where overhead is typically very low. These start-ups will not survive in an atmosphere burdened by unnecessary legal responsibility. Internet-business model patents, due to their unprecedented breadth, are certain to involve a tremendous amount of litigation. Two parties have already challenged Priceline.com's "name your price auction" patent, a patent that has only been in existence since August of 1998. Inherently broad Internet-business model patents will likely face a multitude of validity challenges. As the number of issued Internet-business model patents increases, so will the litigation of these types of patents. The owners of Internet-business model patents, will increasingly take advantage of numerous opportunities to enforce their broad patent rights, thereby leading to an even larger amount of litigation. The time and cost of

[211] Ibid.
[212] Ibid.

litigation, as well as the time and cost involved in avoiding litigation, will gradually destroy the efficiency of e-commerce and will eat up the tremendous gains and advantages of this new commercial medium.[213]

4.4 IS COPYRIGHT AN EFFECTIVE AND EFFICIENT FOR IPR FOR BUSINESS METHODS?

Arguments put forward by some is that copyright is effective because it protects precisely the product that has been developed. It prevents other companies from benefiting by copying your product, while at the same time permitting them to reap the full benefits of anything they develop.

Critics thus continues: "copyright is efficient because it enables firms to compete on the basis of rival implementations. This competition is vital for the efficient allocation of economic resources. The traditional literal aspects copyright doctrine is also efficient because it has negligible administrative overhead and presents no uncertainties. A small startup has certainty in the knowledge that they control what they create.

How could sound legal reasoning lead to a patent policy that so obviously undermines competition, discourages innovation, and distorts market dynamics in an important, emerging industry?

"Legal scholars will say that the long chain of legal reasoning since the 1972 *Benson* decision is too well-established to be overturned. But this is tantamount to saying that, if the U.S. Supreme Court once ruled that the earth is flat, then all subsequent courts must proceed as if this is true. In the end, it is

[213] Ibid. Stills at 4.

believed Internet patents can be successfully challenged only by laying bare the erroneous thinking that underlies the very concept of software patents. It is made aware that these patents can be written so that the U.S. can compel foreign countries to honor them. That's true even if your country's laws haven't yet been fully molded in the image of the out-of-control U.S. intellectual property system."[214]

Patent protection is by its nature concerned with industrial application, and we can see that software is now at the heart of industry. The analogue methods which where typical up until the late 1980s have been totally replaced by digital control. Machinery of even the most basic kind is now controlled by chip and instruction – "a situation which would have been unforeseeable in the early 1970s when the EPC was being formulated, and the denial of protection for software was set in Article 52(2c)".

"However", the argument continues, "the new industrial reality has been realised by the patenting world, and patents are being granted for inventions which are not software alone, particularly in the EPO through developments at Appeal Board level. It is clear that protection would now be allowed for many of the formative ideas in computing: multi-tasking operating systems, for example, which combine hardware and software techniques to radically improve the effectiveness of the computer".[215]

4.5 THE GROWING SHIFT AWAY FROM TRADE SECRET PROTECTION

[214] Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", available at http://www2.linuxjournal.com/articles/currents/014.html , last visited November 13, 2001.
[215] Comment on published papers for: "Software Patents in Europe: meeting the challenges of harmonisation and development in Europe". Held on Monday 23rd March 1998, London. http://wwwlaw.murdoch.edu.au/dtlj/index.html , last visited November 13, 2001.

"Clearly, *State Street* poses two new alternatives for trade secret owners which did not exist before. First, an alternative means of protection has appeared, requiring disclosure of the invention, where before the owner could only rely on trade secret protection, a protection which inherently relies upon maintaining the secrecy of the information in question. Second, protection may now exist for business methods where trade secret law provided no protection, before or now".[216]

"Both are significant. For the first time, some trade secret owners who use valuable financial, marketing or management business methods may have new options to obtain an alternative form of protection which cannot be lost if independently learned, reverse engineered or voluntarily disclosed".

As noted in the infamous Compton patent controversy, "critics contend the PTO is issuing patents without doing adequate examination. In the past, most software has been protected by maintaining it confidential or as a trade secret. Since software patents were new, there were no previous prior art patents in the Patent Office files on which an examination and rejection could be made".[217]

4.6 CAN PROTECTION BE PROPERLY GIVEN?

Amongst the agnostics for business methods patent protection there is some worry about the ability to examine software in the same manner in which other application areas are dealt. Obviously, there are problems which arise from the nature of software but there are also other problems which arise from the non-physicality of software. For although patent rights are theoretically about ideas,

[216] Flores, Victor, of LeRiviere, Grubman & Payne, LLP., "Business Methods Without Computers: The New Patent Landscape", available at http://www.igptlaw.com/busmethart.html, last visited November, 19, 2001.
[217] Ibid..

dispute resolution is always about physical implementation of these ideas - this leads to particular problems in computing.

Derek Haseldon of the UK Patent Office[218] argued that examiners `already have experience of dealing with software and its associated technology. It would therefore be quite wrong to say that throwing the doors open to software would find Patent Offices completely unable to deal with it'. Certainly, there is evidence that examiners are not so tightly constrained by technology as one might imagine: it is possible for a technically literate individual to move between disciplines (given sufficient training) and this frequently happens in all patent offices. However, Haseldon concentrates upon the problem of searching, and it does appear to be this which will be the main problem if there is to be any problem at all. Generally, McQuaker[219] argues that "although there are strong pressures to extend patent protection to computer programs as such, the case is not yet made out well enough to convince large sections of the software industry. It is not enough to argue that other forms of invention enjoy patent protection, so why not software".[220]

4.7 IS HARMONISATION A WAY OUT

At the present international trade regime, where legal parlance are most 'disciplined' concern and almost all different field wherein found the harmonisation an only way to get rid of jingle by WTO-sponsored global 'discipline', it is appropriate to discuss the effect of the same in this context.

[218] Ibid..
[219] Ibid..
[220] Ibid.

4.7.1 GLOBAL PATENT

As one can see, important progress is being made in closing the gaps and harmonizing the requirements of individual IP systems. "Increasingly, the international patent system – or lack thereof – is too cumbersome and expensive. As one American commentator has observed, it takes more than a village to win an international patent today. It takes thousands and thousands of dollars and man-hours"[221].

Needless to say, the current international legal structures don't meet the needs of today's inventors or businesses, regardless of their size. They are not the paradigms for tomorrow's patent system. Despite these realities, we still have not evolved a consensus on what the global patent system should look like in its broadest terms. A variety of alternatives have been suggested. For example, Mr. Francois Churchod of WIPO has suggested the expansion of the Patent Cooperation Treaty.

Given the diversity of existing systems and these proposals, it's clear that achieving a consensus on the nature of a global patent will be challenging. This will be true not only from a technical standpoint, but also from a political one.

Each of these proposals raise tough questions ranging from sovereignty issues to the comparative confidence of different patent offices to the need to harmonise standards of patentability.

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[221] (A) www.ipo.go.ip/saikaine/walmere.htm, last visited October 26, 2001.
"A U.S. Corporation Wish List For Future Patent Systems"
By Charles W. Almer, Vice President and Assistant General Counsel
Warner-Lambert Company
(B) www.gowlings.com/resources/publications.asp, last visited October 28, 2001
"Patenting Software Related Business Methods", Publication Date: 31/07/2001

With that said, some still believe a global patent system is attainable. The adoption and implementation of TRIPs provides us with a common starting point in the 134 countries that are now WTO members and the 30 economies seeking WTO membership. And it is believed there are a number of market forces propelling us toward a global patent, albeit an undefined one.

"Yet another market force that is promoting the evolution of a global patent is competition for technological advantages in the marketplace and for investment". As competition increases, many national governments will feel compelled to adopt the positive features of the domestic laws of others -- so-called "harmonization." For example, the Japanese Patent Office has proposed a series of revisions to their patent regime because they need, in their words, "to build a system where the economic value of IP is raised to international standards." Specifically, the JPO proposal shortens the period 10 during which the examination of the application may be deferred, expands remedies for infringement, and expands the application of patent term restoration. Fundamentally, it must be ensured that a global patent accurately reflects current marketplace realities and technological possibilities. To that end, "we at the USPTO are currently developing our own proposal for a global patent".[222]

4.7.2 ESTABLISHMENT OF A FRAMEWORK FOR GLOBALLY EFFECTIVE IP RIGHTS

[222] visited 18 November 01, http://www.jpo.go.jp/tousie/pdf/chapter4.pdf. , Globally Effective IP Rights

The Trilateral Offices welcomed the decision[223] of the PCT Union Assembly to enter into a PCT reform exercise that could ultimately provide the basis for a global patent system.[224]

4.7.3 SECOND TIER PROTECTION: AN ALTERNATIVE?

As some[225] favours for 'second-tier patent protection' to strengthen and harmonise patent laws world over. "Second tier patent protection is said to advance the interest in enhancing access to the patent system. Leaving aside for the moment the critical normative question of whether enhanced access of the variety promised by Second tier protection makes any sense wharsoever,[226] thoughtful analysis reveals considerable doubts about whether Second tier protection cam really hope to offer the enhanced access that its proponents promise[227]. The writer seriously wonders to demonstrate that "current second tier proposals do not find a solid foundation in history or policy"[228].

4.7.4 A TRILATERAL MEETING TO SOLVE THE PUZZLE?

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[223] for detail discussion, visit, http://www.jpo.go.jp/tousie/pdf/chapter4.pdf., last visited November 18, 2001.

[224] visited 18 November 01, http://www.jpo.go.jp/tousie/pdf/chapter4.pdf *"Globally Effective IP Rights"*

[225] Mark D. Janis "*Second Tier Patent Protection*" Harvard International Law Journal, vol. 40, Number 1, Winter 1999.

[226] Ibid.

[227] Ibid.. under sub-heading "SECOND TIER PATENT REGIMES AND GLOBAL PATENT POLICY: A CRITICAL APPRAISAL". The writer criticises the European initiative as that "might serve as a prototype for regular patent harmonisation in Europe, which might in turn give impetus to global harmonisation".

[228] Ibid. under sub-heading "CONCLUSION". He continues "there remains the task of conducting empirical research on existing second tier regimes that follow along the general lines of current European and Australian proposals". He suggests that the German system, after 1990 amendments, would be a "worthy candidate for thoughtful empirical study that on the downstream consequences of expanded second tier protection".

The USPTO and Japanese PTO (JPO) are currently considering whether to perform a comparative study[229] on software related business methods. Under such a program, both offices would perform a comparison of search methodologies and strategies employed by our examiners in examination of the subject matter. They plan to elaborate on proposals for this study at next month's Trilateral meeting. And in this respect they feel the study would be of benefit in analyzing the proper protection for these applications at a global level.[230]

4.8 A FINAL CRITIC

[229] Last visited July 1st, 2002. For detail, please visit: http://www.uspto.gov/web/tws/main.pdf for "*Report on Comparative Study Carried Out Under Trilateral Project B3b Business Method Related Inventions*".
Highlighted points can well be reproduced verbatim, only to show the quantum and gravity of initiative taken up by USPTO and JPO: 4.Further consideration
(1) Based upon the study of Group1, the practices of the USPTO and the JPO were consistent in that both Offices required a technical aspect as a criterion for a statutory subject matter of business method related inventions, and that an invention derived by merely automating known business methods on a computer did not involve an inventive step. Here, it is to be noted that the difference in the requirements for statutory subject matter did not seem to be major, given that the
examination results as a whole were consistent between the USPTO and the JPO.
(2) The study of Group 2 shows that both the USPTO and the JPO found documents considered to be relevant to all the claims of the hypothetical cases. It should be noted, however, that there was no search source commonly used by both Offices nor documents commonly cited by them.
(3) It is well recognized that business methods are not well-documented and IP Offices sometimes find it difficult to locate documents connected with business methods in spite of the fact that business methods per se have been practiced for a long time, which is an essential problem in examining business method related inventions. Therefore, the Offices recognize the need to improve their documentation in this area and should explore new possibilities to do this including cooperation with the user community to identify and acquire access to the best sources of pertinent prior art.
(4) Taking into account the above-mentioned situation, it can be said that this study raised a challenge as to how to carry out a higher-quality of search for business method related inventions. In this regard, and taking into account the EPO views on examination in this area (Appendix 6), the Trilateral Offices should focus, as a next stage, on collaboration of searching prior art in this field in the framework of Trilateral cooperation.
[230] For details of the remarks of Q. Todd Dickinson, (Acting Assistant Secretary Of Commerce and Acting Commissioner of Patents and Trademarks)
at the International Judges Conference Washington, DC, held on October 19, 1999.

"The cure to such ailments", says Shulman, "is a reform of patent and intellectual property laws that are failing to cope with the new economic primacy of information. Present laws", he says, "are unable to guide us through the murky terrain separating one idea from another; neither do they distinguish well between an original insight and commonly held concepts. As a result, our patent and legal systems support a privatization of knowledge that impedes the flow of information crucial to economic, cultural, scientific, and educational institutions".[231]

It is fairly easy to design a new "way", but business case studies seem to show that it is the execution, rather than the design, that makes various "ways" work. It seems that it would be too often the case that business quality would suffer because someone invented but was unable to utilise a "way", but no one else could use it because of patent protection. Additionally, experience in the US, such as the "1-click shopping" dispute tends to show that such patents can be the source of fairly extensive disputes over "ways" that probably didn't meet the novelty requirement in the first place.[232]

Critics go on to wonder as to how would cars have developed if someone had a patent on the idea of mechanically powered transport? It is also interesting to speculate how the internet would have developed if BT[233] had enforced their patent on hyperlinks from the start. It is probable that universities would not have been prepared to pay licensing fees, the web would never have been developed,

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[231] Ibid..

[232] http://www.patent.gov.uk/about/ippd/consultation/closed/index.htm
Should Patents be Granted for Computer Software or Ways of Doing Business? What's this about and why does it matter?

[233] An interesting case that has received some publicity recently is US patent 4,873,662, pwned by British Telecom and dating from the days of Prestel. The application was first filed in the UK in 1976, many years before the internet achieved widespread importance, but in BT's view covers the concept of hyperlinks, now used on virtually every page on the world wide web(www). This patent is now being enforced to generate revenue from US Internet Service Providers. An equivalent UK patent was also granted (although it has now expired), the example illustrates that patents for internet-related inventions can be obtained in both the US and the UK and, potentially, can be extremely valuable.

so the internet would have remained a file transfer tool for the military and a limited number of academic users.[234]

"What are business methods but applied economics? And what is an applied science? Technology. Business methods are technical, achieve technical effects, have technical considerations with technical definitions, all stated without the need for fuzzy definitions. But as US court cases and the Japanese Patent Office have both explicitly stated, you can't get a patent on the systemization of existing human transactions - there has to be some invention. As the ever growing body of economic literature demonstrates, there is still ample room for innovation in the science of economics, and therefore with applied economics - business methods. But this is a prior art problem."[235]

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[234] http://www.patent.gov.uk/about/ippd/consultation/closed/index.htm
Should Patents be Granted for Computer Software or Ways of Doing Business? What's this about and why does it matter?

[235] for detail discussion on this, please visit: http://www.bustpatents.com/aharonian/technical.htm
Why All Business Methods Achieve A Technical Effect?, Greg Aharonian, Internet Patent News Service, San Francisco, CA 415-981-0441 (latest version at www.bustpatents.com/aharonian/bzmtdtch.htm)
October 2001. And noteworthy points are appended as verbatim:
[Now one can prove this more formally, clearly defining these terms of "science" and "technology" and seek out assessments of legal proofs using such terms and arguments. So these European decisions which argue as far as the word "technical", but no further, are unnecessarily ill-defined and should have no precedential value until they reconsider such decisions in light of more well-defined analyses of terms such as "science" and "technology".

That the patent world grew out of a world solely "physical" does not mean that patent laws forever have to remain solely in the "physical" world. The US courts and American industry have repeatedly chosen not to remain solely in the "physical" world, implicitly or explicitly arguing that business methods (and software) are useful and industrial applications of the science of economics - and thus a patentable technology. This is the fundamental choice the Europeans have to make - whether or not to extend the scope of what is patentable. To date, they have no yet clearly chosen, relying politically on ambiguous language.
In conclusion, as an American unjustifiably speaking for all Americans, please make a clear choice amongst yourselves in Europe, so we then can have a fun transAtlantic legal squabble.
I review some flawed European definitions of "technical". First, we have:

> A technical process controlled by a computer program on known hardware is an invention if and only if it uses natural forces in a new way to directly cause a success in the production of material goods, such that the causal relation between the means and the end can be reliably validated only by experimentation with natural forces (empirical verification) and not by computational deduction from given set of truths (mathematical proof).

4.9 COMMENTS FROM THE AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION

In the white paper, the AIPLA[236] takes the position that business method inventions should be protected under the same laws under which other inventions are protected and that no special test or interpretation of the patent laws should be applied to business method inventions. It also states that US inventors of business method innovations should not be substantively or procedurally disadvantaged compared to their foreign competitors by changes in the US patent laws.

Well, since many software and business methods have to be empirically verified (i.e., tested, software regression testing for example), because their outputs cannot be proved (the Halting problem), this definition of technology is inadequate. That is, if hardware devices involve natural forces validated through experimentation, then so does software (given its formal equivalence to hardware and the (European) view of software as a specific physical device. A related criticism is "repeatability", but the bookstores are filled with business books on how to repeat the successful business practices of others.
This first definition was probably inspired by a comment in a 1986 book by a European, Krasser:

> The "invention" is defined as a technical teaching, i.e. instructions on how to use natural (physical, material) forces to directly cause a physical/material effect. This can refer to dead or living nature and may extend to new laws of nature as they are discovered, but not to the laws of human reasoning (logics, mathematics etc). 'Rules of Organisation or Calculation' are not technical even when they are executed on a computer, because the problem solution is concluded and verified within the realm of reason before the realm of engineering (the technical field) is entered during the practical application.

Again, the assumption is that a program can be made automatically perfect without real world testing, and therefore is not technical. Business methods are no more a priori determinable than software or hardware. The dot-com boom and crash around the world proves that quite clearly.]

[236] 17 November 2001
http://www.fitzpatrickcella.com/outside_links/busmethod.pdf.

4.10 A FURTHER DEBATE : LAURIE AND BEYERS, et. al.

"When one listens carefully to the impassioned arguments against patenting "business methods" it becomes apparent that the arguments, and the basic intellectual property policy positions which consciously or unconsciously underlie them, can be classified into three categories: (a) patents are bad; (b) business method patents are bad; and (c) bad business method patents are bad. The first position is most often heard in the halls of academia and raises fundamental social and economic issues which go far beyond the scope of the present inquiry. The second position is frequently advanced by established companies that constitute a large target for individuals and start-up (sometimes referred to as upstart) companies obtaining these patents. The third position is the most widely held, and for obvious reasons, the easiest to defend. It reflects the fact that the U.S. and other patent offices are ill equipped to properly examine these types of applications. One reason is that examiners typically have training in computer science and engineering, not business, economics and finance. Another is that the best "prior art" is not in the form of previously issued patents (the database historically used by patent examiners) but rather in the form of products and services which are largely unknown to the examiner".[237]

The author continues, "in the heat of the debate over business method patents, the boundary between the second and third philosophical positions described above tends to blur, but it is important to address them separately. The "business method patents are bad" position relates to the question of patentable subject matter, i.e., whether such patents as a class ought to be allowed. The "bad business method patents are bad" position relates to the question of whether

[237] for comprehensive analysis in this respect, visit www.bustpatents.com/laurie.htm.
The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness, by Ron Laurie and Robert Beyers, Ph.D., last visited 16 November 2001

a particular business method is not patentable because the method is either old, i.e., not "novel", or because it is "obvious to a person having ordinary skill in the art". According to the Federal Circuit (or at least the three-judge panel that decided the *State Street Bank* case), the subject matter question is no longer on the table. Thus, the debate should be focused on the questions of novelty and non-obviousness."[238]

"Because it is relatively straightforward to determine novelty[239], the key legal inquiry becomes, *how should obviousness be evaluated for business method patents*? To help answer this question, we first suggest a claims taxonomy for use in evaluating obviousness. Next, we examine the problem solving process itself, i.e., the creation of "technology", and its relation to the traditional legal framework for evaluating obviousness - the *Graham* framework. Finally, we suggest how the *Graham* framework should be applied specifically to business method patents".

"The substantive analysis presented here is an important component of any comprehensive system for granting or litigating Internet-related patent rights. Other articles have examined procedural components to such a system, such as better prior art databases, improved training of patent examiners, and the use of European-style patent opposition proceedings.[240] The analysis of the substantive legal principles presented here complements these previously suggested measures. Indeed, the procedural improvements will be for naught if the substantive analysis is flawed. In addition, the cries of alarm regarding business method patents should subside if patent offices and courts undertake a proper analysis of obviousness".[241]

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[238] Ibid.

[239] Ibid. supra note 3: Analyzing novelty merely requires determining if the claim is "anticipated" by the "prior art", i.e., the claimed subject matter is identical to a previously used or described business method.

[240] Ibid. supra note 4: See, e.g., William J. Clinton & Albert Gore, Jr., *A Framework for Global Electronic Commerce* (1997), available at [http://www.ecommerce.gov/framewrk.htm]; Robert Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 Berkeley Tech. L. J. 577 (1999).

"In short, there's a better way to combat Internet patents than chasing after old journals and Internet posts in search of prior art. Because algorithms are part of the truths given by nature, all algorithms, even novel ones, are prior art by definition. It therefore follows that there is no such thing as a valid patent on a software algorithm, including one for which no evidence of previous practice can be found to exist."[242]

"Judges and attorneys who favor software patents will argue that a literal reading of the US Constitution discloses only that such rights should be limited in duration, but this is obviously false. The US Constitution clearly states that that copyrights and patents should promote the progress of science and technology. It is also obvious that the Constitution means to distinguish intellectual property rights from the type of rights granted to owners of tangible property, such as real estate. In the "takings" clause, the Constitution plainly states that the government may not deprive citizens of their tangible property without paying fair compensation. However, no such compensation is owed when copyright and patent holders lose their protection. Therefore, the Constitution argues that Congress promotes science and technology not only by granting temporary monopolies to copyright and patent holders, but also by depriving them of these rights after a certain amount of time has expired. What the Constitution envisions, in short, is a thriving and growing public domain of ideas, knowledge, and techniques. In the public domain, no one person has a right to exclude others from using ideas, information, techniques, or knowledge in a particular way (Benkler 1999)."[243]

"Internet patent holders will further argue that patents are needed to compensate those who try to discover new algorithms. This is the most absurd argument of all--and it is deeply offensive, as well, coming as it does from

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[241] Ibid.
[242] Ibid. under sub-heading: "Abolish Software Patents Now"
[243] Ibid. under sub-heading: "Patents in Constitutional Perspective"

companies that may very well have accomplished little more than blending an existing business practice with the level of web publishing knowledge found in an introductory textbook. Most of the algorithms now in existence were invented before they became eligible for patent protection".[244]

Business now indicates that software is now so central to economic effort that it deserves protection, but as critics points out to the technical dichotomy: an invention in hardware form can also be produced in software form, but only one is protected. This is true, of course, and is one of the major problems in protection: an idea can be taken from a hardware oriented patent and implemented in software, thus evading protection.

The critics might still blaming those opposing business methods patents asserting that `level playing fields' can sometimes be read as meaning leveled playing fields.

Koerber[245] argued that whilst software patents must come, there should still be the requirement for a technical characteristic of the invention. This, of course, remains the stumbling block: how to allow software patents but not to open the floodgates to protection of all software. As Koerber stated:

> *`there is a consensus within European industry that software must at least enable the technical solution of a technical problem. Software which does not fulfil that minimum requirement should not be patentable, because it is not considered to have a technical character. "Technical" is still interpreted in the traditional sense - not including information as a force of nature. Otherwise all software would have technical character.'*

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[244] Ibid.

[245] http://wwwlaw.murdoch.edu.au/dtlj/index.html. last visited 13 November 01
Comment on published papers for: "Software Patents in Europe: meeting the challenges of harmonisation and development in Europe". Held on Monday 23rd March 1998, London.

"There is no sign, at least to date, of a want of innovation in computer-implemented business methods, and nor was there in the US before business methods became patentable in 1998. Intense innovation has characterised this field. The Government's conclusion is that those who favour some form of patentability for business methods have not provided the necessary evidence that it would be likely to increase innovation. Unless and until that evidence is available, ways of doing business should remain unpatentable."[246]

4.11 AN ANALOGY

Professor Richard Stern, of George Washington University Law School, says that, even if Europe and Asia decide not to follow the US example, companies elsewhere will still be affected. "It depends how the patents are written," he says, "but you would be surprised what kind of extraterritorial reach US patents can have. Consider a European firm conducting e-commerce transactions with US-based customers in a way that infringes a US patent. If that patent is a method patent, it is possible to file an infringement suit against that company in the US on the theory that the product is being shipped to the US after being made by a process patented in the US." In other words, the legal reach of a US patent can be extended across the globe.

"Simply by having a customer complete an electronic form over the web a European company could infringe a US patent - even though it never sets foot outside its own country," adds Stern. "I consider this an irrational over-extension of US law, but the bottom line is that even if many of the controversial e-

[246] *"Should Patents be Granted for Computer Software or Ways of Doing Business? "The Government's Conclusions", March 2001"*

commerce patents are issued only in the US, the nature of the internet means that their influence will be felt globally." [247]

In some sense, many of the events that the *Amazon* patent helped to initiate can be characterized as a "back-swing" from what some have viewed as the opening of the floodgates of patent filings and litigation in the business method area in the wake of the *State Street* decision.[248]

Business Methods patents raise the same issues. Right now there is considerable controversy in the USA over the appropriateness of issuing patents on business methods, and indeed, even if one accepts the controversial notion that business methods are an appropriate topic for patents, there is ample evidence many such patents are of poor quality, for example due to inadequate research of prior art or poor judgments regarding standards for novelty. One can argue that this is a US domestic problem.[249]

If sorting is impossible for political reasons, what else might be done? Two things, as Merges suggests: "(1) raise the standard of patentability and/or the filing fees, in order to induce applicants to sort out the least potentially valuable investments on their own; and (2) make a rational guesstimate regarding a reasonable *average* expenditure on examination, and set the overall patent budget accordingly." Merges continues, "the first proposal raises the cost of applying for a patent. In marginal cases, where the probability of receiving a patent is low, the value of the invention low, and the cost of applying for the patent high, prospective applicants will choose not to file. The filing fee might make the

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[247] Ibid.

[248] ((http:\\www.gsu.edu/~ecojxm/internet/articles/w1003002.html, dated 25 September 01, The Future of Business Method Patents, Scott M. Alter, Esq, Hale and Dorr, Date: Monday, November 05, Time: 11:15am - 12:00pm)

[249] (www.cptech.org/ecom/hague/CPT-Hague-IPR-Jan12-USPTO.html, dated 07 October 01, Hague Convention and IPR, , CPT's January 12, 2001 comments to US Patent and Trademark

most sense as a screen; it could potentially raise revenue, and a fee increase is much easier to implement than increasing the standard of patentability."[250]

"The easiest way to raise standards, conceptually, is to tighten the non-obviousness requirement of section 103. However, this is a notoriously subjective standard, and it may prove difficult, not only to draft a tightened requirement, but also to make it stick."[251]

"The second proposal is perhaps more workable: all inventors would presumably benefit from a rationally derived PTO budget.[252] In theory, the approach would simply be to set the PTO budget equal to the total social cost of all invalid patents. Then, assuming equal expenditure on each patent application, the PTO would spend an amount equal to the average cost of an invalid patent."[253]

"Note that, while valid patents would survive the examination process, so too would a certain number of invalid patents. These would be those patents that cannot be cost-effectively eliminated at the examination stage. Such invalid patents have a close corollary in the economic literature on tort law: accidents that cannot be avoided at reasonable cost.[254] As with these accidents, invalid patents

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Office, Re: CPT's January 12, 2001 comments on IPR aspects of Hague Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters

[250] as cited supra note 56: "Currently, the budget is largely a function of the fees the office collects, minus some money that Congress skims off for the general fisc. *See* 1995 U.S. PAT. &
TRADEMARK OFF. ANN. REP. 47."
As referred in http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf ,
As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform, Robert Merges, 1999, p. 598, vol. 14:577, under subheading "C. Optimal Public Expenditures on Patents" of "IV. EVALUATING THE PATENT EXAMINATION SYSTEM."

[251] Ibid.

[252] Ibid.

[253] Ibid.

[254] Ibid. as cited supra note 57: "*See* ROBERT COOTER AND THOMAS ULEN, LAW AND ECONOMICS 326-71 (1988)." in P. 598, under subheading "C. Optimal Public Expenditures on Patents" of "IV. EVALUATING THE PATENT EXAMINATION SYSTEM."

that are too expensive to weed out must be tolerated. By definition, the money that would be spent to eliminate them is better spent elsewhere."[255]

It is in this background, this study has shown whole efficacy in respect of business methods patents prevailing in different jurisdictions around the world. This study has also tried to concern the fallacy involved whole affairs in this patent subject matter. Effort put in only show that there is growing opposition against this new patenting subject matter and enlargement of the same thereof. Although the study has tried to concentrate on whole issues, but due to lack of sufficient primary sources and also more often than the age-old lacklustre attitude on the part of parties concerned, obviously in developing countries, the debate seems take a posture that never ends. On the other hand, the study also tried to focus the contentions put forward by business houses in the US, Japan, and other industrially developed countries. Those things that they have to arm themselves with also can not be neglected. Both in strict legal and other senses. The study herein puts a break and look and tries to conceptualise the end remarks that are produced in the next chapter.

[255] Ibid.

CHAPTER 5

CONCLUSION and RECOMMENDATION

Cries of alarm and calls for drastic changes are typically heard when the law attempts to address new areas of technology. Oftentimes, however, the most appropriate response can be found in a return to basic legal principles. As Laurie and Beyers concludes the analysis of the law presented here complements previously suggested procedural improvements. Arguably most (if not all) of the cries of alarm regarding business method patents should subside if the Patent and Trademark Office and the courts perform a proper substantive analysis of obviousness[256].

Extension of the patentable subject matter requirement in *State Street v. Signature*[257] and *AT&T v. Excel*[258] though in the US, have eliminated the most significant barriers to the patentability of methods of doing business on the Internet. The extension of the subject matter requirement, however, does not affect the requirement that, in order to be patentable, Internet-business model inventions must satisfy the other standards of patentability. In particular, patentable Internet-business models must also be useful, novel, and non-obvious. It is the purpose of these three remaining standards to protect against exceedingly broad patent monopolies. Two of these remaining statutory standards, the utility standard and the novelty standard, find no unique applications to inventions involving Internet-business models. The non-obviousness requirement, however, would seem to pose special problems for the patentability of many methods of doing business on the Internet.

It is possible to apply the non-obviousness requirement to inventions involving methods of doing business on the Internet in a way that limits patent breadth without completely denying patentability to all Internet-business models. One solution is to distinguish between those Internet-business models that include a unique adaptation to an Internet environment and those that do

[256] See chapter 2 and 4, generally.
[257] See comprehensive discussion in chapter 3 and 4.
[258] See comprehensive discussion in chapter 3 and 4.

not. Those that uniquely apply to the Internet would be the only ones to receive the non-obvious label.

Another justification for limiting the patentability of Internet-business model patents is that patents of this type may not be in the best interest of the public. There is no question that these patents, if enforced, will have a negative impact on electronic commerce. In addition, the value of these types of patents in spurring innovation is questionable.

The current scope of the patentability of Internet-business models should be refined. The Patent Offices, respective domestic courts and legislatures world all have the power to stimulate progress in this area. Regardless of which is the first to act, all three entities will soon need to cooperate in generating a plan for the application of old laws to this issue presented by the knowledge technology.

It would be very useful to have a model of the interaction effects of different IP regimes in different jurisdictions, one that incorporated both the costs and benefits of an IP system and explicitly allowed the migration of some R&D in response to the rights offered by a jurisdiction. This would allow us to better assess the global optimality of the array of IP systems currently in use around the world and their interplay. The USPTO, EPO, Australian Patent Office, to name a few, have already responded by requiring an extra layer of examination for business method patents. Sorrowfully, Indian Patent Office and legislature have not shown any move towards this end.

"A final thought: because it is sometimes difficult to get the genie back into the bottle, it may be advisable to move slowly in expanding and strengthening IP rights".[259]

"It is not worth arguing over which of the many possibilities is most desirable at this stage. A final conclusion regarding the effects of software patents on the software industry should first be reached. Then, if it turns out the effects of software patents are indeed negative, attention can be focused on how to best solve the problem".[260]

"The whole lengthy, dysfunctional, Orwellian edifice of legal reasoning that supports Internet patents has a huge central flaw. It rests, ultimately, on a monumental misunderstanding of the science of algorithms (Newell 1986). The computing community must explain this to the public and lawmakers.[261]

"The above analysis of the amendments to the Indian Patent Act, 1999 makes it clear that the amendments are introduced mainly to satisfy the obligations under WTO and has strengthened the position of the patent owner sacrificing the public interest provisions in the Act. There is no evidence to show that the R&D investment has considerably gone up after the liberalisation of the economy either by Indian or by foreign investors".[262]

To many in the legal profession, *State Street* marked the culmination of a predictable evolution of the law defining patentability. To others, however,

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[259] Content of the Conference has already been discussed in previous chapters.

[260] See chapter 2 and 3.

[261] (http://www2.linuxjournal.com/articles/currents/014.html dated 13 nov 01, Internet Patents: Giving Away the Store, by Bryan Pfaffenberger <bp@virginia.edu>23-Dec-1999

[262] Visited November 13, 2001 www.ebc-india.com/lawyer/articles2001v1a2.htm, "*The Patents (Second Amendment) Bill, 1999 - An Analysis*", by Dr N.S. Gopalakrishnan

State Street was a wake-up call. Now, it is of strategic and competitive importance to companies, which once thought their innovations outside the range of patent protection, to conduct a careful review to determine which of their practices might be patentable.

There is currently a consensus among economists on the fact that software patents tend to stifle innovation and harm small and medium enterprises because they create tremendous juridical uncertainty which only benefits to patent attorneys and lawyers. There is also a consensus among patent attorneys on the fact that patents on business methods are just a kind of software patents and that it is impossible to ban business method patents once software patents become legal. [263]

Another benefit of patents is the diffusion of information. Trade secrecy is an alternative to patents. Thus the gains from getting rid of patents may be less than believed if firms then invest more in keeping their ideas secret - thus, there will still be monopolies although not government granted monopolies. Second, it could even be the case that the public nature of the patent increases information diffusion enough to make patents superior to no-patents. Certainly, on the margin, this idea suggests that we should patent ideas which can be kept secret if not patented but not other processes. We should not allow a patent on one-click buying since this idea could not be kept secret if there was no patent. [264]

Probably it is best to treat different industries differently (make e.g. patent duration variable on patent classification); this may mean to continue

[263] http://petition.eurolinux.org/consultation/sqlGetMail/183/viewMail?NO_COOKIE=true last visited November 22, 2001, The content of which has been narrated in previous chapters. EuroLinux Software Patents Consultation ,

[264] Dr. Alexander Tabarrok,, Email: ATabarrok@Independent.org

non-patentability for software and finance or even extend non-patentability to other areas.[265]

The issues raised against patents mainly hinge around some deficiencies in the administration of the patent system rather than a problem with the law itself. Too many patents on trivial, obvious developments, or covering too broad a scope could stifle innovation, but properly issued patents should encourage competition, regardless of the type of invention.

The central difficulty can be expressed simply: how to define the boundary determining when software is, and is not, part of a technological innovation, so that what is patentable will be clear in specific cases in future. The Government's "conclusion is that those who favour some form of patentability for business methods have not provided the necessary evidence that it would be likely to increase innovation. Unless and until that evidence is available, ways of doing business should remain unpatentable."[266]

If the methodology is pure business-based, the battle will be uphill in the United States and virtually impossible elsewhere. Patenting these business models is possible in the United States, less favorable in Japan and speculative in Europe. But the ground abroad continues to shift, and business methodologies that are currently not patentable in those countries and others may become patentable later when an application is examined.

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[265] see previous discussions in Chapters 3 and 4., cited in col. 1. Aharonian, Greg: [Patents] Economic assessment. http://www.aful.org/pipermail/patents/2000-November/001096.html, 2000. Parent web-site http://www.oekonux-konferenz.de/dokumentation/texte/blasum.html Demystifying intellectual property issues, Holger Blasumvisited)

[266] See generally, chapter 2 and 3.

What of the future? At the moment, suggests Mr. Rees, there will probably be a stalemate. "We are not likely to find harmonisation in the short term - although undoubtedly there will be a lot of pressure from the Americans. On the other hand, the Americans may feel some pressure in return."

However, Professor Richard Stern, cautions that even if Europe and Asia decide not to follow the US example, and allow the patenting of business methods, non-US companies could still be impacted[267].

In contrast, the benefit of protecting new types of subject matter through a traditional intellectual property regime such as patents is obvious. Once competitive arts are incorporated as patent-eligible subject matter, the duty to provide patent protection on them will automatically be imposed on all WTO member countries. This will effectively serve as a means for international harmonization. Considering the borderless nature of Internet patents and e-commerce, it is senseless to introduce a sui generis protection scheme, which would require renegotiations of TRIPS.[268]

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[267] "It depends how the patents are written," he says, "but you would be surprised what kind of extraterritorial reach US patents can have. Consider a European firm conducting e-commerce transactions with US-based customers in a way that infringes a US patent. If that patent is a method patent, it is possible to file an infringement suit against that company in the US on the theory that the product is being shipped to the US after being made by a process patented in the US."
In other words, the legal reach of a US patent can be extended across the globe, he adds. "Simply by having a customer complete an electronic form over the web a European company could infringe a US patent - even though it never sets foot outside its own country. I consider this an irrational over extension of US law, but the bottom line is that even if many of the controversial e-commerce patents are issued only in the US, the nature of the Internet means that their influence will be felt globally." For more discussion on this point, please visit www.ipmatters.net/features/000808_controversy.html, last visited 14 September 01
Internet sparks patenting controversy, Richard Poynder , Thursday, September 27, 2001

[268] (www.law.umich.edu/mttlr/volseven/takanaka_art.html , last visited 14 October 01
COMMENTARY: Professor Chiapetta's Proposal, International and Comparative Law Perspectives on Internet Patents, Toshiko Takenaka, Ph.D[*]

Until more definitive principles dealing with the scope of patentability are established and an extensive prior art base emerges over the next few years, the question of business method patentability will probably remain contentious. The appeal of business method patents to Internet companies will arguably strengthen in jurisdictions where an innovation patent or similar system is in place.

And in India, as usual, the new law is hugely disappointing for all those who had expected India with the reputation it has made for itself in the software and e-commerce fields to adopt new policy with respect to business methods. Hopefully, the groundswell of interest which business methods have generated in India will have its effect on moving the powers that be to reconsider their initial decision to have the legislature and courts exclude increasingly significant subjects from the purview of patents law. It is ironic that the intellect and business enterprise of Indian inventors should be acknowledged throughout the rest of the world yet not receive no patent accolades in India".

May 15, 2001 7 Mich. Telecomm. Tech. L. Rev. 423 (2001), 7 Mich. Telecomm. Tech. L. Rev. 423 (2001), available at http://www.mttlr.org/volseven/takenaka.html

BIBLIOGRAPHY

BIBLIOGRAPHY

PRIMARY SOURCES

American Investor's Protection Act of 1999, available at <http://www.uspto.gov/web/offices/dcom/olia/aipa/>

"Appendix 6: Examination of "business method" applications (EPO)", available at <http://www.uspto.gov/web/tws/appendix6.pdf>

Business Methods Improvement Act 2000 (of United States), available at <http://www.techlawjournal.com/cong106/patent/bus_method/berman.asp>

Business Methods Improvement Act, 2000, United States of America <http://www.techlawjournal.com/cong106/patent/bus_method/berman.asp>

European Patent Convention, available at <http://www.european-patent-office.org/legal/epc/e/ma1.html>

Examination Guidelines for Computer-Related Inventions, Final Version, Patent and Trademark Office, United States Department of Commerce, <http://www.uspto.gov/web/offices/com/hearings/software/analysis/files/guides.doc>

Hague Convention and IPR, , CPT's January 12, 2001 comments to US Patent and Trademark Office, Re: CPT's January 12, 2001 comments on IPR aspects of Hague Convention on Jurisdiction and Foreign Judgments in Civil and Commercial Matters> available at <www.cptech.org/ecom/hague/CPT-Hague-IPR-Jan12-USPTO.html>

Indian Patent Act 1970, The Patents (Amendment) Act, 1999 & Patent (Second Amendment) Act, 2002, (Delhi: Universal Book Traders, 2000)

Japan Patent Law, Law No. 121 of April 13, 1959 as amended by Law No. 220 of December 22, 1999, entry into force: January 6, 2001, <http://www.jpo.go.jp/shoukaie/patent.htm>

Patent Cooperation Treaty 1970, done at Washington on June 19, 1970, amended on September 28, 1979, modified on February 3, 1984, and October 3, 2001, (as in force from April 1, 2002), available at http://www.wipo.org/pct/en/texts/articles/atoc.htm

Patent Counts By Class By Year, January 1977 -- December 31, 2001, U.S. Patent and Trademark Office, Information Products Division / TAF Branch, April 2002", available at <www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby.pdf>

Patents Amendment Act 2001-Australia, available at <http://scaletext.law.gov.au/html/comact/11/6457/top.htm>

Report on Comparative Study Carried Out Under Trilateral Project B3b Business Method Related Inventions", available at <http://www.uspto.gov/web/tws/main.pdf>

TRIPS Agreement, (Switzerland: GATT Secretariat, 1994)

35 United States Code, available at, http://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

United States Constitution , available at, <http://www.house.gov/Constitution/Constitution.html>

SECONDARY SOURCES

BOOKS

Cornish, W.R., *Intellectual Property* (Sweet & Maxwell Ltd., London, 2nd ed, 1999);

Elias, S., *Patent, Copyright & Trademark* (Nolo Press: 3rd Edition, Berkeley, CA,1999)

McKeough, Jill and Stewart, Andrew., *Intellectual Property in Australia* (Butterworths: Sydney, 1997)

Merges, Robert, "As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts & Patent System Reform", vol. 14, 1999, pp. 582,:577, available at <http://www.law.berkeley.edu/institutes/bclt/pubs/merges/siximp.pdf>

Rosenberg, P., *Patent Law Fundamental* (*Clark* Broadman Company: New York, 1975);

ARTICLES

Aharonian, Greg , "WHY ALL BUSINESS METHODS ACHIEVE A TECHNICAL EFFECT?", <http://www.bustpatents.com/aharonian/technical.htm>

Aharonian, Greg, "17,500 software patents to issue in 1998", *Internet Patent News Service*, (Oct. 18, 1998), available at <http://lpf.ai.mit.edu/Patents/ipns/-ipns-19981018.txt>

Almer, Charles W., "A U.S. Corporation Wish List For Future Patent Systems", available at <www.ipo.go.ip/saikaine/walmere.htm>

Alter, Scott M, Esq., Hale and Dorr, "The Future of Business Method Patents" available at <http:\\www.gsu.edu/~ecojxm/internet/articles/w1003002.html>

Bagley, Margo A., "Internet Business Model Patents: Obvious By Analogy", *Michigan Telecommunication Technology Law Review*, 253 (2001), available at <http://www.mttlr.org/articles/baglely/BaglelyNEWTYPE.pdf.>

Bagley, Margo A., "Internet Business Model Patents: Obvious By Analogy",* Michigan Telecommunication Technology Law Review, *253 (2001), available at <http://www.mttlr.org/articles/baglely/BaglelyNEWTYPE.pdf>

Ben-Yehuda, Ron C., "Business Method Patents , June 2000", (Los Angeles office of Sidley & Austin, available at <http://www.sidley.com/cyberlaw/features/bm.asp>

Bessen and Maskin., "Sequential Innovation, Patents and Imitation", Working Paper, available at <http://www.researchoninnovation.org/patent.pdf>

Bessen, James and Maskin, Eric, "Sequential Innovation, Patents and Imitation" (working paper), available at <http://www.researchoninnovation.org/patent.pdf>

Bird, Christopher, "Raising the Bar in Australia: The Patents Amendment Act 2001", *Chartered Institute of Patents Agents Journal*, vol. 30 no. 10, October 2001.

Buchanan Ingersoll, ATTORNEYS, available at <http://www.bipc.com/practice/pdf/intel/patent.pdf>

"Business Methods Patent Practice Workshop", Washington DC Program, Dates: August 16 - 18, 2001 (Thursday through Saturday), available at <www.patentresources.com/advanced/adv_busmt.html>

"Business Patent (Business Method Patent)", (C)1999 Hideo FURUTANI, Japanese, available at <www.furutani.co.jp/office/ronbuss/BPBasic_e.html>

Chartrand, Sabra, "Move in Congress to Limit Protection of Business Methods", *PATENTS, APB Report*, October 09, 2000, available at <*http://enoglen.law.columbia.edu/clasp/archive/patents_software/09pate.html*>

David, Paul A., "The Digital Technology Boomerang: New Intellectual Property Rights Threaten Global 'Open Science", October 2000, available at <http://www-econ.stanford.edu/faculty/workp/swp00016.pdf>

Dobbs , David, "Patenting the Wheel", *Harvard Magazine*, (1999) *available at* <http://www.harvard-magazine.com/issues/ja99/right.patent.html>

Flores, Victor, LaRiviere, Grubman & Payne, LLP, "Business Methods Without Computers: The New Patent Landscape", available at <http://www.lgpatlaw.com/busmethart.html>

Garfinkel, Simon, "Patently Absurd", *Wired Magazine*, July 1994, available at <http://www.wired.com/wired/archive/2.07/patents_pr.html>

Garfinkel, Simson L., "Patently Absurd: How could the Patent Office ever grant a patent to Compton'son its claim to have invented multimedia? This is how" takes us inside the Patent Office, available at **http://www.wired.com/wired/archive/2.07/patents_pr.html**

Gladstone, Julia Alpert, "Why Business Method Patents Are The Epitome of Misdirection : Strong Intellectual Property Rights Do Not Encourage

Innovation In Information Technology", available at <www.legal.edhec.com/Revue/Numero_1/Dossier/Dossier_1.htm>

Gopalakrishnan, Dr N.S., "The Patents (Second Amendment) Bill, 1999 - An Analysis", available at <www.ebc-india.com/lawyer/articles2001v1a2.htm>

Hall, Bronwyn H., "The Global Nature of Intellectual Property: Discussion", Toronto IP Conference, May 2001, University of California at Berkeley and Oxford University, available at <http://emlab.berkeley.edu/users/bhhall/bhhdisc_toronto501.pdf>

Holt, Chris, "Patentability of Internet Business Models", *Cyberspace Law,* Fall 1999, available at <http://www.ukans.edu/~cybermom/CLJ/holt/holt.html>

Holt, Chris, *Cyberspace Law,* Fall 1999, "Patentability of Internet Business Models*", available at <*
http://www.ukans.edu/~cybermom/CLJ/holt/holt.html

Ingersoll, Buchanan, *ATTORNEYS*, available at <http://www.bipc.com/practice/pdf/intel/patent.pdf>

"International Patenting of Internet-Related Business Methods", available at <http://www.nsf.gov/sbe/srs/seind02/c6/c6s5.htm#c6s5l2>

Irlam, Gordon and Rubin, Paul, "Software Patents: An Economic Perspective", First Supplementary Submission, By The League for Programming Freedom, To The Patent and Trademark Office, On Patent Protection for Software-Related Inventions , this document is the League for Programming Freedom's response to issues raised by the San Jose hearings of January 26-27, 1994. The League's submission on software patents is contained in a separate document, available at <http://lpf.ai.mit.edu/Patents/economic-perspective.html>

Janis, Mark D., "Second Tier Patent Protection", *Harvard International Law Journal,* Vol.40, Number 1 1999;

Kasdan, Michael J., "How Courts Should Do Their Business Regarding Business Methods After State Street Bank v. Signature Financial Group, Inc.", *Bright Ideas*, Winter 2000, Vol. 9, No. 3, available at <http://www.nysba.org/sections/ipl/kasdan.pdf.>

Laurie, Ron and Beyers, Robert, "The Patentability of Internet Business Methods: A Systematic Approach to Evaluating Obviousness", available at <www.gcwf.com/articles/journals/jil_may01_1.html>

Laurie, Ron and Beyers, Robert, "The Patentability of Internet "Business Methods: A Systematic Approach to Evaluating Obviousness", available at <http://www.bustpatents.com/laurie.htm>

Lessig, Larry, "The Problem with Patents", The Industry Standard, 23/4/99. http://www.thestandard.com/articles/article_print/0,1454,4296,00.html

Lynch, Clifford A. 1997, "When Technology Leads Policy in Proceedings of the 131st ARL Meeting", Washington, DC. available online at <http://www.arl.org/arl/proceedings/131/lynch.html>.

Merges, Robert P. & Nelson, Robert R., "On the Complex Economies of PATENT SCOPE", Columbia *Law Review*, vol. 90 p. 839; available at <http://Cyberlaw.harvard.edu/ipcoop/90 mer g2.html>

Merges, Robert P., "As Many as Six Impossible Patents Before Breakfast; Property Rights for Business Concepts & Patenting System Reform", *Berkeley Technology Law Journal*, vol. 14, Spring 1999, p. 577, available at www.law.berkeley.edu/institutes/belt/pubs/merges.html;

Moetteli, John B., "Financial Services Using New Business Methods Enabled By Software Are Now Patentable in the US - with Extraterritorial Effects", © 1999. an article published in May '99 issue of " *The Journal of World Intellectual Prop. Law", Werner Publishing*, Jaques Werner, edn.

Myrick, Ronald E., "Summary of Statement, before the House Judiciary Subcommittee, on Courts, the Internet, and Intellectual Property", April 4, 2001, available at <http://www.ipo.org/BusinessMethodTestimony.htm>

Oddi, A. Sammuel, "TRIPS - National Rights and a Polite Form of Economic Imperialism", Vand. J. TRANSNAT'L LAW, vol. 29 415 (1996);

Oskorep, John J., " 'Anything Under the Sun' Looks Bright For Patenting—Especially Software", available at www.gcwf.com/articles/ipu/ipu_sum99_6.html

Patent Protection for Business Methods", available at <http://www.ladas.com/BULLETINS/2002/0202Bulletin/AustraliaBusinessMethods.html>

Patent Wars, Better get yourself armed, everybody else is", *Economist*, April 8 - 14, 2000.

Pfaffenberger, Bryan, "Internet Patents: Giving Away the Store", Available at <http://www2.linuxjournal.com/articles/currents/014.html>

Poynder, Richard, "Internet Sparks Patenting Controversy", available at <http://www.cptech.org/ip/business.html>

Poynder, Richard, "Patents and the web: friends or foes?" available at <www.ipmatters.net/webcaught/chapter1.html>

Richtel, Matt, "Are Patents Good or Bad for Business Online?", *New York Times Cyberlaw Journal*, 28 August 1998, available at <http://www.nytimes.com/library/tech/98/08/cyber/cyberlaw/28law.html>

Sabharwal, Mr. Narendra K., "Opening Remarks: Cooperation for Development Bureau for Asia and the Pacific World Intellectual Property

Organization at the Opening Ceremony", WIPO Asia-Pacific Regional Forum on Policy Development, Institution Building and Demystification of Intellectual Property", August 29 to 31, 2001, New Delhi, available at <http://www.ficci.com/ficci/aug-WIPO.htm>

Sakakibara, Mariko, Lee Branstetter, "Do stronger patents induce more innovation? Evidence from the 1998 Japanese patent law reform", *NBER* Working Paper Series W7066, available at <http://www.nber.org/papers/w7066/> 1999

Samuelson, Pamela & et al, "A Manifesto Concerning the Legal Protection of Computer Software", 94, Columbia Law Review 2308, 2413 (1994);

Should Patents be Granted for Computer Software or Ways of Doing Business? What's this about and why does it matter?", available at <http://www.patent.gov.uk/about/ippd/consultation/closed/index.htm>

Software Patents in Europe: Meeting the Challenges of Harmonisation and Development in Europe", available at <http://wwwlaw.murdoch.edu.au/dtlj/index.html>

Stern, Richard H., "Patenting Computerised Method of doing Business", IEEE Micro Mag, Micro Law Column, December '96

Swinson, John V., Partner, Mallesons Stephen Jaques, "Do Internet process patents threaten eCommerce?", Cyberspace Regulation: eCommerce and Content, Sydney, Australia, 25 May 2001, available at <www.austlii.edu.au/au/other/CyberLRes/2001/11.htm>

Swinson, John V., Partner, Mallesons, Stephen Jaques, "Do Internet process patents threaten eCommerce?", available at <www.austlii.edu.au/au/other/CyberLRes/2001/11.htm>

Takenaka, Toshiko, "COMMENTARY: Professor Chiapetta's Proposal, International and Comparative Law Perspectives on Internet Patents", 7 Mich. Telecomm. Tech. L. Rev. 423 (2001), 7 Mich. Telecomm. Tech. L. Rev., available at <www.law.umich.edu/mttlr/volseven/takanaka_art.html>

Takenaka, Toshiko, "International & Comparative Law Perspectives on Internet Patent", *Michigan Telecommunication Technology Law Review*, vol. 7 423 (2001), available at <*http://www.mttlr.org/volSeven/takenaka.html*>

The National Academies, Board on Science, Technology and Economic Policy, Project Summary on Intellectual Property in the Knowledge-Based Economy, available at <www.nationalacademies.org/step>

"The US Patent System in Transition: Policy Innovation & Innovation Process", *National Bureau of Economic Research*, Working Paper 7280 at http://www.nber.org/papers/w7280.htm;

"The US Patent System Is Out of Control!", available at <http://people.qualcomm.com/karn/patents/patents.html>

Tucker, Todd R., "Methods Of Doing Business: Patenting The New Business Model" (September 2000), Cleveland office, 216/696-1100), available at www.arterhadden.com/publications/other/sbn04.asp

Vaver, David, "S 01/99 "Intellectual Property: WHERE's THE WORLD GOING?" Oxford IP Research Centre - Seminar Paper, available at <www.oiprc.ox.ac.uk/Seminar.0199.html>

CASES

Amazon.com Inc. v. BarnesandNoble.com Inc., 1999 U.S. Dist. LEXIS 18660(1999), available at http://eoc.law.hardvard.edu;

AT&T Corp. v. Excel Comm., 172 F. 3d. 1352 (Fed. Cir. 1999), available at http://eoc.law.harvard.edu; and

AT&T CORP. v. EXCEL COMMUNICATIONS, INC., 98-1338, United States Court of Appeals for the Federal Circuit, available at www.law.emory.edu/fedcircuit/apr99/98-1338.wp.html

CCOM Pty Ltd and Ronald Howard Thomas v. Jiejing Pty Ltd, Paravet Instruments Pty Ltd, Jeffrey John Yates and Eric Russell Chappell No. QG13 of 1994 FED No. 396/94 Patents (1994) 122 ALR 417, (1994) AIPC 91-079 (1994) 51 FCR 260., available at <http://www.austlii.edu.au/au/cases/cth/federal_ct/unrep6887.html>

Diamond v. Diehr, 450 U.S. 175 (1981), available at <http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=case&court=US&vol=450&invol=175>

International Business Machines Corporation v. Patrick Anselm Smith, Commissioner Of Patents, No. G40 of 1990 FED No. 811 Patents (1992) AIPC 90-853 (1991) 105 ALR 388, (1991) 22 IPR 417 (1991) 33 FCR 218, Federal Court of Australia, available at <http://www.austlii.edu.au/au/cases/cth/federal%5fct/unrep5261.html>

State Street Bank & Trust Co. v. Signature Financial Gp., Inc., 149 F.3d 1368 (Fed. Cir. 1998), available at <http://www.II.georgetown.edu/Fed_Ct/Circuit/fed/opinions/97.1327.html

Welcome Real-Time SA v Catuity Inc., ***(No 2) [2001] FCA 785 (24 July 2001), available at <http://www.austlii.edu.au/cgi-bin/disp.pl/au/cases/cth/federal 5fct/2001/785.html?query=%7e+catuity>, Last Updated: 24 July 2001.***

Welcome Real-Time v. Catuity Inc. available at http://64.84.13.71/IPW/articles/ipw03.htm.

WEB SITES

http://european-patent-office.org/news/pressrel/2000_08_18_e.htm, for "A Press-release about 'Patentability of Methods of Doing Business";

http://www.patent.gov.uk/about/consultations/conclusions.htm, for UK Government's position on "Should Patents be granted for Computer Software or the Ways of Doing Business: The Govt.'s conclusions";

http://www.ifla.org/documents/infopol/copyrights/ipbarlaw.htm, for "The Economy of Ideas: A Framework for Rethinking Patents & Copyrights in the Digital Age (Everything You Know about IP is wrong)', by Baslow, John Perry, and

http://www.jpo.go.jp/infoe/tt1211-55.htm > or http://www.cptech:org/ip/business/international.html>for Japan's Policy concerning Business Method Patents (Nov 2000); and Revising of Examination Guidelines for computer software related invention, Jan 09, 2001.